

Christof Nägele, Natasha Kersh and Barbara E. Stalder (Editors)

Trends in Vocational Education and Training Research,
Vol. VI. Proceedings of the European Conference on Educational Research (ECER),
Vocational Education and Training Network (VETNET)

Glasgow, 2023
22 - 25 August 2023



ISBN: 9798854653626
Imprint: Independently published
zenodo.org/community/vetnet/
www.vetnetsite.org

Nägele, C., Kersh, N., & Stalder, B. E. (Eds.) (2023). *Trends in vocational education and training research, Vol. VI. Proceedings of the European Conference on Educational Research (ECER), Vocational Education and Training Network (VETNET)*. <https://doi.org/10.5281/zenodo.8322300>

The content of the papers is the responsibility of the authors - they also retain the full right to their work.



Editorial

We are delighted to present the 2023 edition of the VETNET ECER proceedings, titled 'Trends in Research on Vocational Education and Training', Volume VI. This year, we are particularly excited to be able to welcome all colleagues to Glasgow, three years after the scheduled ECER 2020 conference in this very city had to be cancelled due to the challenges posed by the Covid-19 pandemic.

In the present circumstances, communities worldwide continue to face various societal challenges, including those stemming from the enduring impact of Covid-19, the refugee crisis and military conflicts affecting different parts of the world. These challenges underline, more than ever, the role of education and lifelong learning in addressing contemporary global issues. The conference theme, „The Value of Diversity in Education and Educational Research“, captures the complexities of educational research, policy and practice during these uncertain times and emphasises the need to encourage and maintain societal dialogue while acknowledging the multifaceted dimensions of diverse communities and cultures.

The Vocational Education and Training Network (VETNET), as a research community, continues to contribute to the cross-cultural dialogue by exploring and sharing research on topics related to Vocational Education and Training (VET), its intersections with other sectors and diverse ways of learning and working. We are proud to present this year's proceedings. All papers in this volume are based on double-blind peer-reviewed abstracts that were accepted for presentation at the ECER 2023. Final papers were commented by VETNET board members, who also supported authors in revising and refining their contributions.

The papers in this edition offer a platform for sharing and discussing fresh research perspectives on VET-related developments across different countries around the world. The impact of the social challenges of the past years is evident in the topics discussed within this compilation of papers. The discussion covers a wide range of topics exploring both recent and historical developments in VET, delving into the complex interdependencies between social, economic and political trends within modern society. The papers engage with both innovative and traditional methodological approaches to VET research and address socially significant issues related to policy and practice within and beyond VET, aligning with the broader research priorities of VETNET, which include:

- Comparison of VET cultures and Governance of VET systems
- Qualification frameworks, competence assessment
- Teachers' and trainers' professional development
- Careers, transitions and guidance & counselling
- Work-based learning, partnership of learning venues
- Social issues in VET and social impact of VET provisions
- Pedagogic support by digital media

The significance of addressing the learning needs of individuals through VET, lifelong learning, career support, and inclusion is a recurring theme in this edition. The multidimensional nature of placing the individual at the centre of learning is continuously emphasised within this volume, particularly through exploring the complexity of VET, lifelong learning and work-related learning through the lens of different disciplines, diverse theories, and fresh perspectives. We are delighted to be able to offer this highly stimulating compilation of papers and hope that the key themes, discussed in this edition, will foster international dialogue, mutual learning, and ongoing collaboration both during and after the conference. We are grateful

to all contributors for their invaluable contributions to this volume, which once again, underscores the international scope and interdisciplinary nature of our network. We hope that this edition will capture the interest not only of our VETNET community but also a wider audience. Finally, we extend a warm welcome to both our existing and new members!

Dr Natasha Kersh, VETNET board member
IOE, UCL's Faculty of Education and Society

Dr Christof Nägele, VETNET chair/link convenor of VETNET
University of Applied Sciences and Arts Northwestern Switzerland, School of Education

Professor Dr Barbara E. Stalder, VETNET chair/link convenor
Bern University of Teacher Education

Developments of VET Research Mirrored in the Papers of VETNET at the ECER

VET Students' Perception of Meaningfulness	1
Aarkrog, Vibe	
Kamstrup, Anne-Katrine	
A Regional Forecasting Tool to Estimate the Horizontal Mismatch Between VET Supply and Labour Market Demand 2022 - 2030	8
Albizu Echevarria, Mikel	
Gamboa, Juan P.	
Moso Díez, Mónica	
Monaca-Soto, Antonio	
Pursuing Equity, Vocational Education and Training and Social Justice	17
Avis, James	
Azerbaijan's VET Sector Transformation: The Impact of Policy Borrowing from the EU	25
Bayramli, Majid	
Informal Learning in Secondary VET: The Case of Hungary and Poland	34
Benke, Magdolna	
Rachwał, Tomasz	
Haba, Anikó	
Transitioning Experience: Migrant Learning and Engaging with Canada's Labour Market Challenges	43
Bernhard, Michael	
The Learning and Changes Adults Negotiate Across Worklife Transitions	52
Billett, Stephen	
Good Practice of Support to Students at Risk in Vocational Education	59
Sloka, Biruta	
Buligina, Ilze	
Tora, Ginta	
Dzelme, Juris	
Brante, Ilze	
Liepina, Kristine	
Angena, Anna	
„Blending 4 Futures“: A Teacher Training Course in Blended Learning for Vocational Teachers, Based on Design-Research	67
Casper, Marc	
Augsdörfer, Anja	
van Meegeen, Anna	
Vocational Education and Training for Sustainable Development in Berlin's „Flagship Schools“: A Transformative Design-Based Research Project	77
Casper, Marc	
Gerlach, Petra	
van Bergen, Kerrin	
Linking Technical and Vocational Education and Training with Higher Education, and Possible Consequences for Development Cooperation	88
Entenmann, Steffen	
Euler, Dieter	
Frommberger, Dietmar	
Li, Junmin	
Schmees, Johannes Karl	

Theorising VET: European Differences, Commonalities and Contestation	96
<ul style="list-style-type: none"> Esmond, Bill Ketschau, Thilo J. Schmees, Johannes K. Smeplass, Eli Steib, Christian Wedekind, Volker 	
Strengthening Dual VET as an Attractive Educational Pathway for High-Achieving Pupils in Switzerland – a Governance Perspective on Strategies, Instruments, and Justifications	108
<ul style="list-style-type: none"> Esposito, Raffaella Simona 	
A Tool for the Self-Assessment of Informal Learning for Workers in the Metal and Electrical Industry	119
<ul style="list-style-type: none"> Fischer, Martin 	
Design Principles for Developing Vocational Skills of Low-Qualified Adults	129
<ul style="list-style-type: none"> Gössling, Bernd 	
Symposium: (Comparing) Vocational Education – the Neglected Role of Occupations	133
<ul style="list-style-type: none"> Grollmann, Philipp Bonoli, Lorenzo Fournier, Lisa Gonon, Philipp Markowitsch, Jörg Tiemann, Michael 	
Are we All Exceptional? Structures of Lifelong Learning in Comparative Perspective	140
<ul style="list-style-type: none"> Lassnigg, Lorenz 	
Double Symposium on Diversity in the Social Role of Colleges	149
<ul style="list-style-type: none"> Moodie, Gavin Wheelahlan, Leesa 	
Career Development Qualitative Tools: An Analysis of its Potential with Youth at Risk (OCEAN PROGRAM)	157
<ul style="list-style-type: none"> Moreno-Morilla, Celia Romero-Rodríguez, Soledad Rivodó-Muñoz, Gladys 	
Diversity-Oriented Teachers for Vocational Education. Analysis and Modelling of Competence Requirements for Teacher Education and Training	168
<ul style="list-style-type: none"> Moser, Daniela Kimmelman, Nicole Miesera, Susanne Pool Maag, Silvia 	
Finding the Way into VET – Career Education	180
<ul style="list-style-type: none"> Nägele, Christof Stalder, Barbara E. Hänni, Nicole 	
Analysis of Student Engagement in VET in the Region of Valencia (Spain)	188
<ul style="list-style-type: none"> Navas Saurin, Almudena A. Abiétar López, Míriam Bernad i Garcia, Joan Carles Cordoba Iñesta, Ana I. Giménez Urraco, Elena Meri Crespo, Esperanza 	

„The ‘Work Grammar’ Educational Documentary Film Format in the Italian VET Context (1958-1978): Some Considerations on the Evolution of Film Content and Language”	196
Paolone, Anselmo R.	
Finnish Vocational Students’ Perceptions of the Special Support in Their Studying	203
Ryökkynen, Sanna	
Analysis of Cognitively Activating Tasks in Vocational Education and Training of Nursing	214
Schäfer, Miriam	
Wesselborg, Bärbel	
Weyland, Ulrike	
Kleinknecht, Marc	
Koschel, Wilhelm	
Klar, Kristin	
The Impact of Work-oriented Basic Education from the Company Perspective	224
Schepers, Claudia	
Koppel, Ilka	
Teachers and Their Role in the Career Choice Process	234
Stalder, Barbara E.	
Gaupp, Pia-Mara	
Nägele, Christof	
Inclusion in VET – Understanding Lifeworlds and Defining Situations for Inclusive Learning	243
Vonken, Matthias	
Schaar, Patrick	
What Constitutes a Good Learning Environment in VET?	254
Wahlgren, Bjarne	
Aarkrog, Vibe	

Aarkrog, V. & Kamstrup, A. (2023). VET students' perception of meaningfulness. In C. Nägele, N. Kersh, & B. E. Stalder (Eds.), *Trends in vocational education and training research, Vol. VI. Proceedings of the European Conference on Educational Research (ECER), Vocational Education and Training Network (VETNET)* (pp. 1–7). <https://doi.org/10.5281/zenodo.8207641>

VET Students' Perception of Meaningfulness

Aarkrog, Vibe

viaa@edu.au.dk, Aarhus University

Kamstrup, Anne-Katrine

anka@kp.dk, University College Copenhagen

Abstract

Context: The paper concerns the results from a pilot project preceding a current research project about students', teachers' and trainers' creation and the students' perceptions of meaningfulness in the transition from school to the first period of workplace-based training in Danish VET. The focus on the transition is due to a particularly high dropout rate at that point in time in Danish VET. The project is based on the hypothesis that if the students perceive their education and the interrelation of school-based and workplace-based training as meaningful, they are more likely to complete the VET programme. The research questions are: 1. Which kinds of coherence are meaningful to the students? 2. What strengthens the students' perception of meaningfulness in education? The purpose of the pilot project was to clarify the focus and methods of the main project.

Approach: The pilot study was conducted in 2022-2023 and combined a literature desk study on research into meaningfulness in VET and a minor qualitative empirical study, including focus group interviews with 4-6 students in each of the four VET programmes representing the four main areas within Danish VET. In the empirical study, methods (including students making notes on post-its and discussing photos from the current VET programme) were tried out, the purpose being to encourage the students to articulate their thoughts and ideas about meaningfulness.

Findings: The results from the desk study shows that the concepts of 'meaning' and 'meaningfulness' are frequently used in VET research. However, the concept is seldom defined and seems to be perceived as an automatic consequence of specific activities in VET. Furthermore, the desk study showed that perceiving meaningfulness closely relates to perceiving interrelations between theory and practice and school-based and workplace-based training. Likewise, the empirical qualitative study showed that the students related meaningfulness to a close interrelation between theory and practice, but also to social interactions with fellow students or with colleagues in the work-based training.

Concerning the methods of the empirical study, the results show that the methods were conducive to the dialogue with the students.

Conclusion: Based on the results from the pilot project, the main project, that is conducted in the period April – December 2023, will focus on operationalizing meaningfulness for studying this concept in relation to the students' transition from school to workplace-based training, focusing mainly on the authentic learning environments and social interactions among the students.

Keywords: meaningfulness, transition from school to workplace-based training, authenticity, social relations



1 Introduction

The dropout rate in Danish VET is high, and consequently, the completion of VET is relatively low (Billett et al., 2022; Aarkrog & Wahlgren, 2020; EVA, 2013). Thus, around half of the students complete the VET programme that they have enrolled. Dropout figures show that the dropout rate to a great extent can be located to the transition from school-based training to workplace-based training. The dropout rate at that time of the programme used to be ascribed to lack of apprenticeships. Although it is still difficult within some trades to obtain an apprenticeship, the challenges in the transition are also related to the students being anxious about the workplace-based training. Focusing on the students' perception of meaningfulness in the transition, the aim of the research project is to obtain knowledge that can be used to improve the transition at school as well as in the workplaces, consequently reducing dropout.

Research has shown that one of the major challenges related to drop-out and completion is linked to the quality of the dual training system. Quality concerns, among other things, how to relate theory and practice and school-based education and workplace-based training (Aarkrog & Wahlgren, 2022). The project takes its point of departure in two questions: 1. Which kinds of coherence are meaningful to the students? 2. In general, what strengthens the students' perception of meaningfulness in education?

The project is conducted between April-December 2023 and is one of several activities in a centre for knowledge about VET (CEVEU), link: Om Center for viden om erhvervsuddannelser - CEVEU, which was established in 2022.

In this paper, the aim is to present the results from the *pilot* project (Aarkrog & Kamstrup, 2023), the purpose of which was to inspire and qualify the content and methods of the research project mentioned above. The pilot project was carried out between October 2022 - March 2023.

1.1 Briefly about Danish VET

Danish VET comprises around 108 programmes organised in four main areas „Food, agriculture and experiences“, „Office, trade, and business services“, „Care, health, and pedagogy“, and „Technology, construction, and transport“ and offered in four types of schools: agricultural, commercial, social and health care and technical schools. The programmes are structured in basic courses 1 and 2, each lasting 20 weeks and main courses with various lengths in which the students alternate between school-based education and training and workplace-based training (apprenticeships).

The research project focuses on students in their final part of basic course 2 and the first period of workplace-based training. The empirical study in the pilot project included students from the basic courses as well as from the main courses.

2 Methods in the pilot project

With the purpose of qualifying the content and methods of the research project, a pilot study, including a 'desk study' and a minor empirical study, was conducted.

2.1 Method in the desk study

The desk study is a minor and not a systematic and thorough literature study. The research studies included have been selected on the basis of whether they were relevant to our study and whether they could elaborate the concept of meaningfulness in VET programmes. The hand-held desk study focused on the concepts 'meaningful', 'research' & 'vocational students' OR 'vocational education and training'. Furthermore, the focus was primarily on research that had been completed within the past five years. The search includes the ERIC database in the period 2019-2023. This resulted in 733 hits, seven of which were relevant. Furthermore, a search for

'meaning' and 'meaningfulness' included the following VET research journals: International Journal for Research in Vocational Education and Training (IJRVET) (2019-2023) (three relevant articles), Nordic Journal of Vocational Research (NJVET) (2019-2023) (one relevant article), Vocations and Learning (2019-2023) (three relevant articles) and the Danish journal, Cognition and Pedagogy (2019-2023) (no relevant articles).

2.2 Method in the empirical study

The purpose of the *empirical study* was to study how VET students perceive and articulate meaningfulness in their current education. Furthermore, the purpose was to experiment with methods for eliciting the students' perception of meaningfulness. In focus group interviews with students, we tested two methods, please see below.

It is important to mention that the analysis was based on a relatively limited scope of data. Consequently, the results should be perceived as tendencies that can be explored further in the main research project.

The empirical study includes seven focus-group interviews (Morgan, 2010), all taking place at vocational schools. The focus group interviews have been conducted with a total of 31 basic course and main course students representing the four main areas within Danish VET: „Food, agriculture and experiences“, „Office, trade, and business services“, „Care, health, and pedagogy“, and „Technology, construction, and transport“. Including all the main areas, the aim has been to examine whether there is a difference between what students perceive as meaningful across the main areas. At the same time, we have focused on whether there were significant differences across the four main areas.

The interviews were recorded, a summary was made of each interview, and central passages were directly transcribed.

3 Results

The presentation below includes results from the desk study and results from the empirical study.

3.1 Results from the desk study

The desk study on research into the concept of meaningfulness and perception of meaningfulness in VET shows that:

While 'meaningfulness' is used in a number of articles (e.g., Hersom et al., 2019; EPINION & DPU, 2020), there are relatively few examples of the concept being defined and operationalised in VET research. Thus, there is a lack of knowledge about how students, teachers, and trainers create and perceive the concepts of meaningfulness, meaningful learning, and meaningful interrelations and whether they differ in their perceptions.

In relation to working life, meaningfulness has been defined and elaborated (Ravn, 2008). Ravn argues that the individual can realise potentials for creating meaningful coherence as well as assisting others in realising their potentials. Thus, meaningful coherence is not only created for the individuals; they also participate in the creation. Four factors go into realising potentials for meaningful coherence: realising own strengths, creating value for customers and the outside world, using one's abilities for the benefit of others, and social interaction through collaborating in a working community (Ravn 2008). Another study highlights the significance of professional identity for perceiving meaningfulness (Vähäsantanen et al., 2019). Finally, a study shows that to young people, meaningfulness at work is to contribute to creating value (Farrugia, 2019).

However, research into meaningfulness primarily focuses on school-based education and training. Inspired by Ausubel's concept of *meaningful learning* (Ausubel, 1968), studies have pointed to factors that promote the students' perception of meaningful learning (Jonassen et al.,

2003; Howland et al., 2012). The factors include that the students should participate actively in the learning process and cooperate; the students' experiences should be included in the training; the students should relate learning to the real world; they should formulate their own learning goals, formulate what they learn and reflect on their learning. To support these learning processes, the teachers should clarify the goals of the training, interrelate the various concepts of the training, facilitate discussions among the students, and include the students' experiences (Hinojosa & Arévalo, 2022).

Research shows that the creation of *links between school-based education and training and workplace-based training*, e.g., through working in *authentic learning environments*, is important for the students' experience of meaningfulness, e.g., in relation to teaching natural science subjects (Andersen et al., 2022) or learning through going on field trips (Norby et al., 2017). Learning in authentic environments is also important for vulnerable students' experience of meaningfulness, motivating them for continuing in education (Schmid et al., 2021). Problem-based training, including solving authentic problems promotes the students' feeling of meaningfulness (Hsbollah & Hassan, 2022; Koskinen & Pitkäniemi, 2022). Finally, digital tools can support the experience of authenticity and, consequently meaningfulness (Brito et al., 2021; Jonassen et al., 2003; Tüzün et al., 2021; Xiaofang, 2021).

Inspired by Etienne Wenger's concepts of 'community of practice' and 'negotiating meaning' (Wenger, 1998), experience of meaningfulness involves construction of meaning (Asplund et al., 2021), feedback from the teacher on the students' learning process promoting the process of collective creation of meaning (Johannsson et al., 2019).

Finally, personal factors influence perception of meaningfulness. A study based on the Self-Determination Theory (SDT) (Ryan & Deci, 2017) shows that fulfilling four psychological needs: autonomy, competence, sense of belonging, and beneficence for others strengthens the feeling of meaningfulness (Martela et al., 2018). In a current PhD study, it is argued that the students' general resources of resistance influence their experience of meaningfulness. Thus, the teacher can support the students' experience of meaningfulness by identifying their general resources of resistance (Hansen & Utvær, 2022).

Summing up, the studies included show that meaningfulness has mainly been researched in relation to school-based education and training. Furthermore, the experience of meaningfulness in VET is not only linked to the correlation between theory and practice or between school and training. The experience of meaningfulness is, for example, created by the student being able to set goals, be active in the learning process, and reflect. In addition, fulfilment of psychological needs and resources of resistance are important for the perception of meaningfulness. Therefore, the research project should focus on meaningfulness in a broad sense.

3.2 Results from the empirical study

On the basis of the empirical study, three findings can particularly be identified that are interesting to focus on in the next part of the research project. Furthermore, we briefly present the results of testing two interview techniques.

Like the desk study, the empirical study shows that the students perceive their education as meaningful when theoretical knowledge is related to the current vocation:

„We have some courses that we can see that we can use in the future. (...) For example, in Danish, we learn about professional communication and documentation. It is easier to relate our courses to reality than if you, e.g., were to learn German” (Student basic course, commercial programme).

It is also important that the students can use the knowledge in practice: „It is important that you can use, what you learn, and that the teacher can explain the use of what you learn, e.g., to learn why you have to fry a steak in a certain way” (student main course catering programme). Some subjects or courses are perceived as meaningful while others are not, depending on the

students' perceptions of what they need to know in their future occupation. Thus, the quotation also shows that it is important that the teacher can explain to the students why they have to learn this or that.

Meaningfulness depends on exchanging knowledge between school and workplaces:

„There is a lack of understanding between the internship company and the school. „My company does not know what it means to be a student at a vocational school. So that's what I have to explain to them. Of course, they ask questions about why it should be in this way. And it can be difficult to answer as a student. ” (Student, main programme, technical design).

Focus on the transitions from school to workplace and vice versa is important for understanding the students' experiences on meaningfulness.

The empirical analysis shows that meaningfulness not only relates to the content of the programmes and the interrelation of theory and practice. The students also emphasise the social environment at the school as well as an attractive working community in their future jobs as important for the experience of meaningfulness. The interviews with basic course students highlight the social environment at the school as important:

„I mentioned it to a teacher [that the students would like social activities, ed.], who said that this is a learning place and not a social community. But I just think that it may very well be a learning place, but you cannot learn if you do not feel at ease socially” (Student basic course commercial).

Students in the main programme have less focus on the social environment both at school and at work than the basic course students. There may be different reasons for this (e.g., that they are older, or that they have become more focused their professional interests). When thinking about the social relations at work, the students think about professional cooperation: „I look forward to meeting my colleagues, discussing how to accomplish a task. It is meaningful for me to be part of a collegial community about treating citizens and feeling confident among your colleagues. ” (Student basic course, social and health care).

As mentioned above the pilot project has included testing ways of talking with the students about meaningfulness. The one method tried was to have the students noting down their experiences of meaningfulness in their education, followed by the students exchanging and discussion their perceptions. The other method included that each student should choose two photos that he or she perceived as meaningful, showing situations from the school-based or workplace-based training in the current VET programme. Afterwards the students would argue for their choice of photos and eventually the students together should prioritize the photos, again arguing for the order of photos. The test of these techniques shows that focus-group interviews and the use of activating elements in the interview encourage the students to reflect on their perception of meaningfulness.

4 Conclusion

Showing that meaningfulness is rather frequently used in research about learning in VET, however rarely defined and operationalised, the research project will focus on students', teachers', and trainers' perception of the concept of meaningfulness. To make the informants reflect on the concept, the interviews will be structured around the psychological needs of SDT.

The desk study as well as the empirical study shows that the interrelations of theory and practice and school-based and workplace-based learning are important for the students' perception of meaningfulness. The empirical analysis shows that the students' perception of meaningfulness may develop depending on how long they are in the VET programme. Based on the analysis of differences between basic course and main course students, it can be assumed that the students experience meaningfulness differently, depending on whether they participate in a basic programme or a main programme and depending on whether they refer to training in a school or to training in an apprenticeship. In the research project, to obtain a detailed impression

of what the students perceive as meaningful, it is therefore important to interview the students both at school and in the workplaces. The focus will be on the activities organised by teachers in the school-based training and by trainers in the workplace-based training that have a positive impact on the students' perception of meaningfulness. Furthermore, the students should be understood as active participants in creating meaningfulness. Do the students develop their way of creating and perceiving meaningfulness during the education?

Whereas the desk study did not provide knowledge about the influence of the social learning and training environment on perception of meaningfulness, the empirical study shows that the students perceive the social environment to be important for their perception of meaningfulness. Furthermore, that the students in the basic course seem to differ from students in the main course in relation to their specific needs for a social environment. Consequently, the research project includes studying the significance of the social environment for the students' experience of meaningfulness, focusing on differences among students at school, respectively in apprenticeships. Seen in the light of the relatively large drop-out rate in the transition from the basic programme to the main programme, it is important to study whether the dropout rate can also be linked to the students not fulfilling their social needs and expectations in the transition to onboarding the apprenticeship.

References

- Aarkrog, V. & Kamstrup, A.K. (2023). *Meningsfuldhed for eleverne på erhvervsuddannelserne. Et pilotprojekt som del af forskningsprojektet, 'Skabelse og oplevelse af meningsfuldhed i overgangen fra skole til oplæring'* [Eng: Meaningfulness for students in VET. A pilot project as part of the research project, 'Creation and perception of meaningfulness in the transition from school to apprenticeship']. Aarhus Universitet & Københavns Professionshøjskole.
- Aarkrog, V. & Wahlgren, B. (2022). *Sammenhæng mellem teori og praksis i erhvervsuddannelserne. Pædagogisk Indblik 18*. Aarhus Universitet.
- Aarkrog & Wahlgren (2020) *Videnskortlægning. Undervisningsmiljø i erhvervsuddannelserne*. Aarhus Universitet.
- Andersen, O.D., Benthien, F.L., Hersom, H., Hjermov, P. & Pedersen, L. (2022). *Stem-relaterede grundfag i erhvervsuddannelserne. En undersøgelse af motiverende, helhedsorienteret undervisning*. NCE, KP.
- Asplund, S.-B., Kilbrink, N. & Asghari, H. (2021). Visualising the intended practical doing: Future-oriented movements in Swedish vocational school workshop settings. *International Journal for Research in Vocational Education and Training*, 8(2), 160–185.
- Ausubel, D. P. (1968). *Educational Psychology: A Cognitive View*. Grune and Stratton.
- Billett, S., Stalder, B., Aarkrog, V. Choy, S., Hodge, S., & Le, A. (eds.). (2022). *The standing of vocational education and the occupations it serves. Current concerns and strategies for enhancing that standing*. Springer. <https://doi.org/10.1007/978-3-030-96237-1>
- Brito, L. P., Almeida, L. S. & Osório, A. J. (2021). Seeing in believing: impact of digital simulation pedagogical use in spatial geometry classes. *International Journal of Technology in Teaching and Learning*, 17(2), 109-123.
- Epinion & DPU (2020). *God praksis for undervisningsmiljøer på erhvervsuddannelserne*. Børne- og Undervisningsministeriet, Styrelsen for Undervisning og Kvalitet (STUK).
- EVA (2013). *Sammenhæng mellem skole og praktik: Evaluering af skolers og virksomheders arbejde med at understøtte sammenhæng i tekniske erhvervsuddannelsers hovedforløb*. Evalueringsinstituttet.
- Farrugia, D. (2019). How Youth Become Workers: Identity, Inequality and the Post-Fordist Self. *Journal of sociology* 55(4), 708–723.
- Hansen, G. & Utvær, B. K. (2022). Sense of coherence among apprentices in vocational education and training in Norway: Exploring the general resistance resources. *International Journal for Research in Vocational Education and Training (IJRVET)*, Vol. 9, (3), 363–389.
- Hersom, H., Andersen, O. D., Østergaard, J. T. & Allermand, G. (2019). *Stolthed i erhvervsuddannelserne: resultater af en undersøgelse*. Nationalt Center for Erhvervspædagogik.
- Hinojosa, L. M. N. & Arévalo, M. L. S. (2022). Design and Psychometric Properties of the Strategies for Meaningful Learning Scale. *European Journal of Educational Research Volume 11*, (3), 1413 – 1425.

- Hsbollah, H. M., & Hassan, H. (2022). Creating meaningful learning experiences with active, fun, and technology elements in the problem-based learning approach and its implications. *Malaysian Journal of Learning & Instruction*, 19(1), 147-181.
- Howland, J., Jonassen, D. H., & Marra, R. M. (2012). *Meaningful learning with technology. (4th ed.)*. Columbus, OH: Merrill/ Prentice-Hall.
- Johansson, M. W., Wärvik, G.-B. & Choy, S. (2019). Vocationalising specialized concepts: appropriating meanings through feedback. *Vocations and Learning* 12, 197–215.
- Jonassen, D. H., Howland, J., Moore, J. & Marra, R. M. (2003). *Learning to solve problems with technology: A constructivist perspective*. New Jersey: Merrill Prentice Hall.
- Koskinen, R., & Pitkäniemi, H. (2022). Meaningful Learning in Mathematics: A Research Synthesis of Teaching Approaches. *International Electronic Journal of Mathematics Education*, 17(2), 1-15.
- Martela, F., Ryan, R. M. & Steger, M. F. (2018). Meaningfulness as satisfaction of autonomy, competence, relatedness, and beneficence: Comparing the four satisfactions and positive affect as predictors of meaning in life. *Journal of Happiness Studies: An Interdisciplinary Forum on Subjective Well-Being*, 19(5), 1261–1282.
- Morgan DL. (2010). Reconsidering the Role of Interaction in Analyzing and Reporting Focus Groups. *Qualitative Health Research*. 20(5), 718-722.
- Nordby, M., Knain, E. & Jónsdóttir, G. (2017). Vocational students' meaning-making in school science – negotiating authenticity through multimodal mobile learning. *Nordina: Nordic Studies in Science Education* 13(1), 52-65.
- Ravn, I. (2008). Mening i arbejdslivet – definition og konceptualisering. *Tidsskrift for Arbejdsliv*, 10(4), 59-75.
- Ryan, R. M. & Deci, E. L. (2017). *Self-Determination Theory: Basic Psychological Needs in Motivation, Development, and Wellness*. New York, NY: Guilford Press.
- Schmid, E., Jørstad, B. & Nordlie, G. S. (2021). How schools contribute to keeping students on track: Narratives from vulnerable students in vocational education and training. *NJVET, Vol. 11, (3)*, 47–65.
- Tüzün, Ü.N., Tüysüz, M. & Türk, G. E. (2021). The Effect of Argumentation-Based Organic Chemistry Teaching on Students' Argument Construction Skills. *International Journal of Contemporary Educational Research Volume 8, (2)*, 46-56.
- Vähäsantanen, K., Räikkönen, E., Paloniemi, S., Hökkä, P. & Eteläpelto, E. (2019). A Novel Instrument to Measure the Multidimensional Structure of Professional Agency. *Vocations and Learning* 12, 267–295.
- Xiaofang, B. (2021). Moving from fragmented to seamless sense-making in blended learning. *International Journal for Research in Vocational Education and Training (IJRVET), Vol. 8(3)*, 251–275.
- Wenger, E. (1998). *Communities of practice: Learning, meaning and identity*. Cambridge University Press

Biographical notes

Dr Vibe Aarkrog is associate professor at Aarhus University and professor II at Oslo Metropolitan University. Her research concerns VET pedagogy and 'didactic' focusing on transfer of learning, on the interrelation of theory and practice of school-based and workplace-based training, VET learning environments and dropout.

Dr Anne Katrine Kamstrup is assistant professor at University College Copenhagen. Her research focuses on various aspects of Vocational Education and Training (VET), with a particular emphasis on the collaborative efforts between schools, workplaces, and students/apprentices in creating learning environments.

Albizu Echevarria, M., Gamboa, J. P., Moso Díez, M., Monaca-Soto, A., (2023). A regional forecasting tool to estimate the horizontal mismatch between VET supply and labour market demand 2022 - 2030. In C. Nägele, N. Kersh, & B. E. Stalder (Eds.), *Trends in vocational education and training research, Vol. VI. Proceedings of the European Conference on Educational Research (ECER), Vocational Education and Training Network (VETNET)* (pp. 8–16). <https://doi.org/10.5281/zenodo.8208319>

A Regional Forecasting Tool to Estimate the Horizontal Mismatch Between VET Supply and Labour Market Demand 2022 - 2030

Albizu Echevarria, Mikel

mikel.albizu@orquestra.deusto.es, Orkestra–Basque Institute of Competitiveness, University of Deusto

Gamboa, Juan P.

juan.gamboa@orquestra.deusto.es, Orkestra–Basque Institute of Competitiveness, University of Deusto

Moso Díez, Mónica

moso.monica@gmail.com, Dualiza Foundation

Monaca-Soto, Antonio

amondacas@gmail.com, Dualiza Foundation

Abstract

Context: The demand for workers in the labour market is changing, and due to that, there is, therefore, a particular need to develop systems for forecasting labour demand. To this end, Cedefop has developed a tool that provides comprehensive estimates of labour market trends up to 2030 in all EU Member States. Importantly, this tool has two improvement areas. Firstly, its estimates are not directly linked to the system of skills provision, including initial Vocational Education and Training (IVET), and, secondly, the results are not at the regional level, which offers a particularly appropriate scenario for analysing the dynamics generated between human capital and development.

Approach: the main contribution of the article is the development of a new methodology, based on Cedefop’s Spanish estimates, for estimating the degree of horizontal mismatch between the number of graduates with IVET studies by fields of knowledge per Spanish region and the number of job opportunities by economic sector (NACE code letter) between 2022 and 2030.

Findings: The horizontal mismatch in the construction sector is very pronounced. This is also the case for agriculture and fishing, and manufacturing. The services sector is balanced.

Conclusion: Technical occupations will continue to be relevant in the current and future labour market, although these occupations will likely undergo intrinsic changes. One of these changes should be directed towards the supply of the labour market with people trained in different fields of knowledge.

Keyword: horizontal mismatch, forecasting tool, IVET supply, regional development

1 Context

The demand for workers in the labour market is changing, as it can be evidenced with the vast amount of literature around this topic published during the last two decades. We are in a time of ambiguity and questioning as a result of the integration of different megatrends: digital, green and demographic (Naisbitt & Bisesi, 1983; Opik et al., 2018). There is, therefore, a particular need to develop systems for forecasting labour demand. Matching skills, supply and



demand is crucial for the development of education, economic development and inclusion policies in times of uncertainty.

To this end, Cedefop has developed a tool that provides comprehensive estimates of labour market trends up to 2030¹ in all EU Member States. This tool has two improvement areas. Firstly, its estimates are not directly linked to the system of skills provision, including Initial Vocational Education and Training (IVET). IVET is of particular interest because of its strategic importance for industrial development and employment (Lund & Karlsen, 2020; Spöttl & Windelband, 2021). This importance is greater in some countries (Germany, Denmark, Austria) with a high share of the labour force with post-secondary vocational education (OECD, 2010; Pusterla & Renold, 2022)

Similarly, it provides data at the national level, and as Alfred Marshall (1920) has explained, the concentration of economic activity, innovation and economic performance in certain places is mainly understood in terms of their local labour markets and localised processes of labour force development. In this respect, the regional level offers a particularly appropriate scenario for analysing the dynamics generated between human capital and development (Canal Dominguez, 2021) and to deliver an effective local policy (Sevinc et al., 2020). Other authors have also highlighted the relevance of technical profiles linked to IVET (ILO, 2012) as conducive to regional development (Retegi & Navarro, 2018; Teslenko et al., 2021; Toner & Woolley, 2016). Finally, within the same country, at the regional level, there may be significant differences between VET systems, both in terms of supply and demand for VET workers (Kleinert et al., 2018; Moso-Diez et al., 2022; Schuster & Margarian, 2021; Weßling et al., 2015).

For all the above reasons, the main contribution of the article is the development of a new methodology for estimating the degree of horizontal mismatch between the number of graduates with IVET studies by fields of knowledge per Spanish region between 2022 and 2030 and the number of job opportunities by economic sector (NACE code letter) in the same period of time associated to these IVET professional field. This type of mismatch, known as 'horizontal mismatch' (Robst, 2007), occurs when a worker's job is not related to his or her field of study. This type of mismatch is also known as 'field of study mismatch' and allows us to know whether VET fields of study are properly aligned with labour market demands at the regional level. Among other things, the proper matching of supply and demand in the labour market can increase the productivity of firms, because when individuals are well matched to their occupations, the knowledge and skills acquired through education are optimally used in the labour market (Somers et al., 2019).

This tool is built based on Cedefop estimates and the Spanish Labour Force Survey, two accessible sources that would allow it to be replicated and improved for the rest of the regions in all EU-27 countries.

2 Approach: Methodology, Methods, Research Instruments or Sources Used

The main contributions of the new methodology presented in this article are:

- To estimate the number of IVET-related job opportunities to be created from 2022 to 2030
- To link IVET-related job opportunities to the education system by calculating the horizontal mismatch for the same period
- To develop a forecasting tool that could be replicated into other regions within the EU-27

To this end, a forecasting tool has been developed, and it has 5 stages.

¹ In April 2023, Cedefop updated its estimates. They now range from 2022 to 2035.

2.1 Estimation of the net change of employment between 2022-2030 in the Spanish regions.

First, the Cedefop Skills Forecast model is used to calculate the Spanish sectoral inter-annual rate of change in employment from 2022-2030. These estimates are then applied to the 2021 Labour Force Survey (LFS) results for the Spanish regions by economic activity (NACE code letters).

2.2 Estimation of the global amount of job opportunities (expansion/contraction and replacement) at a regional level

Cedefop's estimates make it feasible to distinguish between the job opportunities created each year in a given labour market as a result of two main sources:

- On the one hand, by 2030, some economic sectors will employ more people globally (expanding), while others will employ fewer (contracting).
- In parallel, other job opportunities will be created by replacing existing workers who leave the labour market (due to retirement, disability, etc). Cedefop has calculated the total number of replacement job opportunities by economic sectors at the national level between 2018 and 2030. Due to that, we take the national average for the period by sector to adjust it to the regional level. In this regard, there are considerable regional differences in employment by age in Spain. In some regions, the working population is characterised by a high degree of ageing (e.g. Asturias, Basque Country, Castilla y León). To carry out this operation, Spanish social security data were used to calculate the percentage of people aged over 55 for each region and sector. On the basis of this calculation, the national average was corrected and adjusted to the regional level.

Finally, in this stage, the annual average replacement job opportunities by sector are added to the annual expansion/contraction opportunities. The final result can be considered as the total job opportunities.

3 Allocation of job opportunities to IVET

In order to estimate the employment opportunities attributable to VET, we have taken as a reference the evolution of the percentage of the employed population with intermediate and advanced VET studies in each sector (CNAE letter) from 2014 to 2021. On this basis, the evolution of the percentage of the employed population with VET studies in the employment of each sector from 2022 to 2030 has been estimated using the method of least squares. These percentages were then applied to the total employment opportunities for the same period to obtain the absolute and gross number of opportunities attributable to VET.

A positive adjustment factor has been applied to gross employment opportunities to take account of the potential impact of the exceptional event of the entry into effect of the groundbreaking Organic Law on the Organisation and Integration of Vocational Training. This law will lead to a transformation of the system, among other things through a greater allocation of resources, which will be reflected in an increase in the number of training places offered. This is expected to increase the number of IVET graduates who will eventually be effectively integrated into the labour market and, as a result, increase the weight of IVET in the working population.

The mechanism by which the VET Act is expected to affect the number of IVET graduates is based on the assumption that the Act will bring Spain closer to the EU-14 as a whole in terms of the percentage of VET graduates out of the total number of post-compulsory graduates (excluding Masters and PhDs). The EU-14 has been chosen as a reference, as it is made up of the most advanced countries in the EU in terms of education and is more comparable to Spain.

These countries have education systems with an occupational structure in which the weight of vocational training is higher.

The adjustment factor has been calculated as the average difference in percentage points between 2016 and 2020 between the number of graduates in IVET (ISCED 35, 45 and 554) and the number of graduates in post-compulsory education (up to university level: ISCED 3-6) aged 15-29 for the EU-14 as a whole and for Spain.

The average of the resulting five-year gap, calculated on the basis of Eurostat data, is 4.5 points. The Organic Law on VET is therefore expected to reduce this gap between Spain and the EU-14 from 2026 onwards, when its effects are expected to be noticed. Thus, a cumulative growth of 4.5 points has been applied to the percentage of employment opportunities for VET between 2026 and 2030. This positive average has been applied to all sectors using the cumulative rate of change.

4 Connection between each economic sector to the IVET fields of knowledge

In Spain, the VET system is divided among 26 different fields of knowledge as it can be seen in the (Table 1). The fields of knowledge, also known as professional branches, are the set of qualifications into which the Spanish National System for Qualifications and Vocational Education and Training are structured. The four main economic sectors (Table 1) can be linked to IVET fields of knowledge using a correspondence table elaborated by the Spanish Employment Public Service (known as SEPE in Spain).

Table 1
Sectoral linking of Spanish IVET fields of knowledge

Sector	VET fields of knowledge
Agriculture, fisheries, mining and energy	Agriculture
	Energy and Water
	Maritime and Fishing Industry
	Extraction Industry
Manufacturing	Electricity and Electronics
	Mechanical Manufacturing
	Food Industry
	Installation and Maintenance
	Wood, Furniture and Cork
	Chemistry
	Security and Environment
	Textiles, Clothing Industry and Leather
	Glass and Ceramics
	Construction
Physical and Sports Activity	
Services	Administration and Management
	Graphic Arts
	Arts and Crafts
	Trade and Marketing
	Hospitality and tourism
	Personal Image
	Image and Sound
	Information and Communication Technology
	Health
	Sociocultural and Community Services
Transport and Vehicles Maintenance	

5 Estimation of the IVET job opportunities by professional fields and the estimation of horizontal mismatch

The annual IVET job opportunities by main sector are crossed with the number of graduates that are effectively entering into the labour market linked in 2022 for each related field of knowledge (Table 1). At this point it is important to emphasise that not all IVET graduates enter the labour market after completing their studies. Some of them continue their studies at a higher level of VET or at university. For this reason, we have corrected this figure using data from the Spanish Survey on the Transition from Education to Work (known as ETEFIL). According to this, 63% of the annual IVET graduates enter the labour market.

Table 2

Methodological stages to calculate the regional horizontal mismatch

	Name of the Stage	Source(s)
1	Estimation of the net variation of employment between 2022-2030	-Cedefop Skills Forecast -Spanish LFS microdata
2	Estimation of the replacement opportunities between 2022-2030	-Cedefop Skills Forecast -Spanish LFS microdata -Social Security Data
3	Allocation of the job opportunities to IVET	-LFS
4	Connection between each economic sector to the IVET knowledge fields	-SEPE
5	Estimation of the IVET job opportunities by field of knowledge and horizontal mismatch	-LFS -ETEFIL

6 Findings

The results obtained for one of the Spanish regions, namely Andalusia, are shown below. This is because space limitations do not allow us to show the data for each of the 17 regions. In any case, the methodology applied and the data obtained would be similar for each of the Spanish regions.

Between 2022 and 2030, a total of 1,231,921 job opportunities will be created in Andalusia, 87% of which will be replacement opportunities. On the other hand, of the 20 sectors analysed (Table 3), 5 will suffer a total contraction in employment (NACE A, C, H, Q and S). However, these will generate job opportunities as a result of the large number of replacement opportunities that will arise in all sectors. On the contrary, the sectors in which proportionally the highest percentage of opportunities will be generated by expansion will be the NACE: P, J, K and F.

Table 3
Total and IVET job opportunities by sector (NACE letter)

ANDALUSIA (Job opportunities 22-30)	TOTAL Job Op- portuni- ties	EXPAN- SIÓN/CO NTRAC- CION Job Op- portuni- ties	RE- PLACE- MENT Job Op- portuni- ties	% EXP/CO N	% REPL	IVET Job Op- portuni- ties	IVET /TOTAL Job op- portuni- ties
A: Agriculture, forestry and fishing	38.449	- 52.079	90.528	-135%	235%	7.366	19%
B: Mining and quarrying	460	- 928	1.388	-202%	302%	102	22%
C: Manufacturing	59.730	- 17.602	77.332	-29%	129%	21.602	36%
D: Electricity, gas, steam and air-conditioning supply	5.384	811	4.573	15%	85%	1.590	30%
E: Water supply, sewerage, waste management and remediation	8.751	1.509	7.242	17%	83%	2.490	28%
F: Construction	106.666	38.414	68.252	36%	64%	24.516	23%
G: Wholesale and retail trade, repair of motor vehicles and motorcycles	216.554	55.548	161.006	26%	74%	66.217	31%
H: Transportation and storage	46.368	- 1.597	47.965	-3%	103%	12.552	27%
I: Accommodation and food service activities	121.896	18.821	103.076	15%	85%	24.475	20%
J: Information and communication	25.499	9.857	15.642	39%	61%	7.484	29%
K: Financial and insurance activities	28.548	10.370	18.179	36%	64%	4.567	16%
L: Real estate activities	10.140	2.982	7.158	29%	71%	2.553	25%
M: Professional, scientific and technical activities	43.084	1.932	41.152	4%	96%	7.524	17%
N: Administrative and support service activities	80.887	26.700	54.187	33%	67%	18.725	23%
O: Public administration and defense, compulsory social security	132.351	21.829	110.522	16%	84%	28.978	22%
P: Education	111.204	45.561	65.643	41%	59%	10.472	9%
Q: Human health and social work activities	100.140	- 12.326	112.466	-12%	112%	34.153	34%
R: Arts, entertainment and recreation	24.260	3.213	21.047	13%	87%	6.237	26%
S: Other services	21.865	- 5.465	27.330	-25%	125%	16.167	74%
T: Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use	49.684	12.262	37.422	25%	75%	5.527	11%
Total	1.231.921	159.811	1.072.110	13%	87%	303.299	25%

Of the total number of job opportunities offered to the entire working population of Andalusia, more than 300,000 will correspond to people with IVET studies, which would represent slightly less than 25% of the total number of opportunities. It can be seen that in some sectors the percentage of job opportunities for people with IVET studies is higher than in others. This is particularly the case in sectors NACE C, J and Q.

Table 4
Horizontal mismatch estimation by main sectors

ANDALUSIA	TOTAL IVET Job Opportunities	ANNUAL IVET Job Opportunities	TOTAL IVET GRADU- ATES	WORKING IVET GRADU- ATES	HORIZON- TAL MISS- MATCH	% IVET op- portunities/ IVET gradu- ates working
Agriculture, fish- eries, mining and energy	7.366	818	1.663	1.131	313	28%
Manufacturing	25.784	2.865	5.027	3.418	553	16%
Construction	24.516	2.724	328	223	-2.501	-1122%
Services	245.631	27.292	38.507	26.185	-1.107	-4%
Total	303.297	33.699	45.525	30.957	-2.742	-9%

Calculating the horizontal mismatch within the labour market (Table 4), it can be seen that in Andalusia the system graduates around 45,000 people per year. Of these, 31,000 end up actually working, as many IVET graduates continue their studies either within the VET system itself or in higher education. Of the total number of graduates, the system provides the labour market with an annual surplus of 28% in the agricultural sector and 16% in the manufacturing sector. On the other hand, the deficit of people trained for the service sector is 4%, while for the construction sector the annual deficit is enormous, reaching 1122%, i.e. for every 2,724 job opportunities per year, the system graduates 223 people who effectively enter the labour market.

7 Conclusions

Today, in view of the profound changes caused by the megatrends, (digitalisation, polarisation of the labour market, hollowing out...), it seems very pertinent to translate Cedefop's calculations to the regional level and to link them to the training system to promote public policies related to education, among other things. As the literature has shown, an adequate match between the training system and labour market demand is essential to promote economic growth, innovation and social cohesion. In order to do this properly, it is necessary to carry out the analysis from a regional perspective, since in Spain, for example, training systems and the productive fabric differ considerably at regional level. This may be essential for any level of training, but it is even more relevant for VET, whose educational purpose, as Billett (2011) points out, is mainly focused on identifying the knowledge necessary for the effective performance of an occupation.

In this sense, the results for the region of Andalusia show that there is a horizontal mismatch of different magnitudes in all sectors. The sector that seems to be the most adjusted is the services sector, where the education system should provide the labour market with 4% more people per year with studies related to it. This sector is the most relevant in terms of employment and, therefore, the one that will create the most job opportunities until 2030, so, in general, the level of mismatch does not seem particularly high. However, the remaining sectors, although employing a smaller number of workers, show higher levels of mismatch: the fields of knowledge that naturally feed the agricultural sector bring 28% more people into the labour market than they should ideally do, which may lead some of these people to end up in sectors that are unsuitable for the type of training they have received. In the case of the manufacturing sector, the same percentage would reach 16%. In the construction sector, the difference is very significant, reaching 1122%. This means that while there are 2,724 job openings per year, there are 223 people with sector-specific training entering in the sector. This, as in the agricultural sector, is likely to lead to a tendency to recruit people with other training and other low levels

of education, thus stimulating the low-skill traps that have always been closely linked to the construction sector in Spain. In any case, it is evident that in line with the arguments of Brown (2020) and Autor (2015), technical occupations will continue to be very relevant in the current and future labour market, although these occupations are likely to undergo intrinsic changes.

Likewise, it is necessary to highlight a number of limitations which, in our opinion, could improve the tool when applied to other territories. Firstly, it is based on large sectors. For example, in the case of the services sector, which has a considerable diversity of activities, more adjusted estimates could be developed to these subsectors. At the same time, the fields of knowledge selected and linked to economic activities correspond to an ideal scenario, i.e. not all people graduating in this field of knowledge are necessarily linked to the sector associated with their training. Nevertheless, we consider the tool to be very valuable because of its adaptability to other regions in which these improvements can be developed.

Finally, the tool has been designed to be replicated and refined by other scholars in other European regions. The two main statistical sources on which it is based are the LFS and the estimates developed by Cedefop, both of which are accessible at European level. Indeed, Cedefop's estimates were updated in April 2023 and now cover the period up to 2035. The scope of the application of these estimates is also broad, as they can be used to measure the level of horizontal mismatch but also, for instance, to guide reskilling strategies through continuing vocational training. To do this, it is necessary to combine this type of estimation with a more specific knowledge of the transformations undergone by the different occupations associated with VET. Another analytical derivation of the present tool of particular interest which has not been explored in depth is directly related to replacement opportunities. Currently, in view of the ageing of the population in many regions of Europe, it would be highly pertinent to develop analytical tools to establish the extent to which the skills supply system is capable of supplying people workforce to the labour market on an annual basis compared to those who need to be replaced.

References

- Autor, D. H. (2015). Why Are There Still So Many Jobs? The History and Future of Workplace Automation. *The Journal of Economic Perspectives*, 29(3), 3-30. <https://doi.org/10.1257/jep.29.3.3>
- Billett, S. (2011). *Vocational education: Purposes, traditions and prospects*. Springer Science & Business Media.
- Brown, P. (2020). Some observations on the race to higher education, digital technologies and the future of work. *Journal of Education and Work*, 33(7-8), 491-499. <https://doi.org/10.1080/13639080.2020.1852500>
- Canal Dominguez, J. F. (2021). Higher education, regional growth and cohesion: insights from the Spanish case. *Regional Studies*, <https://doi.org/10.1080/00343404.2021.1901870>
- ILO (2012) *International Standard Classification of Occupations. Structure, group definitions and correspondence tables*. ISCO08 (vol. I), Geneva: International Labour Office
- Kleinert, C., Vosseler, A., & Blien, U. (2018). Classifying vocational training markets. *The Annals of Regional Science*, 61(1), 31-48. <https://doi.org/10.1007/s00168-017-0856-z>
- Lund, H. B., & Karlsen, A. (2020). The importance of vocational education institutions in manufacturing regions: adding content to a broad definition of regional innovation systems. *Industry and Innovation*, 27(6), 660-679. <https://doi.org/10.1080/13662716.2019.1616534>
- Moso-Diez, M., Mondaca-Soto, A., Gamboa, J. P., & Albizu-Echevarría, M. (2022). A Quantitative Cross-Regional Analysis of the Spanish VET Systems From a Systemic Approach: From a Regional Comparative VET Research Perspective. *International Journal for Research in Vocational Education and Training*, 9(1), 120-145. <https://doi.org/10.13152/IJRVET.9.1.6>
- Marshall A. (1920) *Principles of Economics* (8th ed.), London: Macmillan
- Naisbitt, J., & Bisesi, M. (1983). Megatrends: Ten New Directions Transforming Our Lives. *Sloan Management Review*, 24(4), 69.
- OECD. (2010). *Learning for Jobs*. <https://doi.org/10.1787/9789264087460-en>
- Opik, R., Kirt, T., & Liiv, I. (2018). Megatrend and Intervention Impact Analyzer for Jobs: A Visualization Method for Labor Market Intelligence. *Journal of Official Statistics*, 34(4), 961-979. <https://doi.org/10.2478/jos-2018-0047>

- Pusterla, F., & Renold, U. (2022). Does ICT affect the demand for vocationally educated workers? *Swiss Journal of Economics and Statistics*, 158(1), 22. <https://doi.org/10.1186/s41937-022-00101-8>
- Retegi, J., & Navarro, M. (2018). Los centros de Formación Profesional ante los retos de las RIS3. El caso de Navarra. *Ekonomiaz*, 94 (1) (pp. 56-77)
- Robst, J. (2007). Education, College Major, and Job Match: Gender Differences in Reasons for Mismatch. *Education Economics*, 15(2), 159-175. <https://doi.org/10.1080/09645290701263070>
- Schuster, K., & Margarian, A. (2021). Vocational training choice from a regional perspective. *Empirical Research in Vocational Education and Training*, 13(1), 1-39. <https://doi.org/10.1186/s40461-020-00105-9>
- Sevinc, D., Green, A., Bryson, J. R., Collinson, S., Riley, R., & Adderley, S. (2020). Ensuring skills are available in the right locations: are we there yet? A regional analysis of qualification gaps. *Regional Studies*, 54(8), 1149-1159. <https://doi.org/10.1080/00343404.2020.1740190>
- Somers, M. A., Cabus, S. J., Groot, W., & Maassen van den Brink, H. (2019). Horizontal mismatch between employment and field of education: Evidence from a systematic literature review. *Journal of Economic Surveys*, 33(2), 567-603. <https://doi.org/10.1111/joes.12271>
- Spöttl, G., & Windelband, L. (2021). The 4th industrial revolution – its impact on vocational skills. *Journal of Education and Work*, 34(1), 29-52. <https://doi.org/10.1080/13639080.2020.1858230>
- Teslenko, V., Melnikov, R., & Bazin, D. (2021). Evaluation of the impact of human capital on innovation activity in Russian regions. *Regional Studies, Regional Science*, 8(1), 109-126. <https://doi.org/10.1080/21681376.2021.1900744>
- Toner, P., & Woolley, R. (2016). Perspectives and debates on vocational education and training, skills and the prospects for innovation. *Revista Espanola De Sociologia*, 25(3), 319-342.
- Weßling, K., Hartung, A., & Hillmert, S. (2015). Spatial structure counts: the relevance of regional labour-market conditions for educational transitions to vocational training. *Empirical Research in Vocational Education and Training*, 7(12), 20-7:12<20. ><https://doi.org/10.1186/s40461-015-0024-6>

Biographical notes

Mikel Albizu Echevarria is a pre-doctoral researcher at Orkestra-Basque Institute of Competitiveness, fully involved in creation of the Spanish VET Observatory. His main research lines are related to job creation in local economies and the role of VET within it.

Dr Juan Pablo Gamboa-Navarro is researcher at Orkestra-Basque Institute of Competitiveness. He leads the research line on VET and the scientific development of the Spanish VET Observatory. Other fields of interest for him are employability and career development.

Dr Mónica Moso-Diez is the Head and Principal Investigator of the R&D Centre of a private non-profit foundation (CaixaBank Dualiza), Spain. Main topics are related to VET system as an innovation ecosystem and sustainability, and VET indicators (Spanish VET Observatory).

Antonio Mondaca-Soto is a Senior Researcher in the R&D unit of a private non-profit foundation, Spain. His research interests focus on quantitative methodologies and statistical analysis on VET, highlighting the Spanish VET Observatory (www.observatoriofp.com).

Avis, J. (2023). Pursuing equity, vocational education and training and social justice. In C. Nägele, N. Kersh, & B. E. Stalder (Eds.), *Trends in vocational education and training research, Vol. VI. Proceedings of the European Conference on Educational Research (ECER), Vocational Education and Training Network (VETNET)* (pp. 17–24). <https://doi.org/10.5281/zenodo.8208329>

Pursuing Equity, Vocational Education and Training and Social Justice

Avis, James

j.avis@hud.ac, j.avis@derby.ac.uk, SEPD, University of Huddersfield, UK, IoE, Derby University, UK

Abstract

Context: The paper seeks to problematise conceptualisations of VET and its relationship to social justice. VET occupies a liminal space between postsecondary and higher education. The paper explores debates that engage with understandings of equity, social justice, VET as well as the constituencies it addresses. Substantively the paper is set in the English context.

Approach: The paper is rooted in policy scholarship, with its methodology set in a critical engagement with the relevant literature, adopting an approach derived from critical theory. The paper examines the available national statistics and policy documents, as well as the discourses used in current research in the field.

Findings: The paper confirms that patterns of inequality have not substantially changed over the last 50 years in relation to VET and the disadvantaged groups it allegedly serves. In addition, it examines the limits and possibilities surrounding VET and its conceptualisations. VET is Janus-like, pointing in a number of different directions. Consequently, it is a site of struggle, as are constructions of equity, equality and meritocracy.

Conclusion: VET and its conceptualisation are sites of struggle. Although its progressive affordances are constrained by the hegemony of capitalist and employer interests, it can be bent to secure community and individual well-being. Importantly, VET is not all of a piece and is amenable to the play of politics.

Keywords: equity, vocational education and training, social justice, equality, equal opportunity, meritocracy, class

1 Introduction

The paper seeks to problematise conceptualisations of VET and its relationship to social justice. VET occupies a liminal space between postsecondary and higher education (Moodie, 2002). The paper explores debates that engage with understandings of equity, social justice and VET, as well as the constituencies it addresses. Substantively the paper is set in the English context.

It addresses four key issues.

1. The secular and ongoing reproduction of inequalities amongst disadvantaged groups in VET
2. Patterns of inequality surrounding VET.
3. Limits and possibilities of conceptualisations of VET.
4. Conceptualisations of equity, equality and meritocracy

There is a current in discussions of work-based learning that associates it with equal opportunity and access to VET credentials, which aims to dignify such labour. This applies particularly to occupational practices that are frequently low paid and filled by disadvantaged groups. But,



- How far can such a strategy take us?
- Is it compromised by VET's construction?
- How does it sit with the social relations in which VET is placed?
- To what extent does it go beyond these?

The paper explores the suggestions that despite a secular interest over the last 50 years in VET and disadvantage, those groups designated as such have remained largely unchanged. See for example:

ONS (2021). *Employment*. <https://www.ethnicity-facts-figures.service.gov.uk/work-pay-and-benefits/employment/employment/latest#title>

The Social Mobility Commission (2020). *Monitoring social mobility 2013-2020*. <https://www.gov.uk/government/publications/monitoring-social-mobility-2013-to-2020>

The Social Mobility Commission (2022a). *State of the Nation 2022*. <https://www.gov.uk/government/publications/state-of-the-nation-2022-a-fresh-approach-to-social-mobility>

Zoellner, D. (2022a). Fashioning groups that inhabit society's fringes: the work of Australian VET research into disadvantage, *Journal of Education policy*, 1-19 <https://doi.org/10.1080/02680939.2022.2156621>

Zoellner notes from an Australian context that over the last 50 years, this research consistently acknowledges the inequalities faced by the disadvantaged, yet there is no significant improvement in the socio-economic position of these groups (see Zoellner, 2022a)

Whilst Zoellner's focus is on Australia, his analysis is applicable to other Western societies, particularly those in the Anglosphere, rooted in neo-liberalism. From a structuralist stance, VET is located within a dynamic economy and labour market that is constantly adapting to socio-economic change as well as to the availability of different pools of labour whilst simultaneously re-constituting patterns of inequality.

1.1 Patterns of inequality surrounding VET

The conclusion of the Social Mobility Commission (2020) remains in place, 'Disadvantaged students aged 16 and over tend to cluster in further education – often the poor relation to schools and universities. The sector is underfunded and undervalued. With the right support and a concerted effort to rebuild its reputation, however, this sector could transform lives for the better' (2020, p.36).

The following table explores ethnicity and participation in further education (ESFA, 2021):

- in the 8 years to July 2019, the total number of people in further education in England fell by 30.6%, from 4.2 million to 2.9 million.
- during the same period, the percentage of people in further education from the Asian, Black, Mixed, and Other ethnic groups increased from 19.3% to 22.6%
- however, the number of students from these ethnic groups decreased from 796,730 to 650,130.
- the number of White students fell by 33.7%, from 3.3 million to 2.2 million.
- in the academic year ending July 2019, White people made up 77.3% of those in further education, and 84.0% of the overall population of England.

The Social Mobility Commission (2022) cites Goldthorpe who argues, 'a situation is emerging that is quite new in modern British history, and one that could have far-reaching socio-political consequences... younger

generations of men and women now face less favourable mobility prospects than did their parents, or their grandparents: that is, are less likely to experience upward mobility and more likely to experience downward mobility' (2022, p. 49).

SMC anticipate that at least,

'In the short term, the challenging set of economic circumstances we face in the UK may widen existing inequalities. This includes between:

- different areas of the country [North South divide]
- the majority and ethnic minority groups
- disabled people and those without disabilities
- the highly educated and those with low qualifications.

Recessions typically have greater adverse effects on more 'marginal' groups of workers since they tend to be the first to lose their jobs' (2022, p. 49).

We could add to this list the increasing significance of in-work poverty (BBC News, 2022c).

This discussion raises questions about the ongoing re-composition of class relations. VET provides some possibilities for short-range social mobility within the working class - what we might describe after Allen and Ainley (2007) as the insecure working/middle class. Some sixteen years after Allen and Ainley's discussion these insecurities have been intensified. The insecure middle class are experiencing increased vulnerabilities and a worsening standard of living as are the insecure working class, though here this is felt more acutely by its most disadvantaged fractions. Erstwhile sections of the middle class increasingly find themselves having more in common with the working class than those at the apogee of the class structure. It is important to recognise the porosity of class relations and the manner in which these are continuously being remade. At the same time, we need to acknowledge that fractions of the working class located in welfare vocationalism face even greater impoverishment.

1.1 Conceptualisations of VET

Wolf (2022), in an argument she claims is applicable to 'continental' VET notes a paradox. She argues that in the university sector vocationalism has become increasingly important but that in the liminal space of VET it has become increasingly marginalised, engaged in by disadvantaged groups and has little occupational purchase.

Writing on the English context Esmond and Atkins (2022) suggest that VET incorporates what they term as a 'welfare vocationalism' and a 'technical elite'. T-levels (Technical) serve a minority of young people who Esmond and Atkins somewhat erroneously describe as a 'technical elite'. These young people are advantaged in comparison to those pursuing less prestigious vocational qualifications but nevertheless face a potentially precarious labour market. This 'technical elite' is not only gendered but also raced. T-levels are to be the equivalent of 3 A levels. Terry and Orr (2022) point out that T-levels have a degree of difficulty that precludes young people who previously would have studied comparable applied work-related qualifications at Level three which were to be equivalent to A levels. Here lies a paradox. T-levels and indeed TVET are thought to provide a pathway to HIVE, higher technical education and social mobility and yet remain a minority route for young people who face the uncertainties surrounding the provision of training places by employers.

For Esmond and Atkins VET addresses two rather different and polarised constituencies a 'technical elite' as against those marginalised and disadvantaged young people pursuing welfare vocationalism. However, both groups can be located within the working class broadly

understood, with the latter facing low waged intermittent employment and the former encountering more secure, though potentially insecure employment.

VET students may encounter in their course forms of criticality, civic and community engagement that extend beyond the narrowly vocational. However, these practices will be set within a socio-economic context that emphasises an instrumentalism that rhetorically prioritises employer needs and waged work – in other words, an orientation towards learning to labour (Avis, 2004) To quote at length from the *Commission on Adult Vocational Teaching and Learning* (CAVTL) (2013, p. 7):

Our vision is of a first-class VET system, which develops the ability to perform in a job, and provides a platform for occupational, personal and educational progression. It must provide learners with both initial routes into work and through-career development, including opportunities to change career... A clear line of sight to work is critical because vocational learners must be able to see why they are learning what they are learning, understand what the development of occupational expertise is all about, and experience the job in its context. The real work context should inform the practice of vocational teaching and learning for learners, teachers and trainer.

In some respects, CAVTL's description of VET is progressive being concerned with the development of labour, though unsurprisingly it is wedded to the formation of workers' subjectivities that seek to match the requirements of capital. There are two points to be made. Firstly, Clarke and Winch (2007, p. 1) echoing CAVTL note that VET is concerned with 'the social development of labour' referring to its contribution to the production and reproduction of labour power. Secondly, VET could encourage learners to develop an 'ability to appreciate the broader economic and civic implications of occupational action' (Winch 2012, p. 179).

The struggle by learners, teachers and occupational groupings for a progressive VET could open-up a debate over what constitutes membership of an occupational or professional community. That is to say, the responsibilities members of the occupation have towards wider society, specific communities and employers. In this instance the contribution of VET could go beyond that of simply addressing the needs of employers, though this poses the question of the relationship of such practices to an anti-capitalist project. Is VET so wedded to serving the needs of employers that it is irreparably limited in its social justice aspirations? Such processes are mediated by learner agency and can serve to open-up the potential for a socially engaged and developmental VET that extends beyond waged labour and that could contribute towards both necessary (Gourevitch, 2022) and really useful labour. The former points towards labour that seeks to ensure the smooth running of the social formation. Much domestic labour would illustrate this as being involved with elder care and that of children. Really useful labour can encompass the above but also refers to that which contributes towards societal and community wellbeing. A broader understanding of VET could accommodate these different facets of labour, which in turn become sites of struggle.

Rhetorically, ideologically and hegemonically VET can be conceptualised to emphasise its closeness to the needs of employers. However, can we conceive of a reconceptualised VET that could make a contribution to societal, community and individual well-being, and thus to social justice? Is such a conceptualisation feasible and yet remain VET? It is important to avoid reifying VET by failing to acknowledge it as a site of contestation that is nevertheless framed by employer interests. Can it be otherwise? It is also necessary to consider the contours of inequality within which VET is located that place a limit on its radical potential and contribution to social justice.

2 Equity, Equality and Meritocracy

These terms are underpinned by some sort of aspiration or notion of fairness, equality of opportunity and that one's position in the social structure is earned on the basis of merit. All these terms are contingent, being subject to ongoing mediation which subtly or not so subtly changes their meaning. Lingard et al (2015) illustrate the shift in conceptualisations of social justice, having shifted from a quasi-social democratic understanding to one that sits comfortably alongside neo-liberalism. Commenting on the Australian context, one that is equally applicable to the UK (Lingard, 2021, p. 346) suggest:

Until the early 1980s social justice had been thought of as equality of opportunity demanding redistributive funding to schools located in poorer communities. There was some debate around whether the stress should be on equality of opportunity or outcomes. This was a conceptual, philosophical debate, working with a social democratic definition.

Lingard et al (2014) point towards the philosophical underpinning of social democracy citing approvingly Fraser's discussion of social justice. Fraser (2013) suggests that social justice involves parity of participation allied with a politics of redistribution, recognition and representation (Avis, 2016, p. 3).

However, there are a number of issues that need to be addressed. Social democracy carries with it an ideology that favours redistribution, recognition and representation and in this way can serve as a resource in the struggle for social justice, one which can be aligned with leftist, feminist and anti-racist politics. It seeks to move the social formation in progressive directions, but this potentiality will depend on the outcome of struggle and is also vulnerable to reversal and co-optation. Firstly, it is necessary to acknowledge the brakes placed on the development of progressive possibilities under social democracy - after all this settlement was set within an acceptance of capitalist relations. Secondly, we need to recognise the ongoing reproduction of intersectional relations in terms of class, race and gender and surrounding inequalities as well as resistance to these processes.

For Lingard et al. (2014; Lingard, 2021) new public management and the associated development of neo-liberalism served to undermine social democracy and its conceptualisation of equality replacing this with one of equity. This is set within a supranational context in which measurement and performance indicators are used to judge the effectiveness of specific social formations and their education systems. Equity becomes framed by numerical data, measurement and metrics. This calculative and reductive approach serves to eclipse the philosophical underpinning that under social democracy could have been used to judge its contribution to social justice (Lingard et al., 2014). In its stead, we have metrics orientated towards the development of a competitive economy allied to the expansion of human capital. This represents a rather different and technicised understanding of social justice delivered in neo-liberal fashion through the development of a competitive economy - an 'inclusive' economy that is thought to lead to the provision of decent work and wages predicated on the enhancement of human capital. There are two points to make. Firstly, VET has an important role to play in the development of human capital as well as the skills of the workforce that could contribute to a vibrant economy. Secondly, whilst the language of meritocracy, equality, and equal opportunity remain in place these terms are re-accented to align with neo-liberalism and its metrics. However, these ideas could be used as part of a critique to point out the impoverishment of these conceptualisations of social justice in neo-liberalism. In other words, the way in which equality,

opportunity, social justice and meritocracy are mobilised by neo-liberalism can be turned against itself, becoming a critical resource in anti-capitalist struggle.

Much of the research that addresses meritocracy discusses the difficulties the upwardly mobile encounter in for example, the transition to post-secondary education, higher education and specifically, the elite universities. In these circumstances female and male working-class youth, as well as BAME young people may experience a sense of dislocation and alienation – ‘a fish out of water’ (Jin & Ball, S. 2020; Reay et al, 2009). Whilst these students will have acquired the human capital (the credentials that facilitate mobility) they may experience tensions in relation to their habitus and cultural capital in encounters with more privileged learners. In addition, on returning to their communities they may feel distanced and dislocated from family and friends (Jackson & Marsden, 1973). In this example there is a focus on long range mobility that crosses clearly defined class boundaries. But what of short-range mobility that arises between fractions of a class and how does this impact on VET and its learners?

The forms of dislocation experienced by those entering elite universities will be of a qualitatively different order to those who form part of the ‘technical elite’ that Esmond and Atkins (2022) discuss. Indeed, there may not be such a disparity between the ‘technical elite’ and those engaged in welfare vocationalism, with both groups being conceived of as members of the working class and drawn from not dissimilar communities. In addition, we need to be cognisant of the changed participation rates in higher education, particularly in relation to low status HEIs and colleges of further education who serve the more immediate and localised working-class communities (Wolf, 2022; Crozier, 2019). In the case of these institutions there will be a tighter fit between the institutional habitus of the HEI and that of students than would be the case in the elite universities (Reay et al, 2010).

Social democratic versions of equality and equal opportunity offer a more ‘acceptable’ version of capitalism when set against neo-liberal models of equity. Yet both equity and equality models draw on a notion of equal opportunity and gesture towards an unobtainable vision of meritocracy. Both models offer a critique of white male middle class privilege, particularly at the border between the middle and working class – those located in middling jobs. If these critiques were mobilised in social and educational policy they could lead to some amelioration of these inequalities, resulting in a shuffling of positions in the class structure heralded by a rhetorical desire to mobilise the full talents of society. Such a rhetoric is present in both equity and equality models and the concern with a notion of fairness. However, meritocracy is predicated on hierarchical relations that confer advantages to some and disadvantages to others. Notable for its absence is a recognition of the logic of capitalism, its pursuit of accumulation and the presence of a capitalist class.

3 Towards a conclusion

The paper addresses what may at first sight appear to be a number of disparate issues that have a passing relationship with VET. The introduction relates VET research to the on-going construction of disadvantage amongst the constituencies it allegedly serves. There are two points to be made. Firstly, there should be no surprise in this relation to inequality given VETs liminal position. Secondly, an acknowledgement of the diverse groups that VET addresses and seeks to overcome a reified or reductionist notion of VET. Notably, VET addresses a wide-ranging constituency which is reflected in the paper’s discussion of the ‘technical elite’ and welfare vocationalism. This is followed by a discussion of the way in which VET can be conceptualised in a manner that emphasises its closeness to the needs of employers. The paper also seeks to signal the contribution a re-conceptualised VET could make to societal, community and individual well-being. However, it is necessary to consider the contours of inequality within which VET is located that place a limit on its radical potential. The objective of this part of the paper is to locate VET within a contextualisation that touches on the patterns of inequality

present within the English, and more broadly, the British social formation. The aim is to provide a snapshot, a glimpse of patterns of inequality which raise questions about the on-going re-composition of class relations and in particular the manner in which we conceive the insecure working/middle class. In addition, it talks back to the introduction of the paper which refers to iterative processes that define and re-define the disadvantaged groups that VET serves. In the UK the provision of free school meals is used as a marker of disadvantaged children. This is a highly restrictive definition that ignores those lying at the margins and serves to narrow understandings of inequality, pointing towards the re-composition of class relations and structures of inequality. We could consider the salience of in-work poverty whereby previously secure groups find themselves facing deprivation and disadvantage. Here we could think about the constitution and re-constitution of in/insecure groups within the working class and the porosity of these relations. We should be alert to the presence of exploitation and oppression that are a feature of capitalist societies. The following section discusses models of equity and equality, the former located within neo-liberalism and the latter, social democracy. Both models draw on notions of meritocracy, equal opportunity and social justice, albeit that these are accented differently. As a result of its narrow focus on the development of human capital and economic competitiveness the equity model, rooted in neo-liberal sensitivities, closes-down a broader socio-political and philosophical engagement, one which the social democratic model would open-up. However, both models are constrained by the way in which meritocracy, equal opportunity and social justice are mobilised. Social justice can be judged on the basis of upward movement within a hierarchal class scale based on occupation. This process can be conjoined with a model of equal opportunity that addresses institutional access and outcomes but falls short of a fully-fledged radical and anti-capitalist project. It readily collapses into an interest in the development of labour power aiming to render the social formation more competitive in the global economy thereby seeking to mobilise the societal pool of human capital. Despite the progressive affordances of social democracy and its interest in utilising the full talents of the working class and disadvantaged members of society, it is trammelled by a technicised focus and the limited number of decent jobs. In addition, the shibboleth of meritocracy would at best lead to a shuffling of class positions and consequently would inevitably fall short of its social justice aspirations - after all it is an ideological formation. Whilst it might appear the paper has little to contribute to broader discussions of VET there are a number of issues that move across social formations, key amongst which is the question of politics - how expansively do we conceive VET? Does it have a role in contributing to societal and community wellbeing through the provision of decent work that extends beyond waged labour. Is there a constant tension towards domestication and appropriation of VET that serves the interests of capital? And finally, is an anti-capitalist VET merely a tautology?

Acknowledgement

The paper is an edited and shortened version of 'In pursuit of Equity, Vocational Education and Training and Social Justice' in *Research in Post-Compulsory Education*, in press

References

- Allen, M., Ainley, P. (2007). *Education make you fick, innit? What's gone wrong in England's schools, colleges and universities and how to start putting it right*, Tuffnell press.
- Avis, J. (2004). Work-based learning and social justice: Learning to labour? *Journal of Education and work*, 17(2). 197-217
- Avis, J. (2016). *Social justice, transformation and knowledge: policy. workplace learning and skills*. Routledge.
- Clarke, L., & Winch, c. (2007). Introduction. In L. Clarke & C. Winch (Eds.), *Vocational Education* (pp. 1-18). Routledge.

- Commission on Adult Vocational Teaching and Learning (CAVTL). (2013). *It's about work*. LSIS. www.excellencegateway.org.uk/cavtl
- Crozier, G., Reay, D., & Clayton, J. (2019). Working the borderlands: Working-class students constructing hybrid identities and asserting their place in higher education. *British Journal of Sociology of Education*, 40(7), 922-937. <https://doi.org/10.1080/01425692.2019>
- Esmond, B., Atkins, L. (2022). *Education, skills and social justice in a polarising world*. Routledge
- ESFA. (2021). *Further education participation*, ESFA <https://www.ethnicity-facts-figures.service.gov.uk/education-skills-and-training/a--further-education/further-education-participation/latest#by-ethnicity-over-time>
- Fraser, N. (2013). *Fortunes of feminism: From state-managed capitalism to neoliberal crisis*. Verso Books.
- Gourevitch, A. (2022). Post-work socialism. *Catalyst: a journal of theory and strategy*, 6(2); 1-22. <https://catalyst-journal.com/2022/09/post-work-socialism>
- Jackson, B. Marsden, D. (1973). *Education and the Working Class*. Pelican.
- Jin, J. Ball, S. (2020). Meritocracy, social mobility and a new form of class domination. *British Journal of Sociology of Education*, 41(1), 64-79, DOI:10.1080/01425692.2019.1665496
- Lingard, B. (2021). Multiple temporalities in critical policy sociology in education. *Critical Studies in Education*, 62(3) 338-353
- Lingard, B., Sellar, S. & Savage, G. (2014). Re-articulating social justice as equity in schooling policy: The effects of testing and data infrastructures. *British Journal of Sociology of Education*, 35(5), 710–30.
- Moodie, G. (2002). Identifying vocational education and training. *Journal of Vocational Education and Training*, 54(2) 249-266, DOI: 10.1080/13636820200200197
- ONS (2021). *Employment*. ONS. <https://www.ethnicity-facts-figures.service.gov.uk/work-pay-and-benefits/employment/employment/latest#title>
- The Social Mobility Commission (2020). *Monitoring social mobility 2013-2020*. <https://www.gov.uk/government/publications/monitoring-social-mobility-2013-to-2020>
- The Social Mobility Commission (2022a). *State of the Nation 2022*. <https://www.gov.uk/government/publications/state-of-the-nation-2022-a-fresh-approach-to-social-mobility>
- Terry, R. Orr, K. (2022). *Perceptions of quality in vocational education: The case of English T-Levels*. Paper presented BERA annual conference, the University of Liverpool, 6-8 September
- Winch, C. (2012). *Dimensions of Expertise*. Continuum.
- Wolf, A. (2022). *The paradox of vocational education*. LSE Event. <https://www.youtube.com/watch?v=PbMnn0fWVBc>. Accessed 7 December 2022.
- Zoellner, D. (2022). Fashioning groups that inhabit society's fringes: The work of Australian VET research into disadvantage. *Journal of Education policy*, online, 1-19. <https://doi.org/10.1080/02680939.2022.2156621>

Biographical note

Dr James Avis is an Emeritus Professor at the University of Huddersfield and a Professor of Post-Compulsory Education, IoE, at the University of Derby.

Bayramli, Majid (2023). Azerbaijan's VET sector transformation: The impact of policy borrowing from the EU. In C. Nägele, N. Kersh, & B. E. Stalder (Eds.), *Trends in vocational education and training research, Vol. VI. Proceedings of the European Conference on Educational Research (ECER), Vocational Education and Training Network (VETNET)* (pp. 25–33). <https://doi.org/10.5281/zenodo.8208331>

Azerbaijan's VET Sector Transformation: The Impact of Policy Borrowing from the EU

Bayramli, Majid

m.bayramli.1@research.gla.ac.uk, University of Glasgow

Abstract

Context: International organizations have been increasingly influential in shaping vocational education and training (VET) policies in developing countries. However, the factors that drive the adoption of these policies and the effects of global and national elements on the policy change process are not well researched specifically in the case of relations with the EU and its neighbours. This paper examines the case of Azerbaijan, a non-EU member country that underwent VET system reform with EU assistance.

Approach: The study employs a qualitative research approach and draws on the Cultural Political Economy (CPE) concept and the historical institutionalist perspective. The CPE concept helps to understand how global norms and ideas are translated into national policy, while the historical institutionalist perspective allows for an understanding of the historical processes that have shaped VET system reforms in Azerbaijan. The paper aims to identify the factors that motivated the Azerbaijani government to adopt EU-endorsed VET mechanisms and analyze the political, economic, and cultural aspects that influenced this process.

Findings: The paper analyzes how global and national factors shaped the VET policy reform in Azerbaijan. It shows how the Azerbaijani government cooperated with the EU to adopt the EU-inspired VET system as a solution to domestic challenges, with the EU providing support, knowledge, and technical assistance. It also reveals how local experts and technocrats modified the borrowed mechanisms to suit their political and economic interests. The paper emphasizes the role of global ideological stance of IOs and local governance architecture as major determinants of the policy change process.

Conclusion: The paper shows how the EU influenced the VET policy reform in Azerbaijan, a non-EU member country that diverged from the EU's cultural, economic, and political architecture. The paper reveals how the EU problematized VET underdevelopment, proposed a VET development model, and provided funding and technical assistance that led to the adoption of the EU-inspired VET policy model. The research concludes that policy borrowing is possible even when the international organization does not exercise any obligatory pressure on the country or when the borrower country's context differs from the IO's ideological inclination.

Keywords: Europeanisation, vocational education and training, globalisation, policy borrowing, vet policy reform, EU – Azerbaijan cooperation

1 Introduction

The role of vocational education and training (VET) has been shifting in recent decades with the influence of globalisation and social-economic events such as the economic downturn and financial crises. In this regard, the role of international organisations like UNESCO, the European Union (EU), the World Bank, and the Organization for Economic Cooperation and Development (OECD) in shaping VET policies in developing countries have been debated in



the scholarship (Edwards, 2018; Gilbert & Vines, 2006; Mundy, 1998; Mundy & Verger, 2015). Thus, in Europe, in the case of EU members, various directives featuring mechanisms (like metrics and indicators) were adopted at the macro-institutional level, and states were expected to enact policies that would meet certain models and standards in national VET strategies (Lawn & Lingard, 2002; Witt, 2018). However, the situation differs in the case of non-member European neighbourhood nations, particularly when countries that do not aspire to EU membership follow policies and processes devised by the European Union. This research looks at the experience of Azerbaijan, an EU neighbour country that reformed its VET system based on EU-encouraged policy models and procedures. The study's purpose was to identify the primary factors and elements influencing the Azerbaijani government's decisions to accept EU-supported VET mechanisms within the reform initiative. It also seeks to clarify the contextual (political, economic, and cultural) factors that influence national policymakers in their adoption or rejection of those ideas. The main purpose is to better understand the EU-Azerbaijan policy borrowing in the field of VET and try to identify elements that impact decisions on policy borrowing that go beyond past studies on international political and economic aspects (Langbein & Börzel, 2013).

1.1 Problematization of policy borrowing

Literature on the topic indicates that, on the one hand, neo-institutionalist scholars who endorse the World Culture Theory argue that politicians at the national level are subjected to and subsequently borrow policies backed by international players such as the World Bank or the EU in order to be perceived as legitimate (Ramirez et al., 2016). For these scholars, multinational organisations articulate universal norms, values and virtues, and these common values influence the education policy decisions and preferences of decision-makers operating in different countries, leading to convergence of policies. The soft power of culture plays a leading role in policy borrowing for this group of scholarship, and convergence is a natural phenomenon as a result of the similar policies adopted by the nation-states. Nonetheless, any sort of deviation is classified as „loose coupling“ and acknowledged as an exception to the standard rather than indicating the theory's weakness (Steiner-Khamsi, 2021).

Additionally, a string of scholarship focused on the effects of globalisation on education policies indicate that rather than culture, the economic factor is the main element in policy borrowing. Thus, according to the Globally Structured Agenda for Education (GSAE) concept, the international political economy is the driving force of globalization which also affects the social policies in nation-states. These strings of scholarship observe the emerging complexities of the global capitalist economy and try to determine its impact on educational systems, even as it is implemented nationally (Dale, 2000). Supporters of this idea claim that politicians make VET policy decisions based on international economic and political factors such as conditionality, EU membership, accession, etc. (Sung et al., 2000), and that the participation of international stakeholders in national policy processes is critical to fulfilling national-level education institutional reforms (Edwards & Moschetti, 2021).

There is also a string of scholars, without ignoring the influence of globalisation on the national policy arena, who indicate that policy borrowing cannot be reduced to the formal adoption of specific policies and policy instruments in the national context (Verger & Fontdevila, 2023). Thus, there are factors of a different nature (global, local, material, and ideational) that drive national policymakers towards borrowing of policies but similarly, these factors influence the recontextualization of the borrowed mechanism. Thus, accordingly every nation state is unique as a case that needs to be analysed to understand the motivation of policy borrowing.

The objective of this research is to add to the current global discussions by examining how both global and national elements influence policy adoption and their effects on the institutional framework of VET systems in developing nations. Specifically, this study explores how global

development paradigms and ideas have impacted the VET policy reforms undertaken in Azerbaijan from 2013 to 2019, leading to a notable change in policy direction. However, it is important to acknowledge that the factors behind this policy shift have also influenced political, economic, and social events, which have had a profound impact on the decision-making processes of policy actors.

Although several policy studies have examined the topic and analysed efforts to reform VET systems in Eastern Europe, no systematic research has been conducted thus far to explain the historical processes that shaped the institutional configuration of VET system reforms in post-Soviet countries that are not members of the European Union. This study focuses on the entities responsible for driving change, namely stakeholders, institutions, and policymakers involved in policy adoption. It examines their motivations and the contextual factors surrounding their decision-making process. For this purpose, the research primarily seeks and answers the following questions: To what extent has the EU influenced the reform of the VET system in Azerbaijan? and What are the primary elements (motivations/incentives) that influence Azerbaijan's policymakers' decision to embrace EU-encouraged VET policy models in the VET system reform?

2 Methodology

This study examines the VET policy reform in Azerbaijan as a case study, with a focus on identifying the dominant policy paradigm and mechanism resulting from the reform. Furthermore, the study aims to assess the extent of the EU's influence on the policy change. To achieve these objectives, the study adopts the Cultural Political Economy (CPE) concept developed by Jessop (2010) and enhanced by Verger et al. (2016). This conceptual framework facilitates the understanding of the reasons and methods behind policy dissemination, adoption, and change within the national context, considering the content and ideological drivers involved.

Drawing on previous research that employed the Cultural Political Economy matrix (Maurer, 2012; Sung et al., 2000; Valiente et al., 2020; Verger, 2016) to explore policy borrowing and transfer, this study utilizes the historical institutionalist perspective. It specifically focuses on four factors that influence policy change: Global, Domestic, Soft, and Hard elements. The global material factors examine the economic and political influences of the EU, while the global soft factors identify the cultural and ideational influences shaping policy adoption in Azerbaijan. Simultaneously, the contextual analysis investigates the domestic hard elements that encompass the material factors influencing decisions, and the domestic soft elements explore the local culture and political ideology during decision-making processes.

The pivotal moment of policy change in this study is the adoption of the Law on Vocational Education in Azerbaijan in 2019. This change brought about alterations in the practices and institutional arrangements governing the VET sector, as well as the articulation and justification of new policy objectives, modifications to the policy reference frame, and a shift in underlying philosophical or ideational paradigms (Langbein & Börzel, 2013; Sabatier, 1998). Two types of qualitative data collection were employed to conduct research on this specific topic. In the first stage, policy documents, legislative acts, documentation of EU projects in Azerbaijan, and reports from international organisations were collected. Additionally, elite interviews were conducted with policy makers, policy entrepreneurs, international and local field experts, school managers, and representatives of multilateral organisations to understand the policy adoption process and the key factors influencing decision-making.

Methodologically, this study aims to identify several reasons or historical paths that explain why a global script resonates in a particular context and how it is locally adopted and translated (Verger, 2016). The research employs a critical realist philosophy and a qualitative research methodology. The major findings were derived from a primary examination of grey literature, 20 policy documents, and 24 interviews with high-ranking officials involved in the reform of

the VET sector in Azerbaijan. The themes, categories, and groups of questions are determined based on the CPE conceptual matrix and the documents analysis conducted in initial stage of research.

Consequently, this research employs an interpretative or explanatory case study strategy, following the approaches outlined by Merriam and Yin. This strategy involves the deductive development of conceptual categories to examine initial themes identified from document analysis (Merriam, 1998; Yin, 2014). The case study technique is utilized as it allows for a multi-scalar analysis of a complex phenomenon and enables an in-depth assessment of a single, real-life policy from multiple angles to capture its complexity and uniqueness.

The analysis of documents and interview material utilizes thematic analysis, employing a six-step technique developed by Braun and Clarke (2006, 2021). Thematic analysis is chosen for its ability to approach the material in an open-ended manner, enabling the development of the analysis and reaching conclusions based on both empirical evidence and subjective experiences of participants (Hesse-Biber, 2017). Additionally, discourse analysis (Rogers et al., 2016) of primary qualitative data is conducted using the CPE approach, focusing on examining contextual elements framed within the complexity of intersecting multi-level, multi-scalar (local, national, regional, and global) political forces, social structures, cultural traditions, and economic factors (Verger et al., 2018). The coding of interview data is performed using NVivo qualitative data analysis software. The research has obtained approval from the University of Glasgow College of Social Sciences Ethics Committee.

3 Findings

Drawing on Jessop's Cultural Political Economy (CPE) framework, the policy adoption and change process can be comprehended by three evolutionary mechanisms: variation, selection, and retention (2010). Variation entails the emergence of new practices in a contingent manner, selection involves favouring these practices, and retention encompasses their ongoing implementation. By utilizing the variation, selection, and retention framework, it becomes possible to systematically identify the sequence of contingencies, events, and actions involved in adopting new policy models, as well as the specific factors, both semiotic and non-semiotic, that facilitate or impede policy change. Analysing each of these categories individually allows for developing more nuanced explanations regarding adopting educational policies in particular contexts.

1.2 Variation

Data analysis reveals that both global and national factors, incorporating material and ideational elements, significantly influenced the variation phase of policy change in Azerbaijan's Vocational Education and Training (VET) system. Thus, during the initiation phase of VET policy change, the cooperation between the Azerbaijan government and EU institutions exhibited a rationalistic approach. In other words, the government's top echelons perceived the EU experience as a legitimate model capable of addressing domestic challenges such as the skills gap, demographic pressure, and economic diversification. During this phase, the EU provided support by granting access to knowledge sources, offering technical assistance, and undertaking grand projects to support the transition. The EU's previous experience in assisting the transition of Eastern European former socialist republics also signalled to the government's decision-makers that Azerbaijan could restructure its VET system to bridge the skills gap, align it with the labour market, and meet industry demands for skilled workforce. Importantly, in the initiation phase, the EU and other international organizations played a significant role in drawing attention to the issues within the skills development system through reports and white papers that emphasized the urgency of reform.

1.3 Selection

Conversely, during the selection phase of policy change, the decision-makers at the top levels of the government embraced the EU's models for VET system restructuring, incorporating local experts and technocrats. At the operational level, experts identified a discrepancy between the existing VET system model and the EU model, which the top decision-makers perceived as a legitimate replacement. In this context, the EU supported the design of a VET model that emphasized employer integration, viewed as a form of decentralization within the VET system. Additionally, the EU proposed a cost-sharing model for financing skills development. Although local technocrats warned about contextual obstacles such as the centralized governance structure and the unorganized private sector, which could hinder the implementation of the EU model, the promise of cost-sharing proved appealing to the decision-makers and played a key role in selecting this model. While the initial motivation to embrace the EU-recommended VET model for restructuring was primarily pragmatic, the selection phase was influenced by internal politics, institutional configurations, and the EU's limited knowledge of Azerbaijan's internal decision-making processes. Nevertheless, the EU model, with its focus on employer integration and meeting labour market demands, was ultimately adopted.

1.4 Retention

Consequently, the retention of the chosen policy structure involved minimal involvement from the EU and primarily relied on the participation of local authorities. As the policy direction was determined at higher levels of the state apparatus, institutions and actors at the middle level focused on leveraging the situation and adjusting borrowing mechanisms to maximize their political and economic benefits. Consequently, although the main mechanism for involving employers in the VET system was adopted, the enabling factors necessary for the system to function were omitted from the final legal act. Internal conflicts between institutions and actors in the policy process affected the retention of the main elements of the EU model of skills development. However, it is important to note that the opposition did not solely target the EU model of VET development but rather centred around the specific tools and mechanisms used to implement the selected policy.

Overall, the factors influencing the policy change is indicated in Table 1. The findings of this research indicate that the EU played a significant role in both problematization and the selection of appropriate policy solutions in Azerbaijan's VET system. Specifically, the EU advised the government through the European Training Foundation (ETF) on the problematization of the human capital issue and proposed a VET development model that could be identified as a European model of VET development. In addition, the EU funded a technical assistance project to advise and support the development of the Law on Vocational Education.

Table 1

Factors that influenced the policy change in the VET sector of Azerbaijan.

	Variation		Selection		Retention	
	Ideational	Material	Ideational	Material	Ideational	Material
Global	Problematization of human capital issue	Migrant workers	Cost sharing mechanism	World bank reforms	National Qualifications framework	
				Availability of EU best practice		
Local	Negative image of soviet past	Skills shortage	Centralized governance	Role of Ministry of Education	Negative image of Soviet past	Political power of VET Agency
		Youth demographic change	Paradigm shift to human capital		Low expectations from society	

4 Recontextualization

The European model of VET was appealing to local actors because of its promise to integrate employers into the education system. In other words, the European model envisaged a decentralized VET system with a heavy emphasis on work-based learning, the involvement of employers in decision-making related to the content, governance, and funding of the skills development system. Given the limited financial support for the VET system, decision-makers in top layers of government aimed to involve employers in both content development and funding the skills development system. However, the Ministry of Education was not keen to decentralize the governance of the VET system and give more authority to VET schools and employers. This was primarily due to the limited capacity of the unorganized private sector, insufficient capacity of VET institutions, as well as corporate interests of the Ministry itself.

Thus, the European model of VET, which is more enterprise-led or social partnership-driven and decentralized, made it to the policy agenda and the policy document (the Law on Vocational Education). However, its functionality within a centralized governance system based on a government-led skills development tradition was problematic. Mainly because the primary elements that would enable the enterprise-led or social partnership-driven skills development system in Azerbaijan, including stimulating the private sector with certain cooperation mechanisms and giving more autonomy to govern the VET institutions, including involving employers in governance, were omitted from the new policy. In fact, the government was willing to share the cost of the VET system but not willing to change the governance or financing structure of the skills development to enable the new system.

Overall, the Soviet and socialist past of the country, which had deep sociological roots, as well as the capacity of all local decision-makers, affected the policy change process. The aim to modernize the skills development system to make it responsive to the needs of the labour market was hindered by the unstructured labour market players and the government's unwillingness to make changes in the governance system. The findings of this research showed that Azerbaijan borrowed EU practices in the VET was mainly a pragmatic move by the government aimed to tackle domestic challenges. However, in the later stages the local experts identified that the borrowed package is not completely relevant to the political architecture of the country.

Although some interviewees representing the EU institutions indicated that the relationship in the VET sector between Azerbaijan and the EU during the policy change process was not a policy lending and the EU did not put a condition to change the VET system to a certain way, this study finds that „the menu of the solutions” that was offered to change the VET and address the domestic challenges were limited. In fact, Azerbaijan was free to choose its own model of VET. Still, the EU did not offer any model that would be relevant to the phase of the economic and social development of the country.

5 Conclusion

The literature on this topic indicates that the EU's involvement in the post-Soviet space is fairly monotonous in its relationship with the regional nation-states and that the main motivation of the EU concerning the region was security, and its strategy towards the nation-states was to spread democracy accompanied by a liberal market economy in order to achieve its main goal.

As indicated in this study, the vision of the Azerbaijani government towards economic growth was not in line with the EU's concept of modernization. In other words, the government was seeking to keep the centralized system of governance, did not intend to build its economic system on a liberal market economy with delegating most of its functions to the private sector, and would rather build its economic system on a state capitalist model similar to Russia or China, where the main economic activity had been around state-owned enterprises. In addition to this, although the government had been aiming to diversify the economy, its main source of state income derived from the extraction and export of resources. In fact, most of the resource exports were to the European Union, making the EU the largest economic partner of Azerbaijan.

From the picture described above, it is obvious that, at first glance, the EU's and Azerbaijan's visions diverge in almost all spheres of cooperation. Having security as the main priority towards the region, the EU's cooperation with Azerbaijan was heavily dictated by the energy security of its member states. On the other hand, Azerbaijan's main priority was mainly economic in nature, by exporting its natural resources to the EU member states. Interestingly, the aim of the government of Azerbaijan was rather to build bilateral relationships with different members of the union, rather than building binding cooperation with the EU. Needless to say, the government of Azerbaijan cannot afford to ignore the institutional power and capacity of the European Union but shifts its cooperation focus from the union to the member states depending on the political or economic agenda in the EU, Azerbaijan, or any of the member states.

The research findings of this case study support the idea that the policy borrowing is possible even when the international organization does not exercise any obligatory pressure on the country or when the cultural, economic, and political architecture of the borrower country diverge from the IO's ideological inclination. Furthermore, external pressure is not enough to converge in VET policy, and it is interpreted differently by policymakers, and this can lead to different responses in each political and social context and depending on the priorities of local actors (Valiente et al., 2020). This is because the education sector creates its own demand independent from economic reality most of the time triggered by the social demand. In case of the education sector, although in the 21st century many scholars claim that education and economy are connected by tight coupling (Steiner-Khamsi, 2021), the social demand plays a significant role when borrowing and shaping policies. This reality is highly affected by the political architecture, as well as institutional capacity in the country. Hence, even though international actors like the EU play a role of knowledge hub and influence the spread of policy ideas in the form of programs, the translation of these programs in the local context changes elements of this policy. In addition, this research also supported the idea that path dependency makes it exceedingly difficult to effect dramatic change even after the policies were adopted. This may lead to EU instruments such as the European Qualifications Framework and the European

Credit System for Vocational Education and Training being implemented in line with national training systems rather than transforming them. This supports the idea that when the borrowed policy does not match the cultural, political, economic structure of the borrower country, it remains as a symbolic policy and policy convergence is mostly discursive.

References

- Braun, V., & Clarke, V. (2006, 2006-01-01). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. <https://doi.org/10.1191/1478088706qp063oa>
- Braun, V., & Clarke, V. (2021, 2021-07-03). One size fits all? What counts as quality practice in (reflexive) thematic analysis? *Qualitative Research in Psychology*, 18(3), 328-352. <https://doi.org/10.1080/14780887.2020.1769238>
- Dale, R. (2000, 2000-12-01). Globalization and education: demonstrating a „common world educational culture“ or locating a „globally structured educational agenda“? *Educational Theory*, 50(4), 427-448. <https://doi.org/10.1111/j.1741-5446.2000.00427.x>
- Edwards, D. B. (2018). A Political Economy Perspective on Knowledge Production. In *Global Education Policy, Impact Evaluations, and Alternatives* (pp. 1-22). Springer International Publishing. https://doi.org/10.1007/978-3-319-75142-9_1
- Edwards, D. B., & Moschetti, M. (2021, 2021-01-01). The sociology of policy change within international organisations: beyond coercive and normative perspectives – towards circuits of power. *Globalisation, Societies and Education*, 19(1), 55-69. <https://doi.org/10.1080/14767724.2020.1806043>
- Gilbert, C. L., & Vines, D. (2006). *The World Bank: Structure and Policies*. Cambridge University Press. https://books.google.az/books/about/The_World_Bank.html?id=q4quzgEACAAJ&redir_esc=y
- Hesse-Biber, S. N. (2017). *The practice of qualitative research: engaging students in the research process* (Third ed.). SAGE Publications, Inc. <https://go.exlibris.link/P1wJ90hn>
- Jessop, B. (2010, 2010-04-28). Cultural political economy and critical policy studies. *Critical Policy Studies*, 3(3-4), 336-356. <https://doi.org/10.1080/19460171003619741>
- Langbein, J., & Börzel, T. A. (2013, 2013-06-01). Introduction: Explaining Policy Change in the European Union's Eastern Neighbourhood. *Europe-Asia Studies*, 65(4), 571-580. <https://doi.org/10.1080/09668136.2013.766042>
- Lawn, M., & Lingard, B. (2002, 2002-06-01). Constructing a European Policy Space in Educational Governance: The Role of Transnational Policy Actors. *European Educational Research Journal*, 1(2), 290-307. <https://doi.org/10.2304/eej.2002.1.2.6>
- Maurer, M. (2012, 2012-11-01). Structural elaboration of technical and vocational education and training systems in developing countries: the cases of Sri Lanka and Bangladesh. *Comparative Education*, 48(4), 487-503. <https://doi.org/10.1080/03050068.2012.702011>
- Merriam, S. B. (1998). *Qualitative Research and Case Study Applications in Education. Revised and Expanded from “ Case Study Research in Education. “. ERIC.*
- Mundy, K. (1998). Educational Multilateralism and World (Dis)Order. *Comparative Education Review*, 42(4), 448-478. <http://www.jstor.org/stable/1188855>
- Mundy, K., & Verger, A. (2015, 2015-01-01). The World Bank and the global governance of education in a changing world order. *International Journal of Educational Development*, 40, 9-18. <https://doi.org/10.1016/j.ijedudev.2014.11.021>
- Ramirez, F. O., Meyer, J. W., & Lerch, J. (2016). World Society and the Globalization of Educational Policy. In *The Handbook of Global Education Policy* (pp. 43-63). <https://doi.org/https://doi.org/10.1002/9781118468005.ch2>
- Rogers, R., Schaenen, I., Schott, C., O'Brien, K., Trigos-Carrillo, L., Starkey, K., & Chasteen, C. C. (2016, 2016-12-01). Critical Discourse Analysis in Education. *Review of Educational Research*, 86(4), 1192-1226. <https://doi.org/10.3102/0034654316628993>
- Sabatier, P. A. (1998, 1998-03-01). The advocacy coalition framework: revisions and relevance for Europe. *Journal of European Public Policy*, 5(1), 98-130. <https://doi.org/10.1080/13501768880000051>
- Steiner-Khamsi, G. (2021, 2021-07-03). Policy Borrowing and Lending Research in Comparative Education. *Comparative Education*, 57(3). <https://doi.org/10.1080/03050068.2021.1937820>
- Sung, J., Turbin, J., & Ashton, D. (2000, 2000-03-01). Towards A Framework For The Comparative Analysis Of National Systems Of Skill Formation. *International Journal of Training and Development*, 4(1), 8-25. <https://doi.org/10.1111/1468-2419.00093>
- Valiente, O., Sepúlveda, L., & Zancajo, A. (2020, 2020-10-15). Development paradigms in the institutional configuration of vocational education and training in Chile (1964-2005). *Journal of Vocational Education & Training*, 1-17. <https://doi.org/10.1080/13636820.2020.1833076>

- Verger, A. (2016). The Global Diffusion of Education Privatization. In (pp. 64-80). <https://doi.org/10.1002/9781118468005.ch3>
- Verger, A., & Fontdevila, C. (2023). Ongoing Directions in Global Studies in Education Policy: Something Old, Something New, Something Borrowed in *Handbook of Education Policy Research (2nd edition)*. American Educational Research Association.
- Verger, A., Novelli, M., & Altinyelken, H. K. (2018). *Global education policy and international development: new agendas, issues and policies* (Second ed.). Bloomsbury Academic. <https://go.exlibris.link/1XZZMpLK>
- Witt, M. A. (2018). Transnational Education Policy and a Globally Competitive Workforce: A Comparative Analysis of Vocational Education and Training Policy in the European Union and the United States. In *Handbook of Comparative Studies on Community Colleges and Global Counterparts* (pp. 83-98). Springer International Publishing. https://doi.org/10.1007/978-3-319-50911-2_4
- Yin, R. K. (2014). *Case study research: design and methods* (Fifth ed.). SAGE Publications.

Biographical notes

Majid Bayramli is a PhD candidate at the University of Glasgow, conducting research on VET policy reforms. He has a background in civil service, working at the Ministry of Education as a VET reform coordinator and a liaison between the EU and Azerbaijan during the reform process.

Benke, M., Rachwał, T., & Haba, A. (2023). Informal learning in secondary VET: The case of Hungary and Poland. In C. Nägele, N. Kersh, & B. E. Stalder (Eds.), *Trends in vocational education and training research, Vol. VI. Proceedings of the European Conference on Educational Research (ECER), Vocational Education and Training Network (VETNET)* (pp. 34–42). <https://doi.org/10.5281/zenodo.8208335>

Informal Learning in Secondary VET: The Case of Hungary and Poland

Benke, Magdolna

magdolna.benke@gmail.com, University of Debrecen, CHERD, Hungary

Rachwał, Tomasz

tj.rachwal@gmail.com, Cracow University of Economics, Poland

Haba, Anikó

aniko.haba@gmail.com, HERA, Hungary

Abstract

Context: The growing attention to informal learning in the world of work raises new questions and tasks for vocational education and training (VET) research. Our research focuses on observation-based cooperative learning emerging among VET students, and also among VET students and adults who they observe at work in the family, on TV, and on the Internet. **Approach:** Our focus group is students, preparing for achieving a vocational qualification at ISCED level 3 in VET schools in some practice-intensive occupations, without direct access to higher education. In a Hungarian-Polish questionnaire survey filled by 131 Hungarian and 110 Polish VET students, we explore the extent of informal learning related to observation and cooperation in the life of the searched students.

Findings: Research shows that the different ways of observing others at work play an important role in the process of learning a profession. The findings also highlighted the importance of friendships and trust among students in this age group, and the strong demand for joint practice.

Conclusion: Friendship and the level of trust among students can influence their decisions during training. The results so far suggest that there is greater scope for group work which is favoured by students and so learning from each other in school workshops, than in company settings. The results confirm the intentions of the survey, but further research on a larger sample is needed to draw broader conclusions.

Keywords: informal learning, observation, cooperative learning, vocational education and training

1 Introduction

Since the pioneering work of Knowles (1950) and Coombs (1974), various interpretations of informal learning have emerged. The European Commission's Memorandum on Lifelong Learning (2000) played a significant role in recognizing the importance of informal learning at the educational and policy level in European countries (Stéber & Kereszty, 2015). Accounting for and acknowledging prior knowledge of informal and non-formal learning are pressing issues in educational research and development. Due to the debates surrounding the interpretation of informal learning, we adopt a broad understanding of the term in this study.

Our focus is on the lower branch of secondary vocational education and training. In practice-intensive occupations, learning the specific work tasks and preparing for their mastery can occur in formal, non-formal, and informal learning settings. Therefore, our research examines



observation-based cooperative learning, among vocational students and the individuals they observe while striving for a vocational qualification at ISCED level 3.

Among the various approaches and definitions of informal learning, we emphasize the work of Werquin (2010). He argues that informal learning is unstructured, lacks defined learning objectives, occurs unintentionally, has an unknown duration, and does not lead to formal qualifications. It encompasses cognitive practice and mastery, including observing and assisting in task-related operations. This involves performing and practicing tasks collaboratively, discussing and planning the task, allocating responsibilities, and evaluating the results. In our research, particular importance is placed on observation and task assistance based on this broad definition.

1.1 The theoretical background to the topic under study

The Connectivism Learning Theory, Situated Cognition, and Social Learning Theory inform this research.

According to Connectivism Learning Theory, learning occurs through various forms and pathways, including communities of practice, personal networks, and work-related tasks. (Siemens, G. 2004, 2018). Building connections and expanding personal networks facilitate the acquisition of new knowledge. The theory highlights the influence of social media and online collaborative tools, particularly among the „digital native“ or „net generation“ of students (Siemens, 2004, 2018; Downes, 2010).

Situated cognition emphasizes learning within contextual situations. Students gain knowledge through observation and practical experiences, emphasizing the importance of relationships and interactions with others to foster understanding. Bandura's social learning theory, focusing on learning through modelling and imitation, also provides theoretical support for studying learning from others (Brown et al., 1989; Lave & Wenger, 1991; Billett, 1996; Bandura, 1986).

Boschma (2005) identifies five dimensions of proximity—cognitive, organizational, social, institutional, and geographical—that are crucial for learning between partners. Learning from each other requires at least one of these dimensions to be met. Similarly, Lengyel (2012) suggests that the further apart two partners are from each other on the social network, the more difficult they are able to learn from each other.

1.2 Scope, sample and conditions of the study

A Polish-Hungarian survey is investigating observation-based cooperative learning among vocational students and those they observe. The study aims to determine the presence of this learning type in the lives of vocational students. The survey targets young students in a 3-year apprenticeship program, obtaining an ISCED level 3 qualification, without direct access to higher education. Their successful job placement after the training is crucial, emphasizing the importance of practical skills for meeting labour market expectations.

In spring 2022, a survey was conducted in one Hungarian vocational school and four Polish vocational schools, focusing on students in the 3-year program. The choice of schools was influenced by specific circumstances, such as a nationwide teachers' strike in Hungary and the task of accommodating Ukrainian refugee children in Polish schools. Despite these challenges, the survey took place in schools with personal familiarity in both countries¹. However, this

¹ We received great help in the Hungarian survey from Alexandra Dorogi, PhD student teacher. In the Polish survey we had help from headmasters and teachers of surveyed schools. We would like to thank them for their work.

choice of study sites limited the original plan of surveying students with the same qualifications or qualification groups in both countries.

The completed survey included responses from 241 vocational students, with 131 from Hungary and 110 from Poland. In Hungary, the sample consisted of one school with students from various qualifications including construction, commerce, catering, and social sectors. In Poland, the sample was more diverse, with students from four schools representing eight sectors such as mechanics, food, hairdressing, cosmetics, hotel, catering, tourism, automotive, mechanical, construction, wood, and furniture².

Significant gender differences were observed between the two countries, with the Hungarian sample having nearly equal proportions of female and male students, while the Polish sample had a significantly lower proportion of female students. Most students in both countries were in the 15-17 age group, but the distribution across grades differed. The Hungarian sample was relatively evenly distributed across grades, while the Polish sample was predominantly composed of 9th-grade students.

The Hungarian school was located in a deprived area in the eastern part of the country, while the Polish sample included schools in both urban and rural areas, with two schools in Krakow and two in rural locations. In terms of residence, the Hungarian sample had a similar proportion of students living in towns and villages, while the Polish sample had almost twice as many students from villages compared to towns. A significant proportion of students in both countries travelled to school daily, with approximately 80% in the Hungarian and just over 50% of Polish students. In the Hungarian sample, a small percentage (4%) of students lived in dormitories, while none of the Polish students resided in dormitories.

In both countries, there is a similarity in the parents' job status among the surveyed students. Approximately half of the students have both parents working, with a slightly higher percentage in Poland, although the difference is insignificant. In over 45% of the families, one parent works in a registered job and receives a regular salary. However, a small percentage (3%) of families face a difficult social situation where neither parent is employed.

1.3 Methods of the research

The survey consists of 37 questions and is structured around five main themes, including: 1) Reasons for choosing a profession; 2) Non-formal elements of vocational learning such as observation, communication, and help; 3) Influences of TV, internet, role models, and famous people; 4) Satisfaction with school achievements and training preferences; and 5) Leisure time spent with friends and on the internet. The research focuses on informal learning through the observation of adults at work, watching professional programs, and collaboration among students. The majority of the questions are closed-ended with intensity-related and multiple-choice options, while open-ended questions are used for personal information and preferences. The term „vocational learning“ encompasses the broader scope of vocational education and training (VET). The survey was self-completed.

2 Results of the research

2.1 The interpretative framework of the survey

We include data from both countries to highlight the significance of the topic and increase the sample size. The comparison between Hungary and Poland is primarily used for contextual purposes and to provide an understanding of how the samples from the two countries differ or

² However, some professions in Polish sample were represented by single persons, therefore only results relating to qualifications represented by more students were included.

align with each other. It is important to note that drawing broader conclusions from the comparison would be misleading due to several factors: the small sample size, the varying social backgrounds of students, the different professions studied, the exclusive representation of students from one school in Hungary, and the predominance of 9th-grade students in the Polish sample.

Any significant differences between the two countries were highlighted, while similar response patterns did not include statistical indicators. This pilot and exploratory research aimed to uncover similarities and connections, without strong prior assumptions about country differences.

2.2 Answers to the survey questions

Motivational aspects in profession-choice

A crucial research concern is the factors considered by young people when selecting a profession. In both countries, interest emerged as the primary motivator, cited by the majority of students. Good earning potential ranked second in importance. Other studied aspects varied in significance. For Hungarian students, proximity and geographic accessibility of vocational education and training were the least influential factors in profession-choice, whereas for Polish students, the recommendation of friends held the least significance.

Practicing the knowledge learned in the school

We assume that an effective way to apply school knowledge at home is by assisting with household tasks related to one's profession. The survey revealed that the majority of students in both countries engage in such activities. Over 90% of Hungarian students and nearly 90% of Polish students help at home. Among Hungarian students, slightly more than 50% help frequently, while almost half of Polish students also reported frequent involvement. Additionally, a significant proportion of students assist friends and acquaintances outside the family when needed. Approximately 75% of Polish students and over 80% of Hungarian students stated they provide help outside the home. Notably, more Polish students reported frequently assisting friends and acquaintances compared to Hungarian students.

Observing adults and learning from them

The research explores the intriguing topic of observing others' work and the subsequent informal learning that takes place. We assumed that this age-old yet crucial form of learning is present in students' daily lives. Interestingly, we discovered notable differences between the two samples. Less than 5% of Hungarian learners indicated never observing adults at work, whereas over 10% of Polish learners gave the same response. There was a significant disparity in the frequency of observing adults at work between the two samples, with a significantly higher proportion of Hungarian students reporting frequent observations. Related to this, we wanted to know whether, by observing adults at work, students were able to learn something that would help them to make or repair something more easily, either alone or with help. Most students think that they learn from adults very often in this way. In this case, the rate of „often” is higher for Polish students. Only a small percentage of students answered that they never learned anything in this way.

Social connections – discussing professions and working together

The role of social connections, such as friendships and schoolmates, in vocational informal learning is significant. These connections involve discussing the studied profession and collaborating on tasks. Our research reveals that a majority of students, approximately 60% of Polish and nearly 70% of Hungarian students, have numerous friends and schoolmates with whom they discuss their profession. Moreover, they enjoy working together, with over 40% of Polish

and over 50% of Hungarian students expressing a strong preference for collaborative tasks. Less than 10% of students do not enjoy working on tasks together, indicating a strong desire for joint learning within their chosen profession. Additionally, in both countries, a significant portion of students wishes to have more group-based tasks during practical sessions. Around two-thirds of Hungarian students and almost 60% of Polish students express a desire for more collaborative exercises.

Roles in the working group – choices related to trust

In collaborative learning and group tasks, the decision to assume a leadership or follower role is significant. The research indicates that students generally prefer to be followers, taking on task-performing or ordinary team member roles. Polish students show a slightly higher willingness to be leaders (nearly 40%) compared to Hungarian students (just over 30%). The importance of social and friendly relationships is also evident. Both Polish and Hungarian students prefer seeking help from a friend rather than the most skilled classmate. This highlights the specific role that friendship and trust play in informal learning.

Studying or doing homework with classmates

A crucial question in the survey focused on studying or doing homework with classmates outside of school. The results indicate that nearly 70% of Hungarian students and approximately 55% of Polish students often engage in studying together, preparing for lessons, exams, tests, or completing homework together.

Regarding studying or doing assignments with classmates, there are notable differences between Hungarian and Polish students in the sample. Generally, Hungarian students show a stronger preference for cooperation, with less than 5% of them never studying together. On the other hand, over 12% of Polish students tend to be more individualistic and prefer learning on their own. However, these findings still highlight the significant importance of this form of informal learning in vocational education for young people.

Student's opinions on broader influences (role models, friends, TV, internet) and pastimes

Regarding the impact of role models and the Internet on learning, there are some differences between Hungarian and Polish students. It was found that a minority of students are influenced by these factors, with slightly higher rates in Poland. In terms of having role models, almost two-thirds of Polish students reported having them, while less than 40% of Hungarian students had role models. Similarly, the question about following famous people yielded similar results for both countries.

In the survey we asked students about their favourite TV programs or internet movie series related to their profession. Polish students showed a higher interest, with around 50-60% answering positively, while Hungarian students had a lower interest, with over 60-70% answering negatively. The difference between the two countries' data is significant, particularly regarding internet movie series.

There is a slightly smaller difference between Hungarian and Polish students regarding their favorite websites. Approximately 50% of Polish students and nearly 40% of Hungarian students mentioned having favorite websites that are both interesting and useful for their chosen profession.

Looking at time spent with friends and online, as confirmed by several previous surveys, it is evident that students spend a significant amount of time on both activities. Polish students tend to spend more than 2 hours a day with friends outside of school on weekdays, according to the survey data. Conversely, Hungarian students dedicate slightly more time to internet usage and online chatting, with approximately 60% of them spending over 2 hours a day on weekdays engaged in these activities.

Answers to open questions³

The survey included some open questions about the wider influences of role models, friends, TV, and the internet. There were relatively few respondents who answered the open questions in both countries. Many of those who did answer stated „I do not have“ or „I do not know,“ and only a portion provided specific answers with examples. In the Hungarian sample, the highest response rate was related to role models (33%), while the lowest (10%) was related to favorite internet film series connected to the studied profession. For Poland, the highest proportion of specific responses (45%) was for favorite famous person, and the lowest (14%) was for favorite website related to the profession.

Among those who reported having a role model, most mentioned family members, with parents being the most frequent in both countries. Additionally, various individuals such as footballers (Messi, Neymar, ...), a cook, a singer, teachers, Elon Musk, and Hungarian Prime Minister Viktor Orbán were mentioned in the Hungarian sample. In the Polish sample, role models included an IT teacher, Sentino (rap singer), and a friend, also.

A few students mentioned a favorite TV show or TV film that didn't always have a clear connection to the profession. The favorite TV program related to the profession was mentioned by 23% of Hungarian and 37% of Polish students. In the Hungarian sample, almost half (45%) of these mentions were popular Hungarian cooking programs like „A konyhafőnök“ and „Séfek séfé“ (The Chef; The Chef of Chefs). Additionally, students mentioned a Turkish medical-themed series called „The Miracle Doctor,“ the American reality series „Forged in Fire,“ and the educational film series „How Do They Do It?“. In Poland, many students referred to the TV channel TVN Turbo, which features numerous automotive and extreme sports programs but has little relevance to the car mechanic profession. Due to the large number of students studying car mechanics, individual programs mainly focused on cars were mentioned (e.g., the popular UK show „Top Gear“). Therefore, only a few respondents indicated movie series related to other professions, such as „Sharp cutting“ (in Polish, „Ostre cięcie“) about hairdressers.

The low response rate (about 30% in both countries) to the question about favorite internet film series related to the profession could be attributed to the difficulty in distinguishing between TV programs watched on the internet and film series watched online. In the Hungarian sample, almost half of the responses still revolve around cooking, with mentions of Hungarian reality cooking shows. However, there are also medical-themed film series such as „The Mountain Doctor“ and „Emergency in Mexico.“ In the Polish sample, the most significant mention was the TV film series „Budda,“ which is related to car issues but primarily focuses on car racing and the technical aspects of engines rather than car repair. Only a few answers directly referred to mechanics, such as Adam the mechanic.

A small percentage of Hungarian (11%) and Polish (14%) students mentioned a useful favorite website related to their studied profession. The list is diverse and includes internet search sites like Google, as well as social media platforms like Instagram, Facebook, YouTube, and TikTok. Recipe websites and a Hungarian cooking reality show were also mentioned. In the case of Poland, some websites related to the automotive industry, such as „otomoto.pl“ (a platform for selling used cars), were on the list, too.

A significant portion of Hungarian students (21%) and a larger proportion of Polish students (44%) named a favorite famous person whose life they follow and who has influenced their studies. The list includes car racers (Hamilton), footballers (Ronaldo, Messi), actors

³ The survey did not inquire about the availability of pay TV and internet programs, which may vary significantly between the two samples. Therefore, the reported percentages should be interpreted with caution as they may not accurately reflect young people's interests due to potential differences in access to these programs.

(Justin Bieber), Hungarian and foreign chefs, singers, a Hungarian Roma rapper, influencers, streamers, Bill Gates, and Hungarian Prime Minister Viktor Orbán. Two Hungarian students mentioned their professional teachers. In the Polish sample, two actors from the „Sharp cutting“ hairdresser movie series (Andrzej and Tomasz), Budda (the creator and main presenter of „Budda TV“ mentioned earlier), Muran (an MMA and other fighting sports athlete), Sonik, and Kubica (racing drivers) were also mentioned.

Research results on opinions related to satisfaction with learning

The majority of students in both countries are satisfied with their school performance. However, a significant number of Hungarian students (around 80%) and Polish students (around 60%) express a desire to improve their grades in at least one or two subjects. More Polish students think they have good grades but also that they are not able to improve than Hungarians. Very few believe that grades are not important, in both countries.

Workshops play a significant role in the lives of VET students, with more Hungarian students preferring in-school training and more Polish students preferring external on-site training. The difference between the two preferences is significant. Additionally, more than twice as many Hungarian students report they get more help from the instructor in the school workshop compared to external training, while Polish students rate school and external help at similar levels.

Interestingly, there is a notable contrast between the two samples when it comes to the relationship between receiving help from instructors in the school workshop and liking the workshop itself. In the Hungarian sample, there is a decrease in the proportion of students who like the school workshop despite receiving more help, with nearly 15% fewer students expressing a positive sentiment. However, in the Polish sample, the situation is different, with approximately 40% of students finding the instructions from trainers in external workplaces to be more helpful, which is roughly twice as many as in the Hungarian sample.

Participation in vocational study competitions was quite limited among the surveyed students, with the majority not taking part in any competition. However, a significant difference can be observed between the two countries. In Poland, nearly 30% of students participated in a competition, and half of them achieved a good position. In contrast, the Hungarian sample had much lower values, approximately half as large. One possible explanation for this difference could be the geographical variation between the two samples.

3 Conclusions

Observing adults at work was found to be associated with experiencing learning while observing, and with assisting others in performing tasks. Students who enjoyed collaborative exercises and wanted more of them were more numerous, regardless of their profession.

Hungarian learners were more likely than Polish learners to want more joint tasks in the future, but the difference was not significant. Regardless of their role in joint exercises, both Hungarian and Polish students primarily sought help from their friends rather than the most skilled student. The role of friends in learning from each other was considered important, reflecting trust and social relationships. The time spent together outside of school and on the internet and chatting also reflected the role and influence of friends.

Most students did not have role models, except for those who mentioned famous individuals seen on TV, such as chefs in the Hungarian sample or stars in the automotive industry/sport for car mechanic profession in the Polish sample.

We have to consider the limits of our research results. As all students in the Hungarian sample are students at the same school, they are exposed to the same school influences. Their work placements are different, but we could not investigate their differential impact separately in this questionnaire. For the questions on practical work, students were likely to think of both

locations, but our experience suggests that they are more likely to work together only in school workshops. As the Polish sample consisted of four schools with different backgrounds, and the students represented a total of eight professions, the outsourced practical background is even more diverse, but it is also true that group work is more likely to take place in school workshops. In other words, work in school workshops is likely to play a greater role in the process of learning from each other than in work placements.

The study highlighted the importance of friendship, time spent with friends, and trust among young people, which can influence their actions, such as asking for help during group work.

The research provided insights into the informal learning of vocational school students and can help school directors and teachers become more aware of young people's interests in specific forms of informal education. Further research could explore the impact of informal learning on vocational education outcomes and identify the most effective forms of informal learning for developing professional competencies.

The study also served as a pioneering effort in testing the research questionnaire as a tool for studying informal learning among vocational students. However, the low response rate and uncertain responses in question group 4 (related to role models, friends, TV, internet) raise concerns about its viability. Specifically, some questions may have confused students who struggled to differentiate between TV programs watched on the internet, internet film series, and websites that feature them. In the future, these questions should be combined for clarity.

The improved and test survey can be used by future researchers, and the authors' plan is to supplement the results with interviews and additional surveys in the future.

References

- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood-Cliffs, New Jersey: Prentice-Hall.
- Benke, M., & Rachwał, T. (2022). The evolution of vocational education and training in Hungary and Poland 1989-2035. *Hungarian Educational Research Journal*, 12(3), 328–356. <https://doi.org/10.1556/063.2022.00061>
- Billett, S. (1996). Situated learning: Bridging sociocultural and cognitive theorising. *Learning and Instruction*, 6(3), 263-280.
- Boschma, R. (2005). Proximity and Innovation: A Critical Assessment. *Regional Studies*, 1, 61-74.
- Brown, J. S., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher*, 18, 32–42.
- Coombs, P. H., & Ahmed, M. (1974). *Attacking Rural Poverty: How non-formal education can help*. Baltimore: John Hopkins University Press.
- Downes, S. (2010). New technology supporting informal learning. *Journal of Emerging Technologies in Web Intelligence*, 2(1), 27–33.
- European Commission's Memorandum on Lifelong Learning (2000). Retrieved from <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM%3Ac11047> (30.06.2023).
- Knowles, M. S. (1950). *Informal Adult Education. A Guide for Administrators, Leaders, and Teachers*. New York Association Press.
- Lave, J., & Wenger, E. (1991). *Situated learning. Legitimate peripheral participation*. Cambridge, England: Cambridge University Press.
- Lengyel, B. (2012). Tanulás, hálózatok, régiók. (Learning, networks, regions.) In Rechnitzer, J., & Rácz, Sz. (Szerk.), *Dialógus a Regionális Tudományról. (Dialogue on Regional Science)*. Széchenyi István Egyetem, Regionális és Gazdaságtudományi Doktori Iskola. Magyar Regionális Tudományos Társaság, Győr. (Széchenyi István University, Doctoral School of Regional and Economic Sciences. Hungarian Regional Science Society)
- Siemens, G. (2004). *Connectivism: A learning theory for the digital age*. Retrieved from http://www.itdl.org/Journal/Jan_05/article01.htm (30.06.2023)
- Siemens, G. (2018). Connectivism. In R. E. West (Ed.), *Foundations of Learning and Instructional Design Technology*. EdTech Books. Retrieved from <https://edtechbooks.org/lidtfoundations/connectivism> (30.06.2023)
- Stéber, A., & Kereszty, O. (2015). Az informális tanulás értelmezései a XXI. században. *Új Ped. Szemle*, 65(9-10), 30-44. (The interpretation of informal learning in the 21st century).

Werquin, P. (2010). Recognition of non-formal and informal learning in OECD countries, <https://www.oecd.org/education/skills-beyond-school/44600408.pdf> (30.06.2023)

Biographical notes

Dr Magdolna Benke is a researcher of CHERD and a lecturer at the University of Debrecen, Hungary. Her research interests focus on the relationship between learning communities and vocational education, the new VET scenarios, empowerment and social innovation.

Dr Tomasz Rachwał is a professor at Krakow University of Economics, Poland. His research interests focus primarily on the issue of industrial change, the role of entrepreneurship in the development of spatial systems, as well as VET and entrepreneurship education.

Anikó Haba is a teacher of mathematics and physics, psychologist, and educational expert. In addition to advisory services in research methodology, she is also involved in development work. Her main interest is in developing tools to improve learning efficiency to avoid early school leaving.

Bernhard, M. (2023). Transitioning experience: Migrant learning and engaging with Canada's labour market challenges. In C. Nägele, N. Kersh, & B. E. Stalder (Eds.), *Trends in vocational education and training research, Vol. VI. Proceedings of the European Conference on Educational Research (ECER), Vocational Education and Training Network (VETNET)* (pp. 43–51). <https://doi.org/10.5281/zenodo.8208347>

Transitioning Experience: Migrant Learning and Engaging with Canada's Labour Market Challenges

Bernhard, Michael

m.bernhard@em.uni-frankfurt.de, Goethe University Frankfurt, Germany

Abstract

Context: Newcomers to Canada are commonly expected to possess localized experience to gain full labour market access. It represents a canon of tacit knowledge to be acquired, for instance through volunteer work or employment below individuals' level of qualification. Whereas the exclusionary effects of the Canadian Experience (CE) discourse have been well-documented, less is known about how individuals learn to engage with CE. This paper thus aims to elucidate and conceptualize this aspect of learning during transitions into new work contexts and to draw conclusions for practice.

Approach: Taking a *doing transitions* and *doing migration* perspective, 20 biographical-narrative interviews were conducted in 2021 with persons who had moved to Canada as adults. The data were analysed using the documentary method which focuses not only on the thematic (what) but primarily on the implicit (how) dimensions of the narrations.

Findings: Three modes of engaging with CE: *Replay and readjust* is marked by repeated setbacks, frustrations, and – seemingly – resignation. *Reset and move forward* is marked by a lowering of aspirations and an alignment of future life course decisions with the need to acquire CE. *Research and pro-act* is characterized by excelling at knowing the rules and playing the game.

Conclusion: The analysis of the engagement with migratory challenges points to aids in conceptualizing learning in transitions and its social embeddedness. For the practice of supporting worklife transitions in the context of migration, the findings suggest differentiated provision not only of factual knowledge about labour markets but of guidance and spaces for processing experiences.

Keywords: transitions, migration, adult learning, qualitative methods

1 Introduction

Transitions to and through working life can be associated with a range of changes, including changes in employment status, change in occupation, change in lifestyle or change in location (Billett et al., 2021). In the case of adults migrating – broadly understood as changing residence across administrative borders (Haas et al., 2020, p. 23) – these changes may coincide, requiring individuals to learn, to adapt, and to deal with unexpected challenges as will be the focus of this paper.

During migratory transitions, individuals' previously acquired skills, experience, and qualifications become salient in two ways: First, through processes of formal reassessment, validation or devaluation of credentials (Guo & Shan, 2013; Kloubert & Hoggan, 2021; Nohl et al., 2014). Second and less formally, through the need to transfer and translate the non-



credentialized experience and skills into new labour market and workplace contexts. Whereas bringing experience from diverse geographical, occupational and cultural backgrounds into new contexts can beget creativity and innovation (Shan, 2023), this process of entering the new labour market is fraught with potential challenges. These include restricted access to the labour market and employability-oriented training (Bağcı, 2019; Ellis & Triantaphyllidu, 2023; Liu & Guo, 2021), precarious employment (Hande et al., 2020) and employment below their level of qualification, also referred to as a „brain waste” or a „discounting of skills” (Reitz et al., 2014). Of particular interest in this paper is the – somewhat paradoxical – requirement to possess localized work experience in order to gain access to the local labour market. In the context of the Canadian immigration and labour market regime, this is discussed as *Canadian Experience* (CE).

CE can first be understood as a body of implicit knowledge that is localized, hard to articulate and yet often must be acquired by immigrants to find employment commensurate with their qualifications (Sakamoto et al., 2010). Exploring the contradictions between the stated need for skilled immigrants in Canada and their well-documented labour market challenges, Sakamoto et al. observed a broad array of conceptual understandings of CE with its hard dimensions (technical capabilities) and soft dimensions (communication skills). As a result, the authors propose the use of the concept *tacit knowledge*, which „affords us a more sophisticated understanding of Canadian experience, this elusive yet persistent requirement that skilled immigrants face before accessing successful employment” (Sakamoto et al., 2010, p. 150). Second, the discourse on CE can be conceptualized as a „rhetorical tool” for nation building through branding, understood as a „process of affective identification with an imagined national identity” (Bhuyan et al., 2017, 49, 51). In this sense, CE acts as a „brand” that serves to „re- envision Canada’s White policy within a neoliberal context by relying on the capacity of immigrant others to embody traits of Whiteness in a neoliberal era: self-sufficiency, autonomy, flexibility and utility in the market place” (Bhuyan et al., 2017, p. 60). Third, as argued by Ku et al. (2018), CE can act as a smokescreen for racist practices and enable „racism without racists” by steering the public to...

viewing immigrant difficulties as individual deficits, explainable by their ‘foreign’ credentials, their lack of preparedness, their low status in Canadian social hierarchy to begin with, their lack of culturally appropriate repertoire and soft skills [and thus naturalizing] the hierarchy of people that leads to precarious immigrant access to the labour market. (Ku et al., 2018, p. 305)

Although these exclusionary effects of the CE requirements are well documented, little is known about *how* individuals understand and deal with CE as they seek employment in new labour markets.

In my doctoral research, I investigated learning processes of adults in migration-related transitions in Canada, examining how transitions can serve as an impetus for learning (Hof & Bernhard, 2022, 2023), how individuals engage with different forms of boundaries (Bernhard, 2022), how temporality is intertwined with transitions (Bernhard, 2023b), and how individuals from geographically diverse backgrounds find ways to deal with this particular challenge of CE and find ways to transition their prior work experience to new contexts (Bernhard, 2023a). In this paper I will build on the latter and will first outline the theoretical perspectives of doing transitions and doing migration that were drawn upon in this research. Second, I will briefly describe the methodological approach taken, before presenting and discussing the findings.

2 Theoretical Framework: Doing Migration and Transitions

To study learning during life course transitions, I adopt a doing transitions framework which asserts ...

that transitions do not simply exist but are constantly... shaped and produced through social practices, and that transitions emerge and are constantly reproduced and transformed through the interrelation of discourses, institutional regulation (including formal and informal pedagogical intervention), as well as individual processes of learning, education, and coping. (Walther et al., 2022, p. 5)

Through the interplay of these discursive, institutional, and individual modes of shaping transitions with material, temporal, and interpersonal relations, transitions are constantly produced and reproduced, also reproducing social differences in the process (Settersten et al., 2022, p. 240)

Migration as the movement across national boundaries can be explored as a particular form of doing transitions. Such a doing migration perspective views migration as the result of social practices that „turn mobile (and often also immobile) individuals into ‘migrants’” (Amelina, 2020, p. 2). Migration can then be understood as a relational process that constitutes migrants and within which individuals actively (re)position themselves regarding markers of differences. While constructing and shaping their transitions across boundaries, people put into relation their individual experiences, interpretations, and socially situated practices. This process of doing migration is associated with a variety of learning demands as both a barely escapable imposition and as an opportunity space, expressed in the ambivalence of migration *being done to* and *being done by* (Bernhard, 2022).

3 Research Design: Narrative Interviews and Documentary Method

I gathered data through biographical-narrative interviews (Chase, 2018; Schütze, 1983) in 2021 with 20 persons who had moved to Canada as adults. As this study is interested in post-arrival processes and in the (non)transfer of previously acquired skills and experiences, I selected participants based on their having moved to Canada three or more years ago and on having obtained postsecondary education outside of Canada before initial arrival. This focus on so-called ‘highly skilled migrants’ aims to bring into view the ambivalences of ostensible desirability – as expressed through skills-focused migration regimes – and the challenges faced by this group of migrants in successfully transitioning into the new labour market. Research participants were between 27 and 62 years of age and had arrived in Canada between 3 and 21 years prior. Interviews were conducted following the approach to narrative interviews as outlined by Schütze (1983), encouraging participants to „speak off the cuff about a part of their everyday life that is of interest to the researchers, be it their entire life story or just their working life” (Nohl, 2010, p. 196).

The data were analysed using the Documentary Method (DM) (Bohnsack, 2014; Nohl, 2010) which presupposes that „what is communicated verbally and explicitly in interview texts is not the only element of significance to the empirical analysis, but that it is above all necessary to reconstruct the meaning that underlies and is implied” (Nohl, 2010, p. 200). Put differently: the narrations document different patterns of experience, orientation, and action that are to be reconstructed. Thus, I interpreted not only *what* is being said but also reflected on *how* it is being said. Of interest were modes and figures of speech, such as positive or negative images, so-called *counter-horizons*, which point to participants’ implicit knowledge and frames of orientation. The goal was to reconstruct and contrast different forms of experiencing and processing work-life transitions in the context of migration.

4 Findings

In comparing different logics of practice in the data, I could identify three distinct modes of dealing with CE. The first mode, *replay and readjust*, is marked by repeated setbacks,

frustrations, and—seemingly—resignation. The second mode, *reset and move forward*, is marked by a lowering of aspirations and an alignment of future life course decisions with the need to acquire CE. The third mode, *research and pro-act*, is characterized by a focus on understanding how Canada functions to take advantage of that knowledge. Analysis of the 20 interviews indicated relevance of CE for 12 participants. Among those, the mode replay and readjust can be identified in two, reset and move forward in six, and research and pro-act in four interviews. Drawing on select interview passages, I will illuminate these modes of engaging with CE.

4.1 Replay and readjust

As a common experience, individuals must settle for „survival jobs”, often „hated” and well below the individuals’ levels of qualification. Yet, despite the often-repeated devaluation of experience and education, individuals learn the rules of the game and „press on,” even if returned to start several times.

Going beyond passively experiencing those setbacks, however, individuals actively engage with the situation, interpret the experience and act within their range of limited options. Such is the case for Jamila who had to settle for a job that she disliked, thereby gaining Canadian experience and references, which could then later attest to her experience. This acquisition of localized experience was particularly surprising for her as she gained work experience in the UK which she expected to be valued in Canada:

Coming back here it felt like the Canadians wanted you to have their Canadian something. Yes when you tell them they're like „oh okay yeah great you've worked in UK” ... I've done it in UK, some of them don't even understand what that means so what working in UK means it's like „why do you not understand that?” It's UK it's a- it's a developed country it's like Canada but they don't and so they don't appreciate it so that- that was like a shocker. (Jamila, lines 982-995)

Jamila's expectation of a seamless transition from the British to the Canadian labour market is not met. Instead, upon her return after working in the UK for several years „the Canadians wanted you to have their Canadian something“. The choice of the expression „something” can be interpreted as a perceived arbitrariness of the requirement for Canadian experience. Although her possession of a Canadian education was helpful in her transition from the UK to Canada, she found the non-recognition of professional experience to be „a shocker.“

To further improve her employment prospects beyond her current, disliked job, Jamila is pursuing volunteer work, for which she needs to receive some training. Referring to a situation in which she had to wait 45 minutes for a bus on a cold winter evening, Jamila is reflecting on the actions she must take:

It was really hard, this is a person who was driving now I have been reduced back to using a bus. these things I must do because I know volunteer- I can quote that as a Canadian experience and I'm struggling here finding a job because it's my UK experience Canadians are not really liking it for some reason so now I must start doing things that I'm gonna start you know adding on to my résumé. (Jamila, l. 724-729)

Jamila elaborates on her own theory of why she „must do” all those unpleasant things: the non-recognition of her professional experience in the UK. Although Jamila already had Canadian citizenship at that time, she uses „Canadians” as a group separate from herself. While Jamila takes action and moves forward, volunteer work appears to be less voluntary and rather a requirement „that has to be done” to acquire Canadian work experience.

In this form of engagement with CE, Jamila had to repeatedly adjust her horizons of possibilities and to recognize that her previous migration experience was of only limited value. Against this backdrop of challenges and recurring setbacks, she learns how to independently persist („press on”) as she shares repeatedly during the interview.

4.2 Reset and Move Forward

A second form of engaging with the CE demands can be described as *reset and move forward*. Here and in contrast to the previous form, aspirations are lowered, and future life course decisions aligned with the need to acquire CE. Although this does not preclude disappointment, the reduced expectations appear to open a way out of a repeated *replay and readjust*. Such was the case with Lishan, who – although no longer considering herself a new immigrant – feels in certain respects „shortchanged”. She had met the expectations placed on her, gained Canadian work experience, and obtained Canadian qualifications, yet she has not succeeded in finding employment commensurate with her skills.

Lishan talks about receiving a job offer unrelated to her professional training while she and her family were preparing to relocate within Canada to be closer to her husband’s workplace:

So over that weekend my husband and I talked about it, we talked about it, (.) this was an opportunity that I had found, we won’t guarantee that I’d find a job even if we move to Oakville straight away so we were going to take that job, we agreed: „let’s at least take this that has come and then maybe after you’ve gotten your Canadian experience the fam- (laughs) famous or infamous Canadian experience for a year or two then we can think of moving. (Lishan, l. 436-442)

In contrast to Jamila, who problematizes the exclusionary dimensions of CE, here the engagement with the „famous or infamous” CE affects big life course decisions to be made. Already having internalized the importance of possessing CE, Lishan and her husband agreed to postpone the family move in order to fulfil this requirement. Whereas Jamila was reduced to volunteering and working a job she hated, Lishan took a job unrelated to her field. CE appears as solely something to be acquired („gotten”) to be able to move on. The rather external interpretation of CE as something to possess reappears when Lishan shares her experience of repeated rejection in the labour market despite having Canadian education and some Canadian experience:

In a sense, there are times when- I’m no longer a new Canadian immigrant. I’d say Canada is home now for me, but there is still a sense in which you still feel shortchanged, is that you feel like you did everything that you’re supposed to have done, you have Canadian experience, for me it’s over seven years, I have a Canadian qualification now. (Lishan, l. 616-622)

Lishan begins the description of her situation with the relativizing expression „in a sense” and „there are times when” before she interrupts herself to insert that she is „no longer a new Canadian immigrant (...) Canada is home now for me”. This self-conception of being settled is, in a certain way, contrasted by Lishan feeling disadvantaged, unfairly treated, and „shortchanged”. She has adhered to the rules of the game, gained CE and qualifications, and yet cannot find suitable gainful employment. As a result, she cannot get away from an ascribed migrant identity and her arrival is not complete. This experience of disadvantage is generalized as being shared by others, which is documented by the repeated use of general „you”.

Here, the engagement with CE is marked by an acknowledgement of its importance and willingness to proactively align major life course decisions, such as the family move, with the need to acquire CE as a qualification. Yet, possessing CE appears to be necessary but not sufficient for her labour market success in light of other barriers. As a result, Lishan continues to

steadily move forward in search for the position she really wants despite having played by the rules of the game and acquired CE.

4.3 Research and Pro-act

A more pragmatic approach to dealing with CE can be termed *research and pro-act*, which is characterized by excelling at knowing the rules and playing the game. Here, the focus is less on adjusting expectations and more on understanding how Canada functions, in order to take advantage of that knowledge. For individuals transitioning to the new labour market in this mode, this means lots of research and networking as is the case with Dacian. Unlike Lishan, who also had a professional degree but gave up pursuing a career in her field, Dacian „of course” still has this as his goal, and „just wanted to use [his] time efficiently”. Contrasting with Jamila, who was repeatedly „shocked” and „surprised” by the way things worked, Dacian positions himself as „realistic” and approaches CE as a project to study, understand and engage with systematically:

Based on my experience with the different job search strategies, I decided to use online job search, and in-person job search, including cold calls, and just attending different employers on spot. And this is how I got my first job in Canada working in restaurants. Which gave me a really unique experience. Of course, was big difference from my work in Eastern Europe. I was building the foundation. (Dacian, l. 40-47)

Drawing on his existing biographical experience, Dacian strategically triangulates various job search strategies and seemingly without much trouble lands his first job in a restaurant. Not working in his field was not problematic for Dacian, as the job was a „unique experience” and provided the „foundation” for further steps. Like Lishan, Dacian appears to have accepted the importance of obtaining CE. Further, he takes courses towards his professional goal and enjoys researching the system, which he finds „very interesting”. Unlike Jamila, who repeatedly expressed surprise about the non-recognition of foreign experience, Dacian not only takes this as a given but has learned strategies to reduce the opacity of CE. He „researched the community”, learned that „networking is something very Canadian” and uses this knowledge to his advantage. There are, however, setbacks in Dacian’s quest to understand and navigate the Canadian system while he is working in a new position of a law clerk:

I received notice of termination of my employment, which was very good shock (...) obviously, they were not happy with me. But this lack of transparency that for almost two- two months, they didn’t share this with me. (...) So, I didn't know what was the problem, the accent, the lack of experience. So, they gave me very- very little explanations. (...). After my last workday, of course, I immediately resumed my networking. I don’t have time to lose. I refreshed my contacts, I started to look for another job. (Dacian, l. 112-127)

Being unexpectedly laid off from his position as a law clerk irritated Dacian’s mode of engaging with CE. Against the positive counter-horizon of being told what he did wrong and understanding „what can be changed”, the „lack of transparency” leaves him without a „real assessment” beyond the sense of the employer not being happy with him. Externalizing this challenge as an expression of the more closed nature of the Canadian culture, he „immediately” pivots to again strategically pursuing employment through networking.

In sum, this form of engagement with CE is marked by studying the system and learning the tools to deploy. Dacian recognizes that the non-recognition of foreign experience can have exclusionary effects and consequently approaches his job search methodically, including settling for a restaurant job to build a „foundation.” CE has meaning for him as an object to be studied and rules to be known in order to „know where you’re going”. As a result, Dacian

considers networking to be something particularly Canadian and embraces it as part of his job search strategy.

5 Discussion and Conclusion

The three modes of engaging with the somewhat obscure but persistent requirement to obtain CE as a prerequisite for finding and sustaining adequate employment illuminate the diverse learning and development of working age adults, particularly in transitions. From a doing transitions perspective which highlights the *interrelation* of discourses, institutions and individual processes of learning, education and coping, the particular configuration of individual experience and discourse comes into focus. In the mode of *replay and readjust*, the CE discourse appears as a challenge that is to be faced repeatedly but cannot be surmounted. In the second mode of *reset and move forward*, CE appears as a force that significantly alters expectations, aspirations, and orientations. In the third mode, *research and pro-act*, CE acts as an impetus for learning about processes and researching the labour market, akin to a game to be understood and played.

In each of the modes, the engagement with CE is closely linked with learning and the acquisition of knowledge and competencies: First, it is the non-recognition of previously acquired knowledge and experience that makes obtaining CE necessary. Second, learning and shifting perspectives about oneself and the world can be the consequence of dealing with CE and be influenced by subjective theories of one's own learning (Säljö, 1979, 2021). Here, one can discern different forms of learning in the context of migratory transitions. As elaborated in more detail elsewhere (Bernhard, 2023b), dealing with the challenges of migration, including the requirement to obtain localized experience, can lead to transformative learning both in an expansive and restrictive sense but can also be accompanied by learning that is best described as tacit.

Beyond being solely an individual act however, this learning in transitions is socially embedded and mediated by social practices and relationships (Bernhard & Hof, 2023; Hof & Bernhard, 2022). First, relationally thinking of migration at an individual level brings into view the co-constitutive character of becoming a migrant: Individuals often experience incomplete and incongruent transitions, no longer self-identifying as newcomers, but being treated as such through the entanglement of self with others and with discourses. Against the backdrop of the CE discourse, the questioning and reconstruction of self-concepts come into view, providing both a requirement to reassess what biographical resources can be drawn upon, but also an opportunity space to redefine past experiences. Second, the engagement with the CE discourse is a shared experience as a heterogeneous group of individuals encounter and must deal with the same rulebook, however oblique and opaque it may be. While otherness is being (re-)produced through the CE discourse, outsiders may form a community of experience or of practice (Lave & Wenger, 1991/2008), sharing a similar tacit knowledge of how to interpret and act on the demands placed upon them.

In addition to these implications for theorizing learning in transitions, the findings of this study also provide insights into how best working age adults' learning and development can be guided against the backdrop of individuals' diverse experiences. The insights into the three different modes of engaging with the CE discourse can be used to identify, trial and validate the range of educative experiences in educational, workplace and community settings that support worklife transitions in the context of migration. These supports may refer to sustaining individuals' current employment, advancing further their capacities in that field or advancing a different and new occupational or career trajectory. This means that a better understanding of the different expressions of agency identified in migration „being done by” might serve as impetus for supporting the development of resilience in the mode „replay and readjust”, for guiding the active reassessment of opportunities, acceptance, and alignment of life course decisions

in the mode „reset and move forward”, and for providing information about intricate aspects of the labour market in the mode „research and proact.” Although the research was conducted in Canada, the implications appear relevant also in other contexts as public support for selective professional immigration policies increases and the ambivalence between ostensible desirability of ‘skilled migrants’ and complex barriers to employment persist. Recognizing distinct modes of engaging with and learning from challenges may serve as an impetus to differentiate support and guidance to individuals from diverse backgrounds as they navigate worklife transitions in an increasingly mobile and diverse world.

References

- Amelina, A. (2020). After the reflexive turn in migration studies: Towards the doing migration approach. *Population, Space and Place*, 27(1), 1–11. <https://doi.org/10.1002/psp.2368>
- Bağcı, Ş. E. (2019). Migration and participation in adult education: The Matthew Effect on immigrants. *Adult Education Quarterly*, 69(4), 271–294. <https://doi.org/10.1177/0741713619848108>
- Bernhard, M. (2022). Boundary experiences in Canada: ‘Doing migration’ and the role of adult education. *Der Pädagogische Blick*, 30(1), 6–18. <https://doi.org/10.3262/PB2201006>
- Bernhard, M. (2023a). Doing migration in adulthood: Learning to engage with the Canadian experience discourse [in press]. *Canadian Journal for the Study of Adult Education*, 35(2).
- Bernhard, M. (2023b). Learning by doing migration: Temporal dimensions of life course transitions. *Studies in Continuing Education*. Advance online publication. <https://doi.org/10.1080/0158037X.2023.2223131>
- Bernhard, M., & Hof, C. (2023). Social dimensions of learning in transitions: The heuristic value of non-western perspectives of communal learning [in press]. In J. Sumner (Ed.), *Proceedings of the 2023 Conference of the Canadian Association for the Study of Adult Education (CASAE). Conference theme: Community*.
- Bhuyan, R., Jeyapal, D., Ku, J., Sakamoto, I., & Chou, E. (2017). Branding ‘Canadian Experience’ in immigration policy: Nation building in a neoliberal era. *Journal of International Migration and Integration*, 18(1), 47–62. <https://doi.org/10.1007/s12134-015-0467-4>
- Billett, S., Le, A. H., Smith, R., & Choy, S. (2021). The kinds and character of changes adults negotiate across worklife transitions. *International Journal of Lifelong Education*, 40(5-6), 499–513. <https://doi.org/10.1080/02601370.2021.1989723>
- Bohnsack, R. (2014). Documentary method. In U. Flick (Ed.), *SAGE knowledge. The SAGE handbook of qualitative data analysis* (pp. 217–233). SAGE.
- Chase, S. E. (2018). Narrative inquiry: Toward theoretical and methodological maturity. In N. K. Denzin & Y. S. Lincoln (Eds.), *The SAGE handbook of qualitative research* (946-970). SAGE.
- Ellis, C., & Triantaphyllidu, A. (2023). Precarity, opportunity, and adaptation: Recently arrived immigrant and refugee experiences navigating the Canadian labour market. In I. Isaakyan, A. Triantaphyllidu, & S. Baglioni (Eds.), *Immigrant and Asylum Seekers Labour Market Integration upon Arrival: NowHereLand: A Biographical Perspective* (pp. 101–127). Springer.
- Guo, S., & Shan, H. (2013). The politics of recognition: Critical discourse analysis of recent PLAR policies for immigrant professionals in Canada. *International Journal of Lifelong Education*, 32(4), 464–480. <https://doi.org/10.1080/02601370.2013.778073>
- Haas, H. de, Castles, S., & Miller, M. J. (2020). *The age of migration: International population movements in the modern world* (6th ed.). Red Globe Press.
- Hande, M. J., Mian Akram, A., & Condratto, S. (2020). „All of this happens here?”: Diminishing perceptions of Canada through immigrants’ precarious work in Ontario. *Journal of International Migration and Integration*, 21(3), 711–729. <https://doi.org/10.1007/s12134-019-00683-y>
- Hof, C., & Bernhard, M. (2022). Übergänge als Anlass für Lernprozesse. In S. Andresen, P. Bauer, B. Stauber, & A. Walther (Eds.), *Doing Transitions – die Hervorbringung von Übergängen im Lebenslauf: Zeitschrift für Pädagogik*, 68. Beiheft 2022 (pp. 181–194). Beltz. <https://doi.org/10.3262/ZPB2201181>
- Hof, C., & Bernhard, M. (2023). Transitions as an impetus for learning [Manuscript submitted for publication].
- Kloubert, T., & Hoggan, C. (2021). Migrants and the labor market: The role and tasks of adult education. *Adult Learning*, 32(1), 29–39. <https://doi.org/10.1177/1045159520977713>
- Ku, J., Bhuyan, R., Sakamoto, I., Jeyapal, D., & Fang, L. (2018). „Canadian Experience” discourse and anti-racialism in a „post-racial” society. *Ethnic and Racial Studies*, 42(2), 291–310. <https://doi.org/10.1080/01419870.2018.1432872>
- Lave, J., & Wenger, E. (1991/2008). *Situated learning: Legitimate peripheral participation* (18th printing). Cambridge Univ. Press.
- Liu, J., & Guo, S. (2021). Navigating transition to work: Recent immigrants’ experiences of lifelong learning in Canada. *International Review of Education*, 67(6), 733–750. <https://doi.org/10.1007/s11159-021-09931-9>

- Nohl, A.-M. (2010). Narrative interview and documentary interpretation. In R. Bohnsack, N. Pfaff, & W. Weller (Eds.), *Qualitative analysis and documentary method in international educational research* (pp. 195–218). Verlag Barbara Budrich.
- Nohl, A.-M., Schittenhelm, K., Schmidtke, O., & Weiß, A. (2014). *Work in transition: Cultural capital and highly skilled migrants' passages into the labour market*. Univ. of Toronto Press.
- Reitz, J. G., Curtis, J., & Elrick, J. (2014). Immigrant skill utilization: Trends and policy issues. *Journal of International Migration and Integration*, 15(1), 1–26. <https://doi.org/10.1007/s12134-012-0265-1>
- Sakamoto, I., Chin, M., & Young, M. (2010). „Canadian Experience,” employment challenges, and skilled immigrants: A close look through „tacit knowledge”. *Canadian Social Work Journal*, 12(1), 145–151.
- Säljö, R. (1979). *Learning in the learner's perspective* (no. 76). Reports from the Institute of Education.
- Säljö, R. (2021). The conceptualization of learning in learning research: From introspectionism and conditioned reflexes to meaning-making and performativity in situated practices. In G. R. Kress, S. Selander, R. Säljö, & C. Wulf (Eds.), *Foundations and futures of education. Learning as social practice: Beyond education as an individual enterprise* (146-168). Routledge.
- Schütze, F. (1983). Biographieforschung und narratives Interview. *Neue Praxis*, 13(3), 283–293. <https://nbn-resolving.org/urn:nbn:de:0168-ssoar-53147>
- Settersten, R. A., Jr., Stauber, B., & Walther, A. (2022). The significance of relationality in „doing transitions”. In B. Stauber, A. Walther, & R. A. Settersten Jr. (Eds.), *Life course research and social policies. Doing transitions in the life course: Processes and practices* (pp. 235–252). Springer.
- Shan, H. (2023). Expanding engineering practices: Immigrants' accounts of innovation from a practice-based perspective. In J. Sumner (Ed.), *Proceedings of the 2023 Conference of the Canadian Association for the Study of Adult Education (CASAE). Conference theme: Community*.
- Walther, A., Stauber, B., & Settersten, R. A., Jr. (2022). „Doing Transitions”: A new research perspective. In B. Stauber, A. Walther, & R. A. Settersten Jr. (Eds.), *Life course research and social policies. Doing transitions in the life course: Processes and practices* (pp. 3–18). Springer.

Biographical notes

Michael Bernhard is a lecturer and research associate at the Goethe University Frankfurt am Main, Germany. He studies learning processes during life course transitions in the context of migration, employment, and mobility.

Billett, S. (2023). The learning and changes adults negotiate across worklife transitions. In C. Nägele, N. Kersh, & B. E. Stalder (Eds.), *Trends in vocational education and training research, Vol. VI. Proceedings of the European Conference on Educational Research (ECER), Vocational Education and Training Network (VETNET)* (pp. 52–58). <https://doi.org/10.5281/zenodo.8208355>

The Learning and Changes Adults Negotiate Across Worklife Transitions

Billett, Stephen

s.billett@griffith.edu.au, Griffith University, Brisbane

Abstract

Context: The transitions adults negotiate across their working lives as they secure, maintain and develop further employability through their learning are of interest to governments, workplaces, and workers themselves.

Approach: Through analyses of worklife history interview data with 30 working age adults, distinct kinds of changes comprising these transitions have been delineated as representative of changes that have person-particular meanings and impacts. This delineation represents understandings of processes and outcomes for adults' learning and development.

Findings: These transitions have specific kinds of scope, duration, and impacts in terms of continuity/discontinuity with individuals' earlier activities and knowing. These transitions were identified as being of six kinds: i) life stages, ii) employment status, iii) occupations, iv) relocations, v) health, and vi) personal preference or trajectories.

Conclusion: Such findings point to a broader range of educative experiences than those privileged in lifelong educational provisions and the importance as viewing curriculum as being a personal, rather than institutional pathway.

Keywords: lifelong learning; vocational education and training, social aspects of learning and teaching, qualitative methods

1 Transitions, negotiations and learning

Investigating the transitions working age adults negotiate across their working lives is a helpful way to understand how the learning and development required to remain employable across working life arises. Given the relative dearth of explanatory concepts associated with adults' learning and development through societally and personally important tasks there are potential conceptual and procedural benefits that might be derived from such an enquiry. In particular, the mapping the requirements of working age adults to negotiate these transitions offers a basis for more broadly understanding these processes of human learning and development. Elaborating the processes of engagement in activities and interactions in workplaces, education institutions and communities within and across their working lives offers a means to advance such explanations. Beyond explanatory concepts, there are also procedural and pragmatic reasons for understanding further these processes of learning and development. Effectively negotiating those changes are essential for these adults to secure, maintain and develop further their employability through their learning as they engage in activities within those settings (Billett et al., 2021). Certainly, that learning is of interest to governments, workplaces, and workers themselves, given the shared need for that ongoing learning.

Governments and their supra-governmental counterparts are concerned about working age adults' abilities to respond to changing work and occupational requirements to sustain their



employability across lengthening working lives (OECD, 2006). This focus of addressing change is partially out of concern about the kind of social and economic transitions that nation states need to address. Both private and public sector workplaces are also concerned that their employees have the capacity to and continually learn and respond to the changing requirements of work practices and for the goods and services that they produce. In essence, regardless of whether referring to public or private sector enterprises, their viability is premised, in part, upon abilities to accommodate new technologies, ways of working and practices, that comprise the innovations they need to adopt and enact effectively, and the ability to respond to those changing requirements for the goods and services, both of which are premised upon the capacities of their workforces. This viability can include contributions that they make to the practices and innovations that will secure the viability of those work settings. Moreover, as working life is extended into the seventh decade for many working age adults, the ability to sustain their employability through the further development of their occupational knowledge is essential. This is required to respond to workplace challenges or, developing new occupational capacities and pursuing new trajectories are dependent upon these adults' abilities to learn and negotiate changing circumstances.

So, negotiating new work requirements, potentially developing new occupational capacities etc, are all dependent upon workers' learning and the requirements for that learning are of different kinds and how that learning can be derived are far from being restricted to participation in structured educational programs (i.e., lifelong education), which emphasises the importance of understanding the learning and development that occurs outside of them. Not the least here is that for most adults, unlike children and adolescents, engagement in such programs are often a rarity across long working lives (Billett et al., 2023). Moreover, adults' lives are taken up by commitments associated with work, family and community demands that make engagements in formalised educational programs yet another commitment to be negotiated and included in busy lives.

The findings presented here are from a study that sought to engage with working age adults and for them to elaborate their worklife histories and to engage with issues around how their learning and development occurs across the span of working life (Billett, Salling-Olesen, Fillettaz, 2023). That research identified these transitions and associated negotiations and learning were also derived from analyses of worklife history interview data with 30 working age adults of different ages and occupations, genders and locations. The research procedures comprised the two-phase interview process. In the first interview the informants provided some demographic information about age, educational achievement etc., on a short survey form. Then, they were asked to describe their working life from the first time they engaged in paid or remunerated work until the present almost recent engagement in working life. The securing of the worklife history narrative was largely conducted with very few prompts and no interruptions were ever possible by the interviewer. It allowed the identification of the distinct kinds of changes they experienced in their working lives and allowed the kind and nature of these transitions to be identified. This focus tended to emphasise the range and kinds of changes that these working age adults had encountered and how they had either successfully or unsuccessfully negotiated them and who or what assisted their learning. Another set of analysis contributed to discussions about the understandings of processes and outcomes for adults' learning and development.

A second interview was conducted with each informant well after the initial analysis of the first narrative data set. These transitions have specific kinds of scope, duration, and impacts in terms of continuity/discontinuity with individuals' earlier activities and knowing. The second interview was far more structured than the first and initially, sought to verify or change the transitions identified by the researchers from the life history interview. This second interview in also introduced a survey to capture aspects of the learning and development these informants

had encountered and to make judgements about their effectiveness. Grounded instances were used to assess provide validated data and some of the items used in the second interview survey were those derived from the Program of International Assessment of Adult Competence which allowed aspects of these data to be compared with those from other datasets, for instance Australia, or global comparisons.

1.1 Changes and knowledge to be learnt

It was found that the transitions observed, captured, and represented by a complex of personal, institutional (i.e., generated by society), and/or brute factors (i.e., those from the natural world, including maturation). Consequently, understanding the worklife transitions they encountered and the changes that they comprise to negotiate them and the learning arising from them and how they can be supported and facilitated requires accounting for societal factors as well as individuals' personal histories and legacies and impacts of maturation. These transitions were identified as being of six kinds: i) life stages, ii) employment status, iii) occupations, iv) relocations, v) health, and vi) personal preference or trajectories (Billett et al., 2021).

The changes can be seen as being a product of societal factors (i.e., institutional facts) or those arising through nature (i.e., brute facts) (Searle, 1995). Amongst these are those that arise through individuals' personal histories or ontogenies, referred to as personal facts (Billett, 2009).

1. Stages of life changes (i.e., maturation – brute fact)

Transitions can occur in response to different stages of life, which might include physiological maturity (i.e., brute fact) or societal roles and expectation (i.e., institutional fact). For instance, in early adulthood, finding a partner and commencing a family can initiate transitions in working life associated with needing to secure better paid or more stable employment.

2. Change of employment status (i.e., socially derived – institutional facts)

Transitions might also be in response to or a product of a change in individuals' employment status (i.e., institutional fact). For instance, the shift from being an employee to a supervisor or self-employed or owner of a business will likely bring about transitions in what individuals know, can do, and value.

3. Change in occupations (i.e., individually and socially derived – intersection between personal and institutional facts)

Many adults change their occupations across working life either voluntarily (e.g., to secure more personally appropriate occupations – personal fact) or involuntarily because of changes in demand for location of, or existence of, specific occupations or kinds of work, or perhaps prompted by the prospect of such changes (institutional facts). These changes require the development of new sets of occupational capacities that, by degree, may be similar to or distinct from those already possessed.

3a Change in occupations or occupational focus

This subcategory of change is associated with individuals' change in the occupations in which they work or a variation of occupational practice.

3b Change in skills and capacities (i.e., personal facts)

This subcategory refers to changes within individuals' capacities to practice occupations or associated roles, that is, learning that allows individuals to engage in different kinds and forms of work of which previously they would not have been able. So, this change is about individuals' learning and appropriation of new knowledge and capacities to apply that knowledge (i.e., personal fact).

3c Change in employment through restructuring or changed economic circumstances (i.e., institutional facts)

There are also changes brought about by external factors such as economic restructuring that make specific forms of work and occupations either redundant or in very low supply. The last 40 years has seen significant economic restructuring in many countries. This restructuring is sometimes premised upon globalisation and shifts in goods produced and services provided in the kinds of services.

4. **Change in location** – geographical or societal (i.e., accommodating new language norms, forms, and practices – institutional facts)

Whilst previously most humans lived within walking distance of where they were born and remained in the community in which they grew up, this is no longer the case. Relocation, mainly through voluntary means (i.e., personal facts) although sometimes traumatically through involuntary acts enacted by others (i.e., institutional facts), constitutes significant transitions for adults.

5. **Change in physical and psychological health** – well-being (i.e., maturation – brute fact; institutional facts such as societally derived pressures)

Maturation (i.e., brute fact) brings with it changes in physical capacities and dispositional well-being, both through biological progress and through the accumulation of lived experiences. Physical strength, ability, and acuity of the sensory system evolve and transform across individuals' lives, in different ways, and by degrees. This maturation has impacts upon individuals' choices about working life, and at different stages across that working life, as well as abilities to perform specific occupations.

5a Change in personal health and well-being (i.e., brute facts)

Factors associated with personal health and well-being can be the source of transitions within working life. For instance, not all work is age tolerant. That is, employment that is physically demanding may be impossible for adults to perform above a certain age to carry out that work. For instance, it is quite common in emergency service work and the military for workers to retire by 40 or 45 from frontline activities, as they do not have the strength and may be a risk to themselves and others (e.g., co-workers) because of that.

5b Changes in family health and well-being (i.e. brute facts)

There are also circumstances where, like above, issues of family health and well-being require workers to change occupations or modes and forms of work. This can include the impact upon the families of workers who are absent from home for extended periods of time because of their work. It can also extend to workers engaged in shift work which causes destruction of family life, particularly when children need to be cared for and schooled.

6. **Change in personal lifestyle** (personal facts – individual choice/agency)

This kind of change is brought about by personal factors such as existing or emerging beliefs that would be religious, political, or ethical. So, such changes in individuals' personal beliefs and approaches to lifestyle (e.g., being a vegetarian, environmentally active, commercially disengaged, i.e., personal facts) bring about transitions that are caused by either a prosecution of those beliefs or changes in occupational workplace practices that precipitate the need to transition away from that occupation, form of work, or workplace (i.e., institutional facts).

6a Change in personal preferences and values (i.e., personal facts)

This subcategory refers to specific kinds of changes in individuals' values that lead to how they conduct themselves now and, in the future, (i.e., personal facts). For instance, across his working life, Salim wanted to find work that was fulfilling for him (i.e., personal facts).

6b Change in subjectivity (i.e., personal facts)

This subcategory refers to changes in how individuals come to see themselves and is evident in many of the interviews, indicating their sense of self or subjectivity (i.e., personal facts). For example, Salim went from being a Bahá'í and an Iranian citizen to a refugee migrant, to intentionally gaining Australian citizenship, and also to forming the occupational subjectivity of a builder.

The changes can be seen as being a product of societal factors (i.e., institutional facts) or those arising through nature (i.e., brute facts) (Searle, 1995). Amongst these are those that arise through individuals' personal histories or ontogenies, referred to as personal facts (Billett, 2009).

Moreover, learning for and through these transitions were of five kinds and about: i) language and literacy; ii) cultural practices; iii) world of work; iv) occupational skills; and v) work-life engagement.

These are briefly described as:

- I. Language and literacy – language skills and capacities, both spoken and written, were evident in trajectories of the informants, albeit in quite different ways.
- II. Cultural practices – the norms, forms, and practices associated with a nation's political, social, or educational systems, institutional mores, occupational requirements, and those associated with the individuals (e.g., family tradition, faith).
- III. World of work – involving awareness of requirements for paid employment, including being productive, punctual, reliable, solving problems, and responsive to those who employ and whose needs are served. Extends to understanding of different occupations and career pathways.
- IV. Occupational skills – associated with the occupations in which individuals are employed or seeking to be employed.
- V. Work-life engagement – Learning about work-life involves individuals' responses to and engagement in work as their circumstances change or are changed. Requires adults to fit their working life in with other priorities.

These findings suggests explaining the processes of learning that support sustained employability in times of change and uncertainty need to account for the complex of factors comprising what is suggested by the social world (i.e., the social suggestion - e.g., opportunities, barriers, invitations, , close-distance support, et cetera) and how individuals engage with and shaped by their subjectivities (i.e., sense of self, relations to others), capacities (i.e., what they know, can do, and value), and personal epistemologies (i.e., how they make sense of the world and respond to it). Such findings point to a broader range of educative experiences than those privileged in lifelong educational provisions and the importance as viewing curriculum as being a personal, rather than institutional pathway.

Through these early findings, it has been possible to depict, tentatively, the process that comprises these transitions and how they might be supported. That depiction suggests that there are:

- I. factors initiating those transitions;
- II. different kinds of changes for adults;
- III. distinct ways in how they are able to progress with those transitions through their learning;
- IV. different kinds of support achieved to support that learning; and
- V. distinct outcomes of those transitions.

2 Conceptual advances and implications for practice

There are some conceptual advances arising through this project and emerging are implications for practice. Two explanatory concepts are emerging from this study. The first is the concept of personal curriculum which is a construct centred on the individual and their

trajectory of experiences across their working lives and this centres on the person--dependent set of experiences that they have encountered and from that learnt through and across their working lives. This concept of curriculum is one that accommodates some of the earliest conceptions of the term which were about capturing the pathway and totality of the experiences that individuals have that contribute to their learning and development over time. Of particular importance here is that rather than focusing on institutionally premised accounts of curriculum that inevitably centre on what is afforded through participation in educational institutions, and more recently, workplace settings, the concept of personal curriculum extends beyond that and is not wholly constructed around what is intended and enacted through educational institutions, their programs and efforts of teachers. Whilst these are important contributors to learning across life, they become less so across adults working life. Yet, it seems that there are other contributions that sit outside of what is afforded by educational institutions and also workplace settings. These include contributions from familiars, family members and what is afforded by communities (Billett 2023a). Such a set of considerations deemphasises a singular focus on education institutions and provisions and, taught courses to open up the range of activities and interactions that working age adults encounter across their working lives and acknowledges their contributions to their learning and development.

The second contribution is a broader consideration of educative experiences (Billett 2023b). The data suggest that there are a range of educative experiences that provide support, guidance and direct assistance to working age adults learning across working life and is that these take forms that are quite distinct from those of intentional educational activities afforded by educational institutions. Added here are a range of experiences that provide guidance at both the very general level and also quite specifically about the development of occupational knowledge, contributions to assist understanding and bases for engaging in working life and being supportive across transitions of different kinds. Of course, sitting in here are curriculum and pedagogically practices that are exercised through those institutions and workplaces and these are often helpful for providing access to and developing capacities that are difficult to learn without such assistance. Also, the provision of certification for the knowledge that has been learnt is an important contribution from education and directly and indirectly supporting worklife learning, employability and negotiating worklife transitions.

References

- Andersson, P., & Köpsén, S. (2018). Maintaining competence in the initial occupation: Activities among vocational teachers. *Vocations and Learning*, 11(2), 317-344.
- Billett, S. (2009) Personal epistemologies, work and learning. *Educational Research Review* 4, 210-219
- Billett, S. (2023a) Learning across working life: a product of the personal curriculum. In S. Billett, H. Salling-Olesen, & L. Filliettaz (Eds.), *Sustaining employability through work-life learning: Practices and policies* (pp. 209-227). Springer Nature.
- Billett, S. (2023b). Learning across working life: Educative experiences. In S. Billett, H. Salling-Olesen, & L. Filliettaz (Eds.), *Sustaining employability through work-life learning: Practices and policies* (pp. 191-208). Springer Nature.
- Billett, S., Le, A. H., Smith, R., & Choy, S. (2021). The kinds and character of changes adults negotiate across worklife transitions. *International Journal of Lifelong Education*, 1-15. <https://doi.org/10.1080/02601370.2021.1989723>
- Billett, S., Salling-Olesen, H., & Filliettaz, L. (Eds.) (2023). *Sustaining employability through worklife learning: Policies and Practices*, Springer. ISBN 978-981-99-3958-9
- Billett, S., Choy, S., Le, A.H. (2023). Worklife learning: Personal, educational, and community contributions. In: Evans, K., Lee, W.O., Markowitsch, J., Zukas, M. (Eds.), *Third international handbook of lifelong learning. Springer International Handbooks of Education* (pp.421-442). Springer. 3-031-19592-1 (eBook) <https://doi.org/10.1007/978-3-031-19592-1>
- Boccardi, F., Caputo, A., Fregonese, C., Langher, V., & Sartori, R. (2017). Career adaptability as a strategic competence for career development. *European Journal of Training and Development*, 41(1), 67-82.

- Bradley, H., & Devadason, R. (2008). Fractured transitions: Young adults' pathways into contemporary labour markets. *Sociology*, 42(1), 119-136.
- Olesen, H. S. (2016). A psycho-societal approach to life histories. In Ivor Goodson, Ari Antikainen, Pat Sikes, Molly Andrews (Eds.), *Routledge international handbook on narrative and life history* (pp. 214-224). Routledge.
- Organisation for Economic Co-operation and Development. (2006). *Live longer, work longer: A synthesis report*. OECD.

Biographical notes

Stephen Billett is Professor of Adult and Vocational Education in the School of Education and Professional Studies, Griffith University, Brisbane, Queensland Australia.

Sloka B., Buligina, I., Tora, G., Dzelme, J., Brante, I., Liepina, K., & Angena, A. (2023). Good practice of support to students at risk in vocational education. In C. Nägele, N. Kersh, & B. E. Stalder (Eds.), *Trends in vocational education and training research, Vol. VI. Proceedings of the European Conference on Educational Research (ECER), Vocational Education and Training Network (VETNET)* (pp. 59–66). <https://doi.org/10.5281/10.5281/zenodo.8269449>

Good Practice of Support to Students at Risk in Vocational Education

Sloka, Biruta

biruta.sloka@lu.lv, University of Latvia

Buligina, Ilze

ilze.buligin@lu.lv, University of Latvia

Tora, Ginta

ginta.tora@lu.lv, University of Latvia

Dzelme, Juris

juris.dzelme@lu.lv, University of Latvia

Brante, Ilze

ilze.brante@ovt.lv, University of Latvia, Ogres Tehnikums

Liepina, Kristine

Kristine.liepina@lu.lv, University of Latvia

Angena, Anna

anna.angena@lu.lv, University of Latvia

Abstract

Context: In most countries, there is a significant increase in the number of students at risk – as a result of social conditions and also the COVID-19 pandemic when many students experienced isolation and lack of live communication with their study mates. The increase in the number of students at risk in vocational education and training (VET) has motivated many academic researchers to examine factors influencing the rise in the number of students at risk and share good-practice identified.

Approach: Research findings in academic publications on good practice in working with students at risk in VET using qualitative and quantitative research methods. Qualitative research methods, interviews of students, and focus group discussions with representatives of teaching staff in Latvia were used. A survey of VET teachers working with at-risk students was used as quantitative research methods.

Findings: An excellent and innovative finding was identified as a practice of designating a group mentor – representative of teaching staff devoting his/her full-time workload for individual support and conversations with students at risk. Students have mentioned that it was beneficial and important for them, as often their family members could not provide such support. It was also noted that well-furnished classrooms and other facilities matter a great deal as motivating factors, as well as involvement of students in sports activities and student governance bodies.

Conclusions: Training and seminars for teaching and support staff for work with at-risk students is highly relevant for organising successful work with at-risk students in VET. It is highly recommended to have representatives from teaching staff specifically designated to provide



individual consultations regularly and upon a specific need for students at risk on a broad spectrum of issues related to their personal life and studies at school.

Keywords: VET students at risk, teacher support, group mentor

1 Introduction

Societies nowadays increasingly face the challenge of dealing with young people at risk. The reasons are multifold – unfavourable social or family environment, poverty, learning difficulties, psychological or emotional problems and other unfavourable circumstances. Educational systems are seeking effective solutions. It has been recognised that young people at risk often need additional stimulus and motivation to resist various challenging conditions, especially if their prior learning experiences and school environment has not been positive so far. Research also shows that many of these young people are more inclined to practice-oriented activities and are not keen on more academically oriented ones. For this reason, there is a good justification to carry out targeted research on the potentially positive role of vocational education and training (VET) as a catalyst for improved motivation of at-risk students to deal with their difficulties and strive for more meaningful life modes. Moreover, besides routine VET procedures, additional input might be necessary to make VET even more attractive to this target group. In this respect, the research team has formulated the following research questions: 1. What are the most relevant findings worldwide in the involvement of students at risk in VET, with a focus on innovative solutions requiring original approaches to motivate students and facilitate the work of the teaching and administrative staff? 2. What are limiting and challenging factors for the successful involvement of students at risk into VET to develop these students as successful future professionals? 3. What are the views of representatives of the teaching staff working with students at risk in VET regarding the relevance of selected challenging aspects pointed out by students?

Aim of the research: to propose research-based approaches for innovative solutions in work with students at risk – by their involvement in VET, with additional incentivising and support factors that motivate them to become valued professionals and socially active citizens, thus also contributing to the economic development of the country.

Research methods used in research: to ensure the achievement of the aim of the study and to implement a comprehensive approach, a methodology was developed using combined methods of qualitative and quantitative data collection and analysis. This also included desk research and analysis of various sources of information, including the available statistical data, national legislation, policy documents and projects. A variety of statistical data analysis methods were used. Student interviews and expert interviews were organised based on pre-prepared questionnaires to obtain the material for qualitative analysis. Targeted focus group discussions with teachers were carried out as well. To obtain a more in-depth view from the practitioner's perspective, interviews and discussions were conducted with the project leaders and specialists of targeted national level projects addressing the issues of young persons at risk. The additional discussions with staff of a designate ESF project in work with students at risk allowed for the development of a more focused methodological approach enabling the research team to arrive at unified conclusions and identification of potential measures to facilitate the positive developments in work with students at risk. A questionnaire was developed and based on it a pilot survey was conducted during which the relevant professionals recommended improvements of the questionnaire before its final version was distributed among the target group – teaching staff working with students at risk. The respondents (all members of teaching staff involved in work with students at risk) were invited by representative of State Education Quality Service of the Republic of Latvia, the institution responsible for work and professional development of the administrative and teaching staff dealing with students at risk. The feedback from respondents

was collected by use of survey platform QuestionPro, and the obtained data during the survey were analysed with SPSS software.

2 Theoretical findings

Academic researchers have presented findings on the improved solution of involvement of students at risk in VET, and several relevant aspects need to be taken into consideration (Keijzer et al, 2022; Horsford & D'Amico, 2015), including additional attention to these students and special training for the teaching staff (Fix et al., 2017) indicating specific relevant aspects (Fenwick, Field, 2014) with the students in focus requiring not only attention but also innovative solutions (Sarceda-Gorgoso & Barreira-Cerqueiras, 2021). Countries propose various solutions in response to their particular experience and challenges (Lam, 2001; LeMahieu [https://www-emerald-com.datubazes.lanet.lv/insight/search?q=Paul G. LeMahieu & Nordstrum, Gale, 2017](https://www-emerald-com.datubazes.lanet.lv/insight/search?q=Paul%20G.%20LeMahieu%20&Nordstrum,%20Gale,%202017)) with different suggestions for better policy in the field, stressing the importance of using the best solutions and best practices. Innovative solutions are discussed and analysed (Lippke & Wegener, 2014) with stress on identified innovative approaches (Mundia, Salleh, 2017) with initiatives potentially applicable for other countries in their policy making. Researchers (Middleton, 2022; Mazin et al., 2021) have pointed out that experience in VET has a high value, it being part of compulsory education (López & Saurin, 2017), paying particular attention to the development of skills (Eegdeman et al, 2018) including cognitive skills. It is important to consider various aspects, including the gender of the student (Haro et al, 2020; Jørgensen, 2015), also showing the role of the teaching staff as crucial since the various developed approaches can be developed and applied to address the various challenges. Researchers are expressing the importance of regular updates of knowledge (Vanlommel et al., 2023) stressing that keeping up-to-date on skills and competence also contributes to a positive and inspiring attitude.

3 Empirical research results

In individual interviews with students at risk in VET in Latvia, the presence of a group mentor who is devoting his/her full-time workload to consulting and supporting students in relation to their personal and school life was identified as an encouraging and motivating factor for managing their lives and striving to achieve more. Focus-group discussions of teaching staff representatives indicated that among other relevant aspects in their work with students at risk – specific training and professional development, as well as supervision activities, helped a lot. In the survey, questions were included to evaluate those aspects as well, to have a comprehensive approach. In this paper more detailed analysis of the views of representatives of teaching staff in working with students at risk was in the following aspects: Opportunities for extracurricular/leisure activities are an essential motivating and social inclusion stimulating factor for students at risk of social exclusion; The physical learning environment (rooms and equipment) is a motivating and social inclusion promoting factor for students at risk of social exclusion; A positive emotional learning environment is a motivating and social inclusion promoting factor for students at risk of social exclusion; Psychological support is a motivating and social inclusion promoting factor for students at risk of social exclusion; An individualized approach and delving into the problematic issues of a specific young person is a motivating and social inclusion stimulating factor for students at risk of social exclusion. All analysed aspects were required to be evaluated on scale from 1 to 10, where 1 - not supported (bad); 10 – very well supported (good), and there was also an option to indicate that „not applicable/no information”. Results of the analysed aspects evaluated by members of the teaching staff in VET working with students at risk are included in the following tables.

Table 1

Distribution of evaluations by teaching staff in VET working with students at risk in Latvia in 2023 on evaluated aspect *Opportunities for extracurricular/leisure activities are an essential motivating and social inclusion factor for students at risk of social exclusion*

Evaluations	Frequency	Percent	Valid Percent	Cumulative Percent
0 - Not applicable/No information	5	7,7	7,7	7,7
1 - Not supporting (bad)	1	1,5	1,5	9,2
3	3	4,6	4,6	13,8
4	3	4,6	4,6	18,5
5	1	1,5	1,5	20,0
6	4	6,2	6,2	26,2
7	13	20,0	20,0	46,2
8	14	21,5	21,5	67,7
9	14	21,5	21,5	89,2
10 - Very supporting (good)	7	10,8	10,8	100,0
Total	65	100,0	100,0	

Source. Authors calculations based on survey results, n=65, evaluation scale 1-10, where 1-not supporting (bad), 10-very supporting (good), 0–not applicable/no information

Survey data indicate that VET teachers working with students at risk are fairly positive and have evaluated highly the needs to have additional activities to students at risk. Most of VET teachers working with students at risk gave high evaluations (7 or more) but 7,7% of teachers had no opinion on this aspect.

Table 2

Distribution of evaluations by teaching staff in VET working with students at risk in Latvia in 2023 on the evaluated aspect *The physical learning environment (rooms and equipment) is a motivating and social inclusion-promoting factor for students at risk of social exclusion*

Evaluations	Frequency	Percent	Valid Percent	Cumulative Percent
0 - Not applicable/No information	4	6,2	6,2	6,2
1 - Not supporting (bad)	1	1,5	1,5	7,7
3	1	1,5	1,5	9,2
4	2	3,1	3,1	12,3
5	6	9,2	9,2	21,5
6	8	12,3	12,3	33,8
7	13	20,0	20,0	53,8
8	11	16,9	16,9	70,8
9	10	15,4	15,4	86,2
10- Very supporting (good)	9	13,8	13,8	100,0
Total	65	100,0	100,0	

Source. Authors calculations based on survey results, n=65, evaluation scale 1-10, where 1-not supporting (bad), 10-very supporting (good), 0–not applicable/no information

Survey data indicate that VET teachers working with students at risk are fairly positive and evaluated highly the importance of physical environment of learning to students at risk. Almost half of VET teachers working with students at risk gave high evaluations (7 or more than 7) but 6,6% of teachers had no opinion on this aspect.

Table 3

Distribution of evaluations by teaching staff in VET working with students at risk in Latvia in 2023 on the evaluated aspect *A positive emotional learning environment is a motivating and social inclusion promoting factor for students at risk of social exclusion*

Evaluations	Frequency	Percent	Valid Percent	Cumulative Percent
0	1	1,5	1,5	1,5
4	1	1,5	1,5	3,1
5	1	1,5	1,5	4,6
6	5	7,7	7,7	12,3
7	10	15,4	15,4	27,7
8	14	21,5	21,5	49,2
9	15	23,1	23,1	72,3
10 - Very supporting (good)	18	27,7	27,7	100,0
Total	65	100,0	100,0	

Source: Authors calculations based on survey results, n=65, evaluation scale 1-10, where 1-not supporting (bad), 10-very supporting (good), 0–not applicable/no information

Survey data indicate that VET teachers working with students at risk are very positive and highly evaluated the needs to have emotionally positive learning environment for students at risk. Almost half of VET teachers working with students at risk gave high evaluations (7 or more).

Table 4

Distribution of evaluations by teaching staff in VET working with students at risk in Latvia in 2023 on the evaluated aspect *Psychological support is a motivating and social inclusion promoting factor for students at risk of social exclusion*

Evaluations	Frequency	Percent	Valid Percent	Cumulative Percent
3	1	1,5	1,5	1,5
5	3	4,6	4,6	6,2
6	3	4,6	4,6	10,8
7	7	10,8	10,8	21,5
8	17	26,2	26,2	47,7
9	18	27,7	27,7	75,4
10 - Very supporting (good)	16	24,6	24,6	100,0
Total	65	100,0	100,0	

Source: Authors calculations based on survey results, n=65, evaluation scale 1-10, where 1-not supporting (bad), 10-very supporting (good), 0–not applicable/no information

Survey data indicate that VET teachers working with students at risk are very positive and have highly evaluated the need to have psychological support to students at risk. Almost half of VET teachers working with students at risk gave highest evaluations and every teacher had opinion on this aspect.

Table 5

Distribution of evaluations by teaching staff in VET working with students at risk in Latvia in 2023 on the evaluated aspect *An individualized approach and delving into the problematic issues of a specific young person is a motivating and social inclusion stimulating factor for students at risk of social exclusion*

Evaluations	Frequency	Percent	Valid Percent	Cumulative Percent
3	1	1,5	1,5	1,5
6	5	7,7	7,7	9,2
7	1	1,5	1,5	10,8
8	13	20,0	20,0	30,8
9	18	27,7	27,7	58,5
10 - Very supporting (good)	27	41,5	41,5	100,0
Total	65	100,0	100,0	

Source: Authors calculations based on survey results, n=65, evaluation scale 1-10, where 1-not supporting (bad), 10-very supporting (good), 0–not applicable/no information

Survey data indicate that VET teachers working with at-risk students are very positive and have highly evaluated the need for an individual approach to at-risk students. Almost half of VET teachers working with students at risk gave the highest evaluations and every teacher had opinion on this aspect.

4 Conclusions and recommendations

As a result of the research, conclusions have been drawn regarding the most effective measures for working with students at risk and for supporting the school staff involved in the work. The obtained data and qualitative analysis have shown the decisive role of a systemic set of strategic approaches and interventions at the national level. At the same time, individualised approaches at the institutional level are indispensable in working with the target group – young people at risk. Mitigation of former unfavourable experiences has a powerful potential for positive developments in working with students at risk. Also, an immediate possibility to talk and discuss one's problems and a prompt availability of advice or support may be crucial factors for addressing the risks of the target group. The research results show that the risk factors are reduced with adequate, timely and innovative interventions.

Moreover, the failing students may turn into 'regular' students or even high-achievers with a strong sense of purpose in life. This clearly contributes not only to the student's personal and professional life fulfilment but also prevents social problems and increases the country's economic potential. At the same time, the professional development of the teaching and support staff at VET institutions may play a decisive role. The research shows that regular professional development of the school staff may not be sufficient, and more targeted professional development of the staff is needed to succeed in the work with students at risk of social exclusion. The staff working under strainful conditions need to be taken care of – with adequate remuneration and additional consideration for the well-being of this staff, including supervision and similar activities. Another conclusion is that effective innovative solutions should not remain as temporary activities but need to be turned into sustainable mainstream strategies and measures with adequate financial provision. Creating such comprehensive and sustainable mechanisms may contribute to improved and more inclusive environment for all learners, including students at risk in VET.

References

- Cedefop (2020). *Skills forecast 2020: Latvia. Cedefop skills forecast*. [Online] Available at: <https://www.cedefop.europa.eu/en/country-reports/latvia-2020-skills-forecast>
- Cedefop (2020). *Vocational education and training in Europe, 1995-2035: Scenarios for European vocational education and training in the 21st century*. Publications Office of the European Union. Cedefop reference series; No 114. <http://data.europa.eu/doi/10.2801/794471>
- Cedefop (2022). *Teachers and trainers in a changing world: Building competencies for inclusive, green and digitalised vocational education and training (VET): Synthesis report*. Luxembourg: Publications Office. Cedefop research paper, No 86. <http://data.europa.eu/doi/10.2801/53769>
- Eegdeman, I., Meeter, M., Van Klaveren, C. (2018). Cognitive skills, personality traits and dropout in Dutch vocational education. *Empirical Research in Vocational Education and Training*, 10(1), 11.
- Fenwick, T., Field, J. (2014). Introduction of the visible and invisible in work and learning. *Journal of Workplace Learning*, 26(6/7).
- Fix, G.M., Ritzen, H.T.M., Pieters, J.M., Kuiper, W.A.J.M. (2019). Effective curricula for at-risk students in vocational education: a study of teachers' practice. *Empirical Research in Vocational Education and Training*, 11(1), 1.
- Haro, B., Beranuy, M., Vega, M.A., Calvo, F., Carbonell, X. (2022). Problematic smartphone use and gender differences in vocational education and training. *Educacion XXI*, 25(2), 271-290.
- Horsford, S.D., D'Amico, D. (2015). The past as more than prologue: a call for historical research. *International Journal of Educational Management*, 29(7), 863-873.
- Jørgensen, C.H. (2015). Some boys' problems in education – what is the role of VET? *Journal of Vocational Education and Training*, 67(1), 62-77.
- Keijzer, R., van Schooten, E., van der Rijst, R., Admiraal, W. (2022). Individual characteristics of students in vocational education moderating the relationship between school engagement and vocational identity. *European Journal of Psychology of Education*, 37(4), 255-1283.
- Lam, J.Y.L. (2001). Economic rationalism and education reforms in developed countries. *Journal of Educational Administration*, 39(4), 346-358.
- LeMahieu, P.G., Nordstrum, L.E., Gale, D. (2017). Positive deviance: learning from positive anomalies. *Quality Assurance in Education*, 25(1), 109-124.
- Lippke, L., Wegener, C. (2014). Everyday innovation – pushing boundaries while maintaining stability. *Journal of Workplace Learning*, 26(6/7), 376-391.
- López, M.A., Saurin, A.A.N. (2017). The purpose of Compulsory Education as transition or as goal. *Profesorado*, 21(4), 75-94.
- Mazin, K.A., Norman, H., Nordin, N., Ibrahim, R. (2020). MOOC Student Learning Analytics for Automotive Technology Programme in Vocational College. *Journal of Physics: Conference Series*, 1529(5), 052075.
- Middleton, S. (2022). Secondary/Tertiary High School, Changing Student Experiences Through VET. *Professional and Practice-based Learning*, 34, 191-207.
- Mundia, L., Salleh, S. (2017). Coping styles of failing Brunei vocational students. *Education + Training*, 59(4), 389-405.
- OECD (2020). *OECD Skills Strategy Implementation Guidance for Latvia: Developing Latvia's Education Development Guidelines 2021-2027*, OECD Skills Studies, OECD Publishing, Paris, <https://doi.org/10.1787/ebc98a53-en>
- Sarceda-Gorgoso, M.C., Barreira-Cerqueiras, E.M. (2021). Basic vocational training and its contribution to the development of competences for educational re-engagement and labor insertion: Student perception. *Educar*, 57(2), 319-332.
- Strode, P., Buligina, I., Šuškeviča, I. (2022). Teachers and trainers in a changing world – Latvia: Building up competences for inclusive, green and digitalised vocational education and training (VET). Cedefop ReferNet thematic perspectives series. http://libserver.cedefop.europa.eu/vetelib/2022/teachers_and_trainers_in_a_changing_world_Latvia_Cedefop_ReferNet
- Tütlys, V., Buligina, I., Dzelme, J., Gedvilienė, G., Loogma, K., Sloka, B., Tikkanen, T.I., Tora, G., Valjataga, V.T., Ūmarik, M. (2022). VET ecosystems and labour market integration of at-risk youth in the Baltic countries: implications of Baltic neoliberalism. *Education and Training*, 60(2), 190-213.
- Vanlommel, K., van den Boom-Muilenburg, S.N., Thesingh, J., Kikken, E. (2023). How a sense of collective efficacy influences teacher learning during change: the role of academic optimism and shared vision. *Journal of Professional Capital and Community*, 8(1), 1-16.

Research was supported by project EmpowerVET

Biographical notes

Dr **Biruta Sloka** is a professor and leading researcher at University of Latvia, has participated in several research projects, was supervisor of doctoral dissertations which were successfully defended.

Dr **Ilze Buligina** is a leading researcher at University of Latvia, has participated in several research projects and development of policy documents.

Mg **Ginta Tora** is a researcher at University of Latvia, has participated in several research projects.

Dr **Juris Dzelme** is a leading researcher at University of Latvia, has participated in several research projects and development of policy documents.

Mg **Ilze Brante** is a doctoral student at University of Latvia, has participated in several research projects and development of policy documents.

Mg **Kristine Liepina** is a PhD candidate and research assistant at University of Latvia, has participated in several research.

Mg **Anna Angena** is a doctoral student at University of Latvia, has participated in several research projects.

Casper, M., Augsdörfer, A., & van Meegen, A. (2023). „Blending 4 Futures“: A teacher training course in blended learning for vocational teachers, based on design-research. In C. Nägele, N. Kersh, & B. E. Stalder (Eds.), *Trends in vocational education and training research, Vol. VI. Proceedings of the European Conference on Educational Research (ECER), Vocational Education and Training Network (VETNET)* (pp. 67–76). <https://doi.org/10.5281/zenodo.8208359>

„Blending 4 Futures“: A Teacher Training Course in Blended Learning for Vocational Teachers, Based on Design-Research

Casper, Marc

marc.casper@hu-berlin.de, Humboldt-Universität zu Berlin

Augsdörfer, Anja

anja.augsdoerfer@hu-berlin.de, Universität Hamburg & Humboldt-Universität zu Berlin

van Meegen, Anna

anna.van.meegen@hu-berlin.de, Humboldt-Universität zu Berlin

Abstract

Context: In 2022, Berlin’s regional teacher training institution started a voluntary course in blended learning for vocational schools under the academic supervision of Humboldt University.

Approach: This course was developed and evaluated as a design-based research project according to the general model by McKenney & Reeves, with a special focus on knowledge types according to their epistemic categories (cf. Goldkuhl) and knowledge forms according to their materialisation and explication (cf. Johannesson & Perjons).

Results: The results are both pragmatic and theoretical insights on blended learning in vocational schools, manifested in a „Navigator” for the final course design and a „Knowledge Map” for its epistemic categories.

Conclusion: The authors conclude that the conceptual factors of progression and supervision, accompanied by their respective competences, are fundamental differentiating factors in developing a distinct blended learning competence in vocational education.

Keywords: blended learning, vocational education, teacher training, digitalization, design-based research

1 The demand for designing blended learning in vocational schools

In 2022, Berlin’s regional teacher training institution started a voluntary course in blended learning for vocational schools. Members of Humboldt University joined with further education multipliers for digitalization to develop this course as an educational design research project (cf. McKenney & Reeves, 2018), tailored to teachers’ needs and the status quo in vocational schools in Berlin, Germany. This paper delineates the development and evaluation of this training, with a special focus on mapping the diverse types and forms of knowledge (cf. Goldkuhl, 2020; Johannesson & Perjons, 2014) which informed both the design and the theoretical understanding obtained from it.

The demand for such a form of teacher training was based on lessons learned during the COVID19 pandemic’s lockdowns and emergency remote teaching (cf. Hodges et al., 2020). Evidently, online learning environments and digital media allow for new educational settings with the potential to increase and innovate learning effects (cf. Müller & Mildemberger, 2021).



However, technologies and the respective legislatures are developing at a rapid pace (e.g. the European Data Protection Regulation, <https://gdpr.eu/>), so teachers on-the-job need further training to acquire „an increasingly broad and more sophisticated set of competences” (cf. the European DigiCompEdu framework, Redecker, 2017, p. iv). Also, current generations of learners use media in very different ways and for very different aims than their teachers do (cf. Khan & Vuopala, 2019; Feierabend et al., 2017), calling for a reflection and redefinition of media competences for both groups. Focusing on vocational education, ‘new work’ increasingly relies on digital media, specific vocational competences, and self-regulation (cf. Rafiola et al., 2020), which cannot be expected to be covered by current curricula yet.

At the same time, diverse challenges considering online learning have been discovered. It has been evident throughout the COVID19 pandemic that on-site teaching still has various substantial advantages over online teaching. Particularly, schools serve custodial and social functions: They offer students a range of possibilities to meet with and emotionally grow among peers in complex social situations. Also, schools supervise learners on behalf of parents and other custodians. This „baby sitter function”, as Wall (1978) put it cynically, is a socioeconomic prerequisite for most families to partake in work life (as experienced by many in a very stressful way during COVID19 lockdowns). Goudeau et al. (2021) summarize how school closures and remote teaching with predominantly digital resources exacerbated social class disparities in three ways:

- the digital divide (learners’ unequal access to digital resources, tools and skills),
- the cultural divide (unequal familiarity with academic knowledge and skills; unequal dispositions for autonomy and self-regulation), and
- the structural divide (unequal support of learners from schools).

In addition, concerning vocational education with its many lab and workshop settings, hands-on and on-site learning are still understood to be indispensable for the development of practical work skills, which in turn have an effect on students' employability and emancipation.

In consequence, it is not ‘pure’ online learning but deliberate ‘blended’ learning which is of considerable importance for vocational schools, teachers, and learners. „Blended learning” can be defined as „a formal education program in which a student learns at least in part through online delivery of content and instruction with some element of student control over time, place, path, and/or pace and at least in part at a supervised brick-and-mortar location away from home.” (Staker & Horn, 2012, p. 3) Teachers who want to develop blended learning programs then need some specific competences, which both include and exceed the respective competences for online and on-site elements of their programs. The design research project „Blending4Futures” aimed at identifying such competences while developing a suitable teacher training course.

2 Approach: Practice what you preach – design what you study – know what you know

As educational design research aims to combine a specific „maturing intervention” with general „theoretical understanding” (cf. McKenney & Reeves, 2018), the course development was conducted as an agile, iterative process based on collaborative work and formative feedback. In a ‘practice what you preach’ approach to blended learning, both the development process and the final course deliberately blended online and on-site activities. The participating teachers learned how to design blended learning formats for their respective target groups of students of different vocations, while partaking in a blended learning training format themselves. Thus, participating teachers could experience blended learning both from the perspectives of learners and of developers. In effect, trainers, researchers, and participants constantly reflected on conditions, factors, and principles of successful blended learning, in an agile mindset of (re-)designing the course as it progressed.

Inspired by Sandoval's (2014) concept of „conjecture mapping” for design research, a „knowledge map” was created to illustrate the various types and forms of knowledge informing the design and being obtained from it as in- and outflows. Data for this was collected via desk-top research, document analysis, and formative and summative feedbacks both during design meetings (concerning the involved teacher trainers) and during training sessions (concerning the participating teachers). As a learning management system, Berlin's central Moodle platform „Lernraum Berlin” (<https://www.lernraum-berlin.de/>) was used, offering the developers diverse tools for collaboration and evaluation, such as collaborative documents, video calls, and anonymized survey tools.

As Kretz (2020) explains, designing is an interwoven trifold process of understanding, structuring and changing a given situation *simultaneously*. From a designer's perspective, it is inevitable that you study what you design – and to design what you study. It is therefore not feasible to divide this complexity in practice. However, a linear model helps in pre-structuring, documenting, and communicating design research endeavours. In this sense, McKenney & Reeves (2018) propose a three-phase process model with iterations for educational design research. For „Blending4Futures”, this model was utilized to structure both the design project and the knowledge map as one of its results. These phases are:

1. Analysis and Exploration,
2. Design and Construction, and
3. Evaluation and Reflection, plus a parallel dimension of steadily increasing
4. Implementation and Spread

Depending on the phases, the types and forms of knowledge varied and were characterised according to the typologies of Goldkuhl (2020) and Johannesson & Perjons (2014). Goldkuhl differentiates knowledge types according to their epistemic categories. The following knowledge types are especially important in design processes:

- „descriptive knowledge” is about states and effects,
- „explanatory knowledge” is about causes, relations and reasons,
- „normative knowledge” is about values and goals,
- „prospective knowledge” is about reasonable possibilities, potentials and hypotheses,
- „prescriptive knowledge” is about (validated) principles and rules.

In addition, Johannesson & Perjons differentiate forms of knowledge according to their materialisation and explication:

- „explicit knowledge” is symbolised in texts, numbers, media etc., which makes it relatively easy to store and transfer,
- „embodied knowledge” is the internalized experience of people, such as successful patterns of acting, which are usually implicit,
- „embedded knowledge” is incorporated in objects and processes, such as a tool bearing information about how to use it (e.g., scissors usually have an ‘instructional’ shape, indicating that it would be effective to put fingers into its holes and perform a grabbing movement)

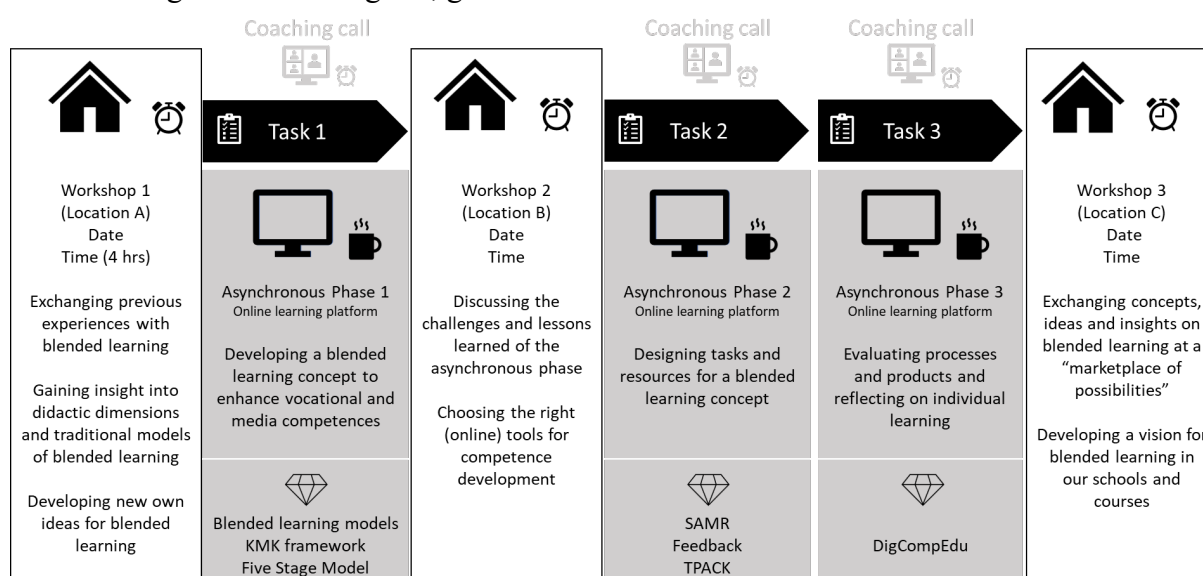
In combination, McKenney & Reeves' (2018) phases, Goldkuhl's (2020) types and Johannesson & Perjons' (2014) forms of knowledge offer a comprehensive framework for structuring and documenting the cognitive dimensions of design research. For example, in the case of Blending4Futures, during „Analysis and Exploration”, relevant knowledge tended to be „explicit” in the form of published literature and „embodied” in the form of participants' teaching experience and best practice. While empirical literature hinted at „descriptive” and „explanatory” knowledge gained in the past and by others, the participants expressed their own „normative” and „prospective” knowledge in designing their new blended learning ideas (e.g., „what we should and could be doing”). During „Evaluation and Reflection” then, knowledge tended to be „embedded” in the form of design artefacts, such as blended learning concept documents,

learning management system courses, and teaching materials/learning media. By identifying their effective design principles, „prescriptive” implications for future developments were formulated.

3 Results

In line with McKenney and Reeves (2018), the project’s results include both the realized design artefacts and theoretical understanding, especially transferrable design principles. The prototypical design includes a written concept, a „Navigator” visualizing the events-and-tasks structure of the course, and the respective learning media (all tasks and materials in a Moodle course). Table 1 shows a generalized version of the final „Navigator”.

Table 1
The Blending4Futures Navigator, generalized version

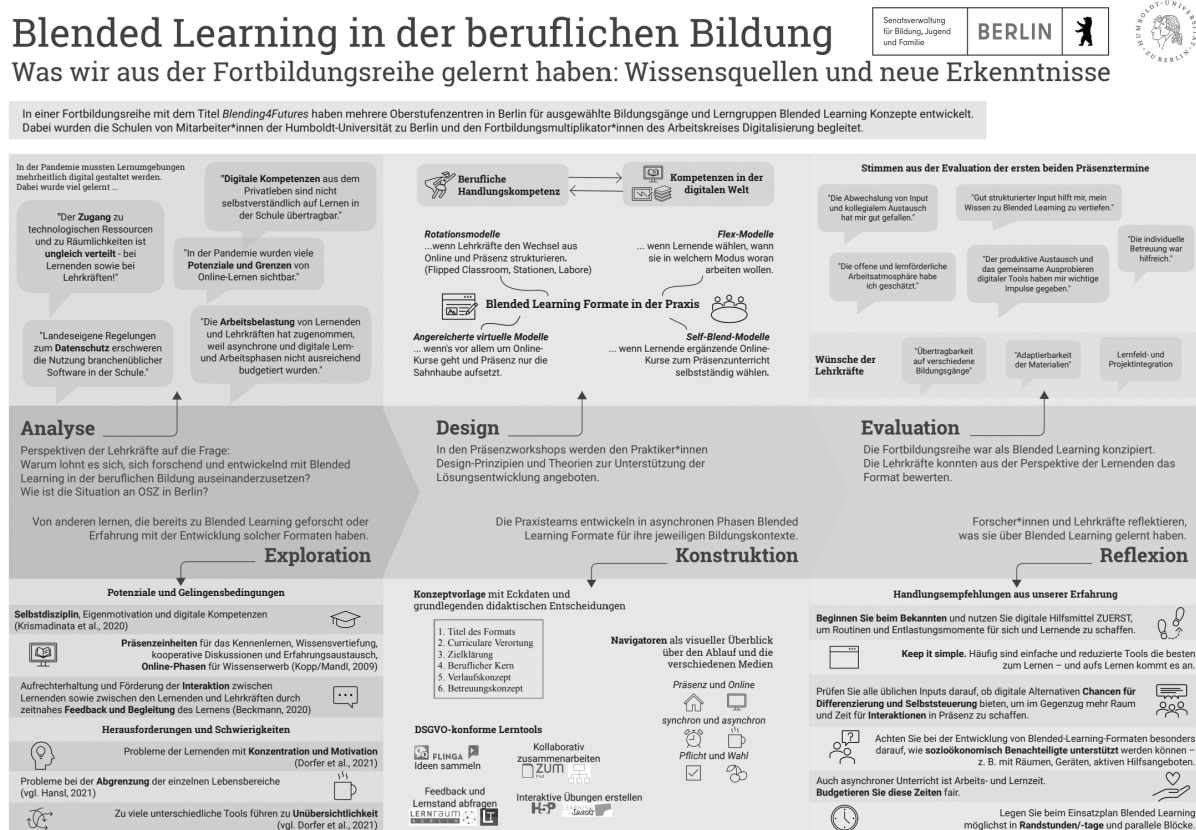


The „Blending4Futures” training course began in September 2022 with an on-site workshop and ended in March 2023 with a presentation marketplace. Another on-site workshop took place in November. Those three on-site workshops were connected via three asynchronous phases with online learning tasks and resources. Optional coaching calls were offered to accompany the online phases. The activity structure, tasks and contents can easily be read from the navigator; however, a very important insight must be added: The final course design actually reflects McKenney & Reeves’ (2018) design research model. The first on-site workshop and online tasks aimed at „Analysis and Exploration”, guiding teachers in exchanging their prior experiences with online and blended teaching and learning, explicating and validating those experiences (cf. „embedded knowledge”) with the help of theories and literature, and analysing their local conditions for blended learning (cf. „descriptive/explanatory knowledge”). The second workshop and asynchronous phase focused on „Design and Construction”, supporting the participating teachers in creating their own blended learning formats with the help of didactical frameworks, potential (online) tools and creativity coaching (cf. „normative/prospective knowledge”). The last asynchronous phase and the final workshop concluded with „Evaluation and Reflection”, by exchanging participants’ products and ideas and looking back on their own learning processes throughout those last weeks and months. By generalizing and validating their latest experiences in a group, they formulated implications for future developments (cf. „prescriptive knowledge”).

Since the partners of Humboldt University had a special interest in knowledge creation through design, a „Knowledge Map” for blended learning in vocational schools based on the experiences from „Blending4Futures” was created. It is available as a dynamic Miro board in German (van Meegen et al., 2023) and depicted in Table 2. Just like the „Navigator”, the „Knowledge Map” is structured according to McKenney & Reeves’ (2018) model. The following subsections explain some details of this „Knowledge Map”.

Table 2

The Blending4Futures Knowledge Map (for dynamic version via Miro, cf. van Meegen et al., 2023)



3.1 Analysis and Exploration

With the process of „Analysis”, McKenney & Reeves associate a predominantly empirical, descriptive, and explanatory approach to a specific local problem or issue, using guiding questions such as: „What is the problem? Why is it this way? What would constitute a solution? What are the boundary conditions?” (McKenney, 2022, sl. 52) – This approachable and illustrative wording is cited from an unpublished keynote presentation by Susan McKenney. In McKenney & Reeves, (2018), these questions are elaborated more methodologically. „Exploration”, on the other hand, is associated with a more global, investigative approach to learning from others who have already dealt with similar/related issues, using guiding questions such as: „What is already known? What are best practices? With whom can we collaborate?” (ibid.)

Thus, the whole project started by asking: What lessons have vocational teachers from Berlin learned about blended learning during emergency remote teaching in the COVID19 pandemic? In-depth inquiries were conducted to explore the perspectives of teachers, including the rationale for engaging in research and development on blended learning in vocational education, the current situation at vocational schools in Berlin, and the essential types of knowledge required for designing blended learning formats. To address these questions, information was

gathered through discussion sessions during the initial workshop. The following common insights regarding challenges and difficulties in implementing blended learning were identified:

- There is an unequal distribution of access to technological resources and physical spaces among both learners and teachers.
- Local data protection regulations pose obstacles to using industry-standard software in schools.
- Digital competences from private life do not automatically transfer to learning in school settings.
- The pandemic revealed various potentials and limitations of online learning.
- There was an increased workload for both learners and teachers due to inadequate allocation of time and resources for asynchronous and digital learning and working phases.

These local personal insights („embodied descriptive knowledge”) were then contrasted with the explicit descriptive and explanatory insights from literature and researchers who already investigated blended learning and discovered challenges, potentials, and success factors:

- In blended learning, learners tend to experience difficulties with concentration and motivation which demand special consideration (Dorfer et al., 2021).
- Learning and working digitally poses new challenges in demarcating life domains and privacy (Hansl, 2021).
- The increasing number of available online tools is disorienting and demands well-founded decision-making (Dorfer et al., 2021).
- When chosen voluntarily, online components of blended learning positively impact self-discipline, self-motivation, and digital competences (Krismadinata et al., 2020), as well as knowledge acquisition (Kopp/Mandl, 2009).
- Offline/in-person sessions facilitate in-depth knowledge exploration, cooperative discussions, and sharing experiences. They also sustain and enhance interaction among learners and between learners and teachers through timely feedback and learning support (Beckmann, 2020).

In conclusion, „Analysis and Exploration” confirm the „normative” and „prospective knowledge” that blended learning formats for vocational school settings should be developed deliberately.

3.2 Design and Construction

This phase includes the determination of the local prerequisites for a specific design, as well as its incremental and iterative (‘step-by-step’) implementation and revision with the help of general (or generalizable) construction criteria such as frameworks, tools, patterns, and principles. Guiding questions for the local „Design”-perspective are: „What could we do? What should we do? What would that look like?”, whose for the global „Construction”-perspective are: „How do we make it? How do we improve it?” (McKenney, 2022, sl. 56)

During on-site workshops, teachers were introduced to design principles and theories for blended learning (e.g., Staker & Horn, 2012). Models and frameworks applicable to the design of blended learning environments showcase what is feasible, but their effectiveness in specific cases is not assured. Throughout this phase, it became evident that the majority of realizable blended learning formats incorporate the concept of flipped classroom as a „homework variant” or „lab rotations” within the school setting (ibid.). Many teachers adopted the trainers’ idea of a „Blended Learning Navigator” akin to an advanced organizer, to provide a visual overview of the content and media sequence. Also, a written concept template proved helpful for teachers in aligning tools with specific learning tasks/processes, such as brainstorming, collaboration, feedback, assessment and testing, as well as interactive media and tasks.

The written concept format which resulted from the training course can be regarded as a standard template for blended learning in vocational schools. Participating teachers employed this template to develop their own blended learning prototypes for learners. The parameters of the template are:

1. Working Title of the format (indicating both content and methods)
2. Curriculum Context (when and why to teach)
3. Learning Objectives (integrating vocational and media competences)
4. Vocational Core (vocational problems, work processes, and products learners will encounter)
5. Progression Concept (events-and-tasks structure as well as the logic of transitions between elements)
6. Supervision Concept (supportive moderation, coaching, social, and custodial activities)
7. Lessons Learned and Development Ideas (incorporating an ongoing redesign of the concept based on teaching experience and student feedback)

Especially the points 5. „Progression” and 6. „Supervision” proved to be important. A peculiarity of blended learning, as opposed to pure online and pure on-site learning, is the need to plan for and manage the transitions between online and offline realms. This has didactical as well as technical dimensions, since special tasks and technologies are needed. For example, technologies for a transition from offline to online are

- recording (photos, audio, video, ...),
- scanning (2D and 3D, QR codes, NFC, RFID, ...), and
- sensors (light, sound, temperature, magnetism, ...);

examples for the transition from online to offline are

- playing (speakers, projectors, ...),
- printing (2D and 3D, ...), and
- programming of actors/automation (CNC, electronic motors, ...).

Under the term ‘supervision’, the participants discussed the broad variety of learning support strategies, such as learning coaching, logfiles, time- and self-management tools, peer learning and more, which deserve a special emphasis in blended learning settings with their „element[s] of student control over time, place, path, and/or pace” (Staker & Horn, 2012, p. 3). While most teachers are experienced in some such strategies in offline contexts, for online activities, they might have to look into relatively new e-moderating practices (e.g., Salmon, 2011, p. 60ff).

3.3 Evaluation and Reflection

In this phase, the aim is to gain insights into the quality of the intervention, with the guiding question „How do we investigate it? What do we see? What does this mean?”, and to reflect on the evaluation in terms of its (theoretical and practical) reasons and implications with the questions „What are its implications for practice? What are its implications for theory?” (McKenney, 2022, sl. 62)

Under the motto ‘practice what you preach’, the training course was intentionally designed as a blended learning experience. Thus, participating educators had the valuable opportunity to experience and evaluate the format from a learner’s perspective, enabling them to critically analyse factors which might be significant for their students in their respective blended learning environments, as well. Throughout the on-site workshops, anonymous written evaluations were collected, and a focus group discussion took place during the final session, from which selected quotations are provided below (own translation, German originals are shown in the knowledge map):

- „I enjoyed the variety of input and collegial exchange!”

- „Well-structured input helps me deepen my knowledge of blended learning.”
- „I appreciated the open and conducive work atmosphere.”
- „The productive exchange and collaborative experimentation with digital tools provided me with valuable insights.”
- „The individual support/coaching was helpful.”

Reflections from additional discussions between the involved digitalization multipliers and the partners at Humboldt University were distilled into a set of ‘lessons learned’, captured in a ‘starter pack’ or ‘first aid’ postcard which was later printed and handed out to more teachers interested in developing their own blended learning formats:

- Begin with familiar elements and prioritize the use of digital tools to establish routines and increase degrees of freedom for both teachers and learners.
- Keep it simple. Often, straightforward and streamlined tools prove to be the most effective for learning.
- Assess all traditional instructional inputs for opportunities to differentiate and foster self-guided learning through digital alternatives, thereby creating additional space and time for face-to-face interactions.
- Pay special attention to supporting individuals facing socioeconomic disadvantages in the development of blended learning formats, ensuring equitable access to facilities, devices, and proactive assistance.
- Visualize the phases, milestones, and interconnectedness of instructional concepts to facilitate navigation for all stakeholders involved.
- Recognize that asynchronous instruction constitutes dedicated work and learning time. Allocate these periods fairly and judiciously.
- When scheduling the implementation of blended learning, prioritize off-peak hours/days and concurrent blocks to optimize its effectiveness.

3.4 Implementation and Spread

At the moment of writing, three levels of implementation and spread can be identified for „Blending4Futures”:

- School level: The potential implementation of the participating teachers’ newly developed blended learning concepts at their respective schools was a central aspect of the training course. Some of the concepts were already tested during the training course, others are ready to be applied in the next school year. Their realization and spread, however, remains in the hands of those teachers.
- Training level: The training course „Blending4Futures” will be repeated in 2023 and probably continued after that, led by the regional further education multipliers for digitalization which have been involved in designing the course.
- Political level: Due to the success of the course and the increased interest of vocational schools to develop innovative blended learning formats, the Senate Department for Education, Youth and Family, Berlin, granted an extensive three-year pilot project according to the state school law, §18 SchulG Berlin. This ‘Schulversuch’ under the same name „Blending4Futures” allows ten participating vocational schools to test and evaluate innovative formats which are not yet covered by local regulations, with academic supervision and evaluation. The authors participate as didactic counsellors in a design-research setting similar to that of the training course. Such ‘Schulversuch’ pilot projects explicitly aim at modernizing regulations to account for educational

innovations. Thus, it can be expected that further implementations and disseminations of blended learning will be supported by political stakeholders in the near future.

4 Conclusion

As stated in section 3.2, the authors conclude that the factors ‘progression’ and ‘supervision’, accompanied by their respective competences, are fundamental differentiating factors in the development of a distinct blended learning competence tailored to blended learning environments in vocational education. These factors transcend the media and methods competences already required for traditional online or on-site education. By intentionally integrating online and on-site educational approaches, new challenges pertaining to progression and transitions emerge. These challenges encompass various aspects, such as the effective transfer of outcomes from online activities to on-site activities and the efficient organization and communication of mandatory and self-organized elements. Furthermore, challenges in supervision arise due to the need to adhere to attendance regulations, particularly in labs and workshops, as well as the application of e-moderating practices (as referenced by Salmon, (2011, p. 60ff), fulfilling communication and feedback requirements, and providing differentiated support to address socio-economic disparities. Consequently, the factors ‘Progression’ and ‘Supervision’ shed light on the specific challenges and design principles that set blended learning in vocational schools apart from other educational settings.

Although the integration of new pedagogical concepts is always accompanied by scepticism and challenges to overcome, it simultaneously presents opportunities and possibilities. Through the design-based research approach, this teacher training course aimed to build on post-pandemic experiences of teachers at a meta-level, to create space for exchange, and to identify, promote, and stimulate reflections on the teaching competencies required, by way of participating in a course of the same concept (‘practice what you preach’). Designing blended learning formats is not only about identifying suitable tools to support online learning processes, but also about identifying the diverse competencies of learners and promoting them through the tailored coordination of online and offline phases. It is not merely about the use of new media, but rather about understanding the respective potentials and challenges of online and offline learning environments, using digital tools for individualization and differentiation, enabling the promotion of personal competencies, and utilizing the social needs and opportunities of offline phases to promote social competencies and, not to be forgotten: the joy of learning and working together.

„Blending4Futures” is sponsored by the Senate Department for Education, Youth and Families, Berlin.



References

- Beckmann, A. (2020). *Zur studentischen Akzeptanz von digitalen Tools in der Hochschullehre*. Universitätsbibliothek Dortmund.
- Feierabend, C., Plankenhorn, T., & Rathgeb, T. (2017). JIM 2017. *Jugend, Information, (Multi-)Media: Basisstudie zum Medienumgang 12- bis 19-Jähriger in Deutschland* [JIM 2017. Youth, Information, (Multi-)Media: Basic Study on Media Use among 12- to 19-Year-Olds in Germany]. mpfs.
- GDPR - *General Data Protection Regulation*. (n.d.). Retrieved from <https://gdpr.eu/>
- Goldkuhl, G. (2020). Design Science Epistemology: A pragmatist inquiry. *Scandinavian Journal of Information Systems*, 32(1), Paper 2. Retrieved from <https://aisel.aisnet.org/sjis/vol32/iss1/2>
- Goudeau, S., Sanrey, C., Stanczak, A., Manstead, A., & Darnon, C. (2021). Why lockdown and distance learning during the COVID-19 pandemic are likely to increase the social class achievement gap. *Nature Human*

- Behaviour*, 5(10), 1273-1281.
- Hansl, Nora (2021): *Studieren in der Krise: Entfremdung und E-Learning*. Retrieved from <https://www.derstandard.at/story/2000125051198/studieren-in-der-krise-entfremdung-und-e-learning> [13.06.2023]
- Johannesson, P., & Perjons, E. (2014). *An Introduction to Design Science*. Springer.
- Khan, F., & Vuopala, E. (2019). Digital competence assessment across generations: A Finnish sample using the DigComp framework. *International Journal of Digital Literacy and Digital Competence (IJDLC)*, 10(2), 15-28.
- Kopp, B., & Heinz (2009): *Blended Learning: Forschungsfragen und Perspektiven*, Forschungsbericht Nr. 182, Ludwig-Maximilians-Universität München, Department Psychologie, Institut für Pädagogische Psychologie.
- Kretz, S. (2020). *The Cosmos of Design: Exploring the Designer's Mind*. Walther König.
- Krismadinata, K., Verawardina, U., Jalinus, N., Rizal, F., Sukardi, S., Sudira, P., Ramadhani, D., Lubis, A. L., Friadi, J., Arifin, A. S. R., & Novaliendry, D. (2020). Blended Learning as Instructional Model in Vocational Education: Literature Review. *Universal Journal of Educational Research*, 8(11B), 5801–5815. Retrieved from <https://doi.org/10.13189/ujer.2020.082214>
- McKenney, S., & Reeves, T. C. (2018). *Conducting educational design research* (2nd ed.). Routledge Taylor & Francis Group.
- McKenney, S. (2022). *Educational Design Research: Why, What, and How?* [Keynote address, Jan 20, 2022, DFG Conference on EDR, University of Hamburg/Online]. Unpublished presentation slides.
- Müller, C., & Mildenerger, T. (2021). Facilitating flexible learning by replacing classroom time with an online learning environment: A systematic review of blended learning in higher education. *Educational Research Review*, 34, 100394.
- Rafiola, R., Setyosari, P., Radjah, C., & Ramli, M. (2020). The effect of learning motivation, self-efficacy, and blended learning on students' achievement in the industrial revolution 4.0. *International Journal of Emerging Technologies in Learning (iJET)*, 15(8), 71-82.
- Redecker, C. (2017). *European framework for the digital competence of educators: DigCompEdu* (Y. Punie, Ed.). Publications Office of the European Union.
- Reinmann, G. (2011). Blended Learning in der Lehrerbildung: Didaktische Grundlagen am Beispiel der Lehrkompetenzförderung [Blended Learning in Teacher Education: Didactic Foundations using the Example of Promoting Teaching Competence]. *Seminar*, 3, 7-16.
- Salmon, G. (2011). *E-moderating: The key to online teaching and learning*Routledge.
- Sandoval, W. (2014). Conjecture Mapping: An Approach to Systematic Educational Design Research. *Journal of the Learning Sciences*, 23(1), 18-36.
- Staker, H., & Horn, M. B. (2012). *Classifying K–12 Blended Learning*. Innosight Institute, Inc.
- Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The Difference Between Emergency Remote Teaching and Online Learning. *EDUCAUSE Review*. Retrieved from <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning>
- van Meegen, A., Casper, M., Augsdörfer, A., Ottliczky, J., & Johnsen, A. (2023). *Knowledge Map „Blended Learning in der beruflichen Bildung“* [Knowledge Map „Blended Learning in Vocational Education“]. Retrieved from <https://miro.com/app/board/uXjVPhsRUNw=/>, via <https://www.erziehungswissenschaften.hu-berlin.de/de/wipaed/international/projekte/blended-learning>.

Biographical notes

Dr Marc Casper is a researcher and teacher trainer at Humboldt-Universität zu Berlin. Key themes of his projects are education for sustainable development, blended learning, curriculum development, reflective practice, and design-based research.

Dr Anja Augsdörfer is a researcher and teacher trainer at Universität Hamburg and Humboldt-Universität zu Berlin. Her research focuses on vocational teacher education, media technology, applications of blended learning and AI for individualized learning, and video-based reflection.

Anna van Meegen is an academic supervisor for vocational schools participating in the pilot project „Blending4Futures“ and a freelance teacher trainer for Humboldt-Universität zu Berlin. She is specialised in self-directed learning and learning coaching.

Casper, M., Gerlach, P., & van Bergen, K. (2023). Vocational education and training for sustainable development in Berlin's „Flagship Schools“: A transformative design-based research project. In C. Nägele, N. Kersh, & B. E. Stalder (Eds.), *Trends in vocational education and training research, Vol. VI. Proceedings of the European Conference on Educational Research (ECER), Vocational Education and Training Network (VETNET)* (pp. 77–87). <https://doi.org/10.5281/zenodo.8208364>

Vocational Education and Training for Sustainable Development in Berlin's „Flagship Schools“: A Transformative Design-Based Research Project

Casper, Marc

marc.casper@hu-berlin.de, Humboldt-Universität zu Berlin

Gerlach, Petra

petra.gerlach@senbjf.berlin.de, Senate Department for Education, Youth and Family, Berlin

van Bergen, Kerrin

vanbergen@epiz-berlin.de, EPIZ - Center for Global Citizenship Education, Berlin

Abstract

Context: A network of three vocational schools in Berlin partnered with Humboldt-University, the NGO EPIZ – „Center for Global Citizenship Education” and the Senate Department for Education, Youth and Family, Berlin, which is responsible for in-service teacher training. As „Flagship Schools for Sustainability”, they aim to develop innovative school-specific curricula and learning settings for sustainability in their respective vocations, which are: Social security clerks at Hermann-Scheer-School, gardeners at Peter-Lenné-School, and industrial mechanics at Georg-Schlesinger-School. The diversity of these vocations (administration, „green”, and industrial domain) represents that sustainability is indeed relevant in all vocations, but with very different aspects. It also offers the possibility to research similarities and differences in curriculum development, aiming at generalizable knowledge such as transferrable design principles, to be applied to other vocations and schools in the future.

Approach: The network operates under a design-based research paradigm, aiming at pragmatic change and local developments while generating theoretical understanding and transferrable knowledge (cf. McKenney & Reeves, 2018). The school-specific curriculum development strategy follows the competency matrix approach proposed and by Casper et al. (2021) and Kastrup et al. (2021).

Findings: The results presented here include the three vocation-specific competency matrixes developed by the „Flagship Schools” and comments on both general and vocation-specific insights.

Conclusion: The paper concludes with an outlook on prioritizing vocation-specific climate change education.

Keywords: vocational school, curriculum development, sustainability, competence framework, design-based research

1 The importance of education for sustainable development

With the „European Green Deal”, environmental degradation and climate change gain increased political and public attention in Europe (European Commission, 2023). Many institutions and enterprises have implemented ‘sustainability’ activities, although tending to



oversimplify ‘sustainability’ by reducing it to environmentalist terms, efficiency of resources, or even counterproductive ideas of ‘continuity’, which might lead to self-assuring instead of necessary transformative practices. In contrast, this paper follows the transformational understanding of ‘sustainability’ of the United Nations’ Agenda 2030 and its 17 Sustainable Development Goals (SDGs), which aim to „stimulate action [...] in areas of critical importance for humanity and the planet” (<https://sdgs.un.org/2030agenda>). Thus, the UNESCO defines education for sustainable development as the endeavour to „give learners of all ages the knowledge, skills, values and agency to address interconnected global challenges including climate change, loss of biodiversity, unsustainable use of resources, and inequality. It empowers learners of all ages to make informed decisions and take individual and collective action to change society and care for the planet.” (UNESCO, 2023) Sustainability in this sense is an existential personal and global affair in the long run.

However, organizations and companies both small and large also need to address today’s economic, social and environmental requirements to be ‘sustainable’ in the sense of long-term success and responsibility. On the one hand, demand for alternative resources and products is rising, leading to changes in business models and market approaches. On the other hand, social movements such as „Fridays for Future” emphasize the changing value systems of young people, indicating that true corporate responsibility (both ecological and social) will be of increased importance for attracting qualified and motivated apprentices across Europe and beyond. The ongoing demographic change in Europe (cf. Prskawetz, 2007) puts young people in a good bargaining position: The next generation wants to - and will largely be able to - choose employment according to their personal values and purposes (cf. van den Bergh & Wulf, 2017). Sustainability in the UN sense thus becomes an employer branding factor and an objective of vocational education and training, as well.

2 The role of vocational schools’ internal curriculum development for sustainability education: The case of Berlin’s „Flagship Schools for Sustainability”

In Germany, education is understood to enable competences and sustainable structures (cf. Deutscher Bundestag 2017). Especially „vocational education and training for sustainable development” (VET-ESD) is promoted as a key factor, since a qualified workforce drives innovation and transformation. One example: the German transition to renewable energy („Energiewende”) is significantly executed by qualified vocational workers such as electricians, who plan, install and maintain necessary technologies (cf. Hemkes et al., 2013). Considering the scope of the United Nations’ 17 Sustainable Development Goals (<https://sdgs.un.org/goals>), every vocation can contribute to sustainability in specific ways according to its products, services and fields of expertise. Every step of a value chain offers possibilities to promote – or impede – sustainable developments, from raw materials, production and logistics to services and waste/disposal tasks.

How can these complex and domain-specific capabilities be identified and operationalized for vocational education curricula? In German VET, a multi-stakeholder approach to deriving vocational curricula is applied. Whenever official curricula for a certain vocational domain are developed or updated, a group of representatives of different stakeholders such as employers, employees, teachers, labour researchers and sometimes NGOs, enters the discussion, managed by the Federal Institute for Vocational Education and Training („Bundesinstitut für Berufsbildung”, BIBB). While arguing in the interest of their stakeholders, the representatives in such committees draw knowledge from work research, current expertise, and pilot projects. Due to this discursive mode, modernizing official vocational curricula can be a long and cumbersome political process. In some cases, it takes two decades for an official vocational curriculum to be modernized.

Such a time span would not allow companies and schools to address state-of-the-art processes and technologies. In consequence, official vocational curricula in Germany are rather abstract and tend to have some degrees of freedom content-wise. In this sense, in 2021, a new standard for ‘sustainability’ has been announced for all apprenticeship courses in Germany (cf. BIBB, 2021), however, it is very general and lacks specifics for individual vocations. Identifying, formulating and promoting vocation-specific competences and contents for sustainability is thus delegated to vocational educators with the respective field competences.

Since vocational schools have to address students’ and apprentices’ needs in a changing world as immediately and specifically as possible, developing specific internal curricula is a part of their educational mission. This is a great chance for innovation and subjectively relevant teaching and learning, but it is also a challenging task, considering that teachers need time, expertise and other resources to perform this kind of analytical and transformative work. In order to address these challenges, a network of three vocational schools in Berlin partnered with Humboldt-University, the NGO EPIZ – „Center for Global Citizenship Education” and the Senate Department for Education, Youth and Family, which is responsible for in-service teacher training. As „Flagship Schools for Sustainability”, they aim to develop innovative school-specific curricula and learning settings for sustainability in their respective vocations, which are:

- social security clerks at Hermann-Scheer-School,
- gardeners at Peter-Lenné-School, and
- industrial mechanics at Georg-Schlesinger-School.

The diversity of these vocations (administration, „green”, and industrial domains) represents that sustainability is indeed relevant in all vocations, but with very different aspects. It also offers the possibility to research similarities and differences in curriculum development, aiming at generalizable knowledge such as transferrable design principles, to be applied to other vocations and schools in the future. With this aim, the academic partners in the network structure these development processes as design-based research projects (cf. McKenny & Reeves, 2018) with a continuous flow of information, knowledge and feedback. This paper delineates the applied curriculum development strategy, which is based on successful prior projects in different domains such as trade and logistics (Casper et al. 2021) and food production (Kastrup et al. 2021). The core results presented here are three competency frameworks which serve as thematical curricular overviews. They show how the three participating schools understand and specify sustainability competencies in their respective vocations.

3 Design-based research and the framework for identifying vocation-specific competencies for sustainable development

The „Flagship Schools”-network follows the pragmatic methodology of educational design research as suggested by McKenney & Reeves (2018). The project partners equally pursue empirical understanding, theory formation, and pragmatic changes in the interwoven process of designing (Kretz, 2020). With this understanding, the analysis and active guidance of local cases of innovative development is assumed to lead to overarching, generalizable theoretical findings from and about practice. The three schools and their respective development projects are such local cases from which area-specific theories (i.e. models of sustainability-related vocational competencies), situation-specific solutions (i.e. learning tasks) and transferrable design principles are developed. Since all partners in the network are actively involved in developing, it is not a mere case-study, but a true design project in progress.

The well-tested strategy applied here for identifying sustainability-related vocational competences emerged from prior German projects in other vocational domains (commerce/trade: Casper et al., 2021; food: Kastrup et al., 2021). It follows six steps:

1. Associatively **COLLECT** aspects of sustainability in the given vocation.
2. **DEFINE** domain-specific tasks and process profiles concerning sustainable development and use these to specify the competence framework blueprint.
3. **STRUCTURE** the collected aspects by assigning them to slots of a specified VET-ESD competency matrix.
4. **FORMULATE** vocational competences as learning objectives for selected slots of the framework.
5. **ASSIGN** these competences to given (if necessary: new) curriculum positions and sections of the respective educational standards documents.
6. **CHECK** whether crucial aspects have been missed, with special regards to the Sustainable Development Goals and slots of the framework which have yet been left empty.

After defining competences and learning objectives, learning settings and tasks can be developed, applying teachers' professional knowledge and sustainability-specific didactical principles such as those proposed by Schütt-Sayed et al. (2021) and Casper et al. (2023). This strategy has been applied to a variety of apprenticeship courses in pilot projects sponsored by BIBB before, however, as is the mission of BIBB, those projects were addressed at training companies, not at (public) schools.

For the „Flagship Schools“-network, the partners assume that the same strategy can be applied to school curricula development. Over the course of one year, a set of workshops with teachers and the institutional partners was arranged. The role of Humboldt-University was to introduce and guide the process according to prior experiences. EPIZ accompanied the process with their expertise in global learning and sustainability education, as well as offering spring and autumn workshop events for guided development, exchange, and feedback. The senate representative legitimates the process as a matter of further education, arranges for time resources and grants partial reliefs from teaching obligations for selected participating teachers.

The iteration/adaptation of the BIBB-process lead to the following steps: For (1) **COLLECTING**, workshop participants were asked to brainstorm associations with the term ‘sustainability’ in respect to their vocations, school life, and private life. This also served as a team-building exercise, giving participants the opportunity to learn more about each other and to identify shared values, interests and concerns. The brainstormed terms were then clustered according to the five „didactic analytical categories” of Vollmer & Kuhlmeier (2014):

- social, ecologic, and economic aspects (interdependence, discrepancies, dilemmas)
- effects on others (local, regional, global)
- effects on the future (positive vision, agency, responsibility)
- action strategies (consistency, sufficiency, efficiency)
- life cycles and value chains (products, processes)

Starting from the „processes“-cluster, the next step was to (2) **DEFINE** those work processes and tasks which actually confront apprentices/students with matters of sustainability. This approach aims to model sustainability as a dimension of daily (work) life rather than as an abstract regulative idea. This way, students can experience agency and find feasible ways of promoting sustainability in their own scope of action. While many sustainability-related decisions have to be made on a managerial or political level, there is also a lot that qualified workers can influence directly. However, these processes and tasks are understood to be the starting point, but not the end of education for sustainable development.

Thus, in step (3), a **STRUCTURE** for both direct scopes of action and more indirect scopes of understanding was built, aiming at a comprehensive picture of competencies for sustainable vocational action. For this, Humboldt-University introduced the competency matrix framework which had been developed in prior BIBB projects. Table 1 shows the published example for the domain of food crafts and food industry to illustrate this.

The BIBB-competency framework is defined by an X-axis with integrated competence dimensions, i.e. „Sustainable action competency as the ability to take...

- **sustainable professional action [aspects of product- and process-related expertise]**
- socially responsible action [aspects of empathy and accountability; and]
- meaningful and self-responsible action [aspects of empowerment and identification].” (Strotmann et al., 2022, p. 3)

and a Y-axis with hierarchical „fields of action”, i.e.

- job-related work processes;
- entrepreneurial and organizational decisions; [and]
- social developments and political decisions.” (ibid.)

These categories result in a three-by-three matrix with nine thematic competency slots for each of the three selected vocations. As shown in Table 1, in prior BIBB projects investigating domains instead of individual vocations, such frameworks could be differentiated into even more stages and fields. For the „Flagship Schools”, however, the concise version of 3x3 was chosen in order to keep illustrations simple and focussed.

The steps (4) **FORMULATE** and (5) **ASSIGN** were carried out simultaneously by checking for existing learning tasks and possibilities to promote sustainability aspects by adding or changing certain aspects without changing the complete learning setting. This approach was chosen since the involved teachers did not have plenty resources for radical development. Also, they wanted to make a point towards their less involved colleagues for small changes having big impacts. Up to now, many sustainability-relevant learning objectives could already be formulated and assigned to existing tasks and learning settings, but some completely new settings still had to be developed. In the next section, the three respective competency frameworks and some exemplary learning tasks will be presented. The closing section will give an outlook on step (6) **CHECK**, since the whole process is still in progress to this date and **CHECKING** is understood as an ongoing formative evaluation of iterative development.

4 Results

The competency frameworks developed with the participating schools largely speak for themselves. They are presented in the following subsections with some comments on specifics and exemplary learning tasks. In general, it was perceived as very helpful to follow a similar process in three schools simultaneously. Exchanging early ideas and drafts helped the schools to adapt, find some common principles, and to contrast their respective vocational specifics. For example, a group of very dedicated physical education teachers from Hermann-Scheer-Schule emphasized personal health aspects of work life with new learning tasks, which was adopted by all schools (cf. „Maintaining personal health” as „meaningful and self-responsible action” in „work routines”), although in very different ways: Social security clerks primarily work in office environments, which are stressful due to long periods of sitting and screen work. Gardeners, on the other hand, tend to carry heavy objects; and mechanics potentially work in loud, hot and dangerous environments. Starting with self-care and reflection in these areas can then lead to a higher awareness of working conditions in a global context and thus allow for

empathic discussions about social justice and human rights along the respective value chains. Other common insights were a respective focus on resource efficiency on the level of „**sustainable professional action**” in „work routines” and a reflection of vocational identification, role perceptions, and personal contributions to the greater/common good on the level of „meaningful and self-responsible action” in „the (global) environment and society”. Those competency fields now invite historical, systemic, and ethical perspectives on the vocations at hand. In general, the column of „meaningful and self-responsible action” was embraced by many as a chance to address more clearly the emancipatory educational mission of vocational schools in the greater sense of German ‘Bildung’, surpassing mere qualification and job training for an ambition of holistic, humanistic personal growth.

Table 1

Competency matrix and thematic areas in the Food Crafts and Food Industry (Strotmann et al., 2022, p. 3)

Competency dimension Fields of action		Sustainable action competency as the ability to take...		
		... sustainable professional action	... socially responsible action	... meaningful and self-responsible action
Job-related work processes	Procurement and provision of raw materials	Selecting and providing raw materials as required	Evaluating upstream working- and production-conditions and supply chains	Creating a „from the field to the table“ mindset
	Processing, storage, packaging	Valorising raw materials and optimising working processes	Producing in a resource and climate-conscious manner	Promoting sustainable development through food production
	Product development, marketing	Boosting sustainable product features	Supporting sustainable eating habits	Preserving traditions and setting trends
Entrepreneurial and organisational decisions		Anchoring sustainability in the business model	Advocating for the social and health concerns of employees	Embracing the profession’s possibilities
Social developments and political decisions		Assessing the political framework of food production	Supporting the regulative idea of sustainability	Expressing lifestyles with food

4.1 The case of industrial mechanics at Georg-Schlesinger-Schule

At Georg-Schlesinger-Schule, a variety of mechanics is educated over three-year courses. They all share the same curriculum in their first year before specifying in different fields. Thus, the first year builds the foundation for understanding basic principles and relations of the trade. The involved teachers emphasized a responsibility for quality and safety, since mechanics are often entrusted with high value machinery. Especially in the huge field of maintenance, they take responsibility for efficient workflows and economic stability (since every second of pause in production has economic and thus also social consequences). Mechanics usually work in contexts of high energy and resource input, so it is important for them to understand the actual global and social cost of the objects they handle. Thus, they first focussed on the field „Identifying working and environmental conditions of resource exploitation” as „socially responsible action” in „the (global) environment and society” (see Table 2). With the help of EPIZ, the teachers at Georg-Schlesinger-Schule adapted an existing simulation game about their vocation’s main materials copper, aluminium, and steel (Hartwig & Llano Quintana, 2021). Students play different roles with conflicting agendas in the setting of a metals conference and thus learn

about the most important properties of the resources as well as their ecological and social footprints. This game is now fixed as an introduction at the very beginning of the school year.

Table 2

Competency matrix and thematic areas for sustainable action of mechanics

Sustainable action competency as the ability to take [y] in [x]	[y] ... sustainable professional action	... socially responsible action	... meaningful and self-responsible action
[x] ... work routines	Choosing and using resources, materials, tools and machines according to sustainability criteria	Caring for oneself, others and products with regards to quality and safety	Maintaining personal health
... company contexts	Comprehending entrepreneurial decisions in the face of industrial competition and sustainable development	Representing social and ecological interests as an employee	Organizing work for resource efficiency
... the (global) environment and society	Handling hazardous substances and risk exposure appropriately	Identifying working and environmental conditions of resource exploitation	Evaluating the role of industrial production for quality of life and common good

4.2 The case of social security clerks at Hermann-Scheer-Schule

Social security clerks work in institutions such as health insurance companies or Deutsche Rentenversicherung, the states' regional pension insurers. The involved teachers at Hermann-Scheer-Schule soon focussed on social issues such as diversity, equality and common good. They had a liberating insight when they learned that many SDGs have a social focus, so sustainability did not have to be an exclusively environmental matter for their school, which seemed rather far-fetched. Focussing on issues of common good and social justice was a much more comprehensible approach to sustainability for both teachers and students. Since social security should per definition be a matter of common good, the teachers developed a new project course with a focus on the field „Depicting the impacts of social insurance companies on the common good” as „sustainable professional action” in „company contexts” (see Table 3). In a first project, students develop infographics for SDGs and ideas for sustainable action at their school, getting more involved with auditing organisations from a sustainability perspective. In a second project, they choose from a set of criteria for common good and audit their own training companies, inquiring on the status quo and developing ideas for developments. Thus, they reflect on lip services in the public sector, the potentials and limits of good governance, and their personal role and fields of action as clerks. Since most of the training companies are involved in some kind of sustainability auditing anyways, these projects have the potential to create a stronger feeling of integration and agency.

Table 3

Competency matrix and thematic areas for sustainable action of social security clerks

Sustainable action competency as the ability to take [y] in [x]	[y] ... sustainable professional action	... socially responsible action	... meaningful and self-responsible action
[x] ... work routines	Organising office processes resource-efficiently	Accompanying insured persons through all (sometimes challenging) life stages	Maintaining personal health
... company contexts	Depicting the impacts of social insurance companies on the common good	Promoting diversity in public service	Pursuing permanent vocational education
... society and politics	Managing insurance contributions accurately and responsibly	Comparing the fairness of social frameworks across the globe	Evaluating personal contributions to intergenerational contracts and solidarity

4.3 The case of gardeners at Peter-Lenné-Schule

Peter-Lenné-Schule is a school for gardening, animal care and environmental technologies. It has been very committed to ecological awareness and global learning for a long time. As such, it should be the most obvious case of ecological sustainability. However, even though there are many interesting projects at Peter-Lenné-Schule, most of them are limited in time and resources, so they will usually not be repeated with several groups of students. Thus, one of the main goals of the teachers there was to implement sustainability aspects as permanent, regular aspects of their gardening curriculum. With the help of the competency matrix, thematic fields were identified quickly, and existing learning tasks could be expanded or re-designed with manageable effort. For example, in the field „Evaluating social and climate effects of gardening in global contexts” as „socially responsible action” in „the (global) environment and society” (see Table 4), one existing learning task concerning terrace construction was expanded to dig deeper into the subject of child labour in stone mines. Natural stone turns out to be a resource with quite problematic conditions, as EPIZ worked out in a previous material for gardening (Hartwig, 2018). Teachers adapted this for their learning tasks on terrace construction and developed similar tasks concerning water management, biodiversity and soil processing; always beginning with routine work tasks and zooming out to global perspectives, connecting hands-on vocational knowledge with managerial and global perspectives on sustainable action.

Table 4

Competency matrix and thematic areas for sustainable action of gardeners (cf. Haß et al., 2023, p. 26)

Sustainable action competency as the ability to take [y] in [x]	[y] ... sustainable professional action	... socially responsible action	... meaningful and self-responsible action
[x] ... work routines	Choosing and using resources, materials, tools and machines according to sustainability criteria	Protecting and cultivating existential natural resources	Maintaining personal health
... company contexts	Innovating gardening with alternative materials, processes and business models	Balancing the interests of the company, project owners and customers/users	Bearing discrepancies between routines and ideals and promoting good practice
... the (global) environment and society	Appreciating the importance of plants, soil and water for life on Earth	Evaluating social and climate effects of gardening in global contexts	Evaluating the personal impact on quality of life through working in a „green job“

5 Conclusion and outlook: A focus on climate education

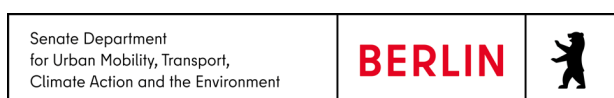
As the competency matrixes illustrate, the adapted BIBB process proved to help to identify vocation-specific competencies and thematic fields in the involved schools and to support sustainability-related enhancements of learning tasks and settings. So far, adapting the process for the internal curriculum development of vocational schools proved successful. However, there is still a long way to go. The schools identified a number of relevant fields and now face the challenge of creating learning opportunities for all of them, which can only be realized step by step. The 3x3 matrixes in their concise format provide a good reference, but because of the complexity of sustainability issues, there are no short cuts. Learning tasks tend to relate to multiple competencies and competencies need several learning opportunities to fully develop. As such, the matrixes should be understood as helpful heuristics for internal school curricula, not as curricula or syllabi in themselves.

It also has to be noted that the matrixes themselves do not prioritize. The comments show that, even though starting with work routines and most obvious action fields was consensual, the schools ended up prioritizing rather large and complex themes such as common good and human rights for their development of new learning opportunities. Now, since climate change is a topic of increased urgency and political interest, the next phase for the „Flagship Schools“ will be a focus on vocational climate education. This includes education on ways to minimize climate impact and climate change mitigation, such as reducing carbon emissions and necessary adaptations to those effects of climate change which are already manifesting or expected to manifest shortly. The latter is already a straightforward demand in many vocational areas today. Gardeners for example already have to face changing soil and water conditions in the Berlin/Brandenburg area. Climate change forces them to rethink plant selection and maintenance routines such as mowing and watering (cf. Haß et al., 2023). Likewise, mechanics are impacted by new regulations for industrial emissions, leading to new technologies. Social security clerks, like all office-related vocations, are faced with the problematic energy footprints of office buildings and the need to rethink office work in the face of energy regulations and changing real estate markets.

These examples show that climate education is a relevant aspect of sustainable development in every vocation. However, it should be remembered that it is just one of many aspects of the sustainability discourse concerning the 17 SDGs, although undoubtedly a key challenge

of our times. Politics in Germany acknowledge this, and the „Flagship Schools”-network is glad to be sponsored now by the Senate Department for Mobility, Transport, Climate Protection and the Environment, Berlin, for a three-year project on vocational climate education (<https://www.epiz-berlin.de/leinen-los-fuer-klimabildung/>). This enables EPIZ and Humboldt-University to support the schools’ development of teaching material and learning tasks with personal and monetary resources, which comes at the right time: Due to a grave scarcity of teachers in Germany, those in service are busy teaching and keeping the base functions of their schools running. Under these conditions, cooperation and third-party assistance seem to be prerequisites for effective innovation. Considering that sustainable development aims at transformation rather than continuity, such project fundings are very precious.

From 01.09.2022 until 30.08.2025, the „Flagship Schools” participate in the project „Leinen los für Klimabildung”, sponsored by the Senate Department for Mobility, Transport, Climate Protection and the Environment, Berlin



References

- Casper, M., Schütt-Sayed, S., & Vollmer, T. (2021). Nachhaltigkeitsbezogene Gestaltungskompetenz in kaufmännischen Berufen des Handels. In: C. Melzig, W. Kuhlmeier & S. Kretschmer (Ed.): *Berufsbildung für nachhaltige Entwicklung. Die Modellversuche 2015–2019 auf dem Weg vom Projekt zur Struktur* (pp. 179–199). Barbara Budrich.
- Casper, M., Kastrup, J., & Nölle-Krug, M. (2023). Lebendiges Lernen mit kreativen und erfahrungsbasierten Methoden zur didaktischen Umsetzung einer Berufsbildung für nachhaltige Entwicklung. In: M. Ansmann, J. Kastrup & W. Kuhlmeier (Eds.): *Berufliche Handlungskompetenz für nachhaltige Entwicklung. Die Modellversuche in Lebensmittelhandwerk und -industrie* (pp. 180–197). Barbara Budrich.
- Deutscher Bundestag. (2017). *Bericht der Bundesregierung zur Bildung für nachhaltige Entwicklung - 18. Legislaturperiode*. Heenemann. Retrieved from <http://dipbt.bundestag.de/dip21/btd/18/136/1813665.pdf>
- European Commission. (2023). *A European Green Deal. Striving to be the first climate-neutral continent*. Retrieved from https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en
- Hartwig, J. (2018). *Globales Lernen im Gartenbau. Unterrichtsmaterial für die berufliche Bildung*: EXILE Kulturkoordination e.V. Retrieved from http://globales-lernen-gartenbau.de/wp-content/uploads/2019/03/EXI_BRO_Gartenbau_W.pdf
- Hartwig, J., & Llano Quintana, I. (2021). *Kupfer, Alu, Stahl global. Unterrichtsmaterial für die Metallberufe*. Hamburg: Berufliche Schule für Anlagen- und Konstruktionstechnik am Inselpark BS13.
- Haß, D., Casper, M., & Hartwig, J. (2023). Umsetzung von Nachhaltigkeit im Garten- und Landschaftsbau. Innovationsbericht einer Berliner Berufsschule. In: *berufsbildung* (197), 25–27.
- Hemkes, B., Kuhlmeier, W., & Vollmer, T. (2013). Der BIBB-Förderschwerpunkt „Berufliche Bildung für eine nachhaltige Entwicklung“ - Baustein zur Förderung gesellschaftlicher Innovationsstrategien. In: *BWP - Berufsbildung in Wissenschaft und Praxis* 6/2013, 28–31. Retrieved from <https://www.bibb.de/veroeffentlichungen/de/bwp/show/7168>
- Kastrup, J., Kuhlmeier, W., & Strotmann, C. (2021). Entwicklung nachhaltigkeitsbezogener Kompetenzen in der Ausbildung. Ein Strukturmodell für Lebensmittelhandwerk und -industrie. In: *BWP - Berufsbildung in Wissenschaft und Praxis* (3), 24–27.
- Kretz, S. (2020). *The Cosmos of Design. Exploring the Designer's Mind*. Walther König.
- McKenney, S., & Reeves, T. C. (2018). *Conducting educational design research*. Routledge.
- Prskawetz, A., Fent, T., Barthel, W., Crespo-Cuaresma, J., Lindh, T., Malmberg, B., & Halvarsson, M. (2007). *The relationship between demographic change and economic growth in the EU*. Verl. der Österr. Akad. der Wiss (Forschungsbericht / Institut für Demographie, Österreichische Akademie der Wissenschaften, 32).
- Schütt-Sayed, S., Casper, M., & Vollmer, T. (2021). Mitgestaltung lernbar machen – Didaktik der Berufsbildung für nachhaltige Entwicklung. In: C. Melzig, W. Kuhlmeier & S. Kretschmer (Eds.): *Berufsbildung für nachhaltige Entwicklung. Die Modellversuche 2015–2019 auf dem Weg vom Projekt zur Struktur*. Barbara Budrich, pp. 200–227.
- Strotmann, C., Kastrup, J., Casper, M., Kuhlmeier, W., Nölle-Krug, M., & Kähler, A. (2022). *Competency Model for VETSD in the Food Crafts and Food Industry*. BIBB - Federal Institute for Vocational Education and

Training. Retrieved from https://www.fh-muenster.de/isun/downloads/Competency_model_for_VETSD_in_food_craft_and_industry.pdf
UNESCO. (2023). *What you need to know about education for sustainable development*. Retrieved from <https://www.unesco.org/en/education-sustainable-development/need-know>
van den Bergh, J., & Wulf, K. (2017). Millennials at Work. In: *Research World* (63), 19–21. DOI: 10.1002/rwm3.20490

Biographical notes

Dr Marc Casper is a researcher and teacher trainer at Humboldt-Universität zu Berlin. Key themes of his projects are education for sustainable development, blended learning, curriculum development, reflective practice and design-based research.

Petra Gerlach is head of further training and fundamental issues in the training of vocational school teachers in Berlin's senate administration. She is responsible for curricular and organizational aspects of training and further education of teachers and school managers.

Kerrin van Bergen is a project coordinator at the NGO Entwicklungspolitisches Bildungs- und Informationszentrum – EPIZ, a center for global citizenship education in Berlin. Key themes of her work are education for global justice and climate change mitigation in vocational schools.

Entenmann, S., Euler, D., Frommberger, D., Li, J., & Schmees, J. K., (2023). Linking technical and vocational education and training with higher education, and possible consequences for development cooperation. In C. Nägele, N. Kersh, & B. E. Stalder (Eds.), *Trends in vocational education and training research, Vol. VI. Proceedings of the European Conference on Educational Research (ECER), Vocational Education and Training Network (VETNET)* (pp. 88–95). <https://doi.org/10.5281/zenodo.8208378>

Linking Technical and Vocational Education and Training with Higher Education, and Possible Consequences for Development Cooperation¹

Entenmann, Steffen

steffen.entenmann@giz.de, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Euler, Dieter

dieter.euler@unisg.ch, University of St. Gallen

Frommberger, Dietmar

dietmar.frommberger@uni-osnabrueck.de, Osnabrück University

Li, Junmin

junmin.li@uni-koeln.de, University of Cologne

Schmees, Johannes Karl

johannes.k.schmees@ntnu.no, Norwegian University of Science and Technology

Abstract

Context: In many countries, the historical relationship between general and higher education on the one hand and TVET on the other can be seen as each side separating itself from the other. From a global perspective, approaches have emerged where TVET meets higher education. These developments can change the relationship between the two sectors. This paper discusses the spectrum of options from creating new permeability between the two sectors and points out possible consequences for development cooperation.

Approach: To investigate the variety of forms in different countries linking TVET with higher education, we use a heuristic that includes four dimensions, namely objective, organisation, programme and system. The heuristic is applied to the development of academisation and tertiarisation in the People's Republic of China and the Palestinian territories.

Findings: In China, the entrance examinations regulate the permeability between the pillars of the secondary and tertiary level TVET system. There is a considerable development in permeability within the TVET system between upper secondary and tertiary levels. In the case of the Palestinian territories, the Al-Quds University can be taken as an example of a step-by-step way to integrate practice-oriented dual studies into existing university structures. Establishing a link between education and practice is a higher priority than establishing stronger links between TVET and higher education.

¹ A detailed German contribution of this proceeding paper is published with the title „Verknüpfungen von beruflicher und hochschulischer Bildung und mögliche Konsequenzen für die Entwicklungszusammenarbeit“ in the journal „Zeitschrift für Berufs- und Wirtschaftspädagogik“, vol. 118, no. 2022/4, pp. 698–718, doi 10.25162/ZBW-2022-0027.



Conclusion: As the two case studies demonstrate, awareness is developing in particular countries that linking these two sectors of the education system can bring benefits. Initial ideas and limitations regarding the expansion of initiatives in development cooperation will be stated.

Keywords: academisation; development cooperation; hybrid vocational education and training; Palestinian territories; People’s Republic of China; permeability

1 Introduction

In many countries, technical and vocational education and training (TVET) is often viewed less favourably and considered less attractive compared to higher education. Historically, there has been a growing divide between general and higher education, on one hand, and TVET, on the other. Each sector has pursued its own distinct goals and objectives. Higher education generally focuses on the scientific basics and theories in each profession, the training of critical thinking skills and the development of analytical and problem-solving capacities, while TVET has been perceived as practical and focused on the training of technical skills only. While higher education and TVET respond to different societal needs, higher education and its „more prestigious” university degrees were traditionally reserved for a privileged group only, while the status of TVET became lower – especially over the last decades.

Globally, convergences and linkages are emerging between the sectors, also in countries with very different education structures. Various approaches have emerged at the intersection of TVET and higher education. While these approaches have not eliminated the divide, they offer new possibilities for redefining the relationship between the two sectors. These approaches span a range of options, including creating greater permeability between TVET and higher education, transferring credit points, and developing programmes that integrate TVET and higher education in one qualification (Wolter, 2019). This way, higher education becomes more relevant for the (local) industries while at the same time (higher) forms of TVET can benefit from the status of higher education.

Consequently, the boundaries between these two education sectors are becoming increasingly blurred. Vocational schools, for example, are encroaching upon the territory that was traditionally reserved for higher education institutions. Meanwhile, universities of applied sciences and even some universities are offering advanced TVET courses to compete with specialized TVET institutions (Dunkel & Le Mouillour, 2013). In certain European countries, this convergence is even more pronounced, with universities offering advanced vocational programmes, leading to well-established qualifications like Executive MBAs, and in some cases, even vocational PhD programmes are offered (Dunkel & Le Mouillour, 2013). Additionally, hybrid institutions are emerging in some countries. This indicates that new connections and linkages are forming between the two sectors.

We adopt Dieter Euler’s approach, which identifies an area of convergence between higher education and TVET (Euler, 2021), to distinguish between the two education sectors mentioned earlier and the resulting emergence of an intersecting or converging area. The differentiation between the two education sectors and the resulting emergence of an area of intersection or convergence is illustrated in Figure 1 below.

Figure 1

An area of convergence emerges between higher education and TVET (based on Euler 2021, p. 43)

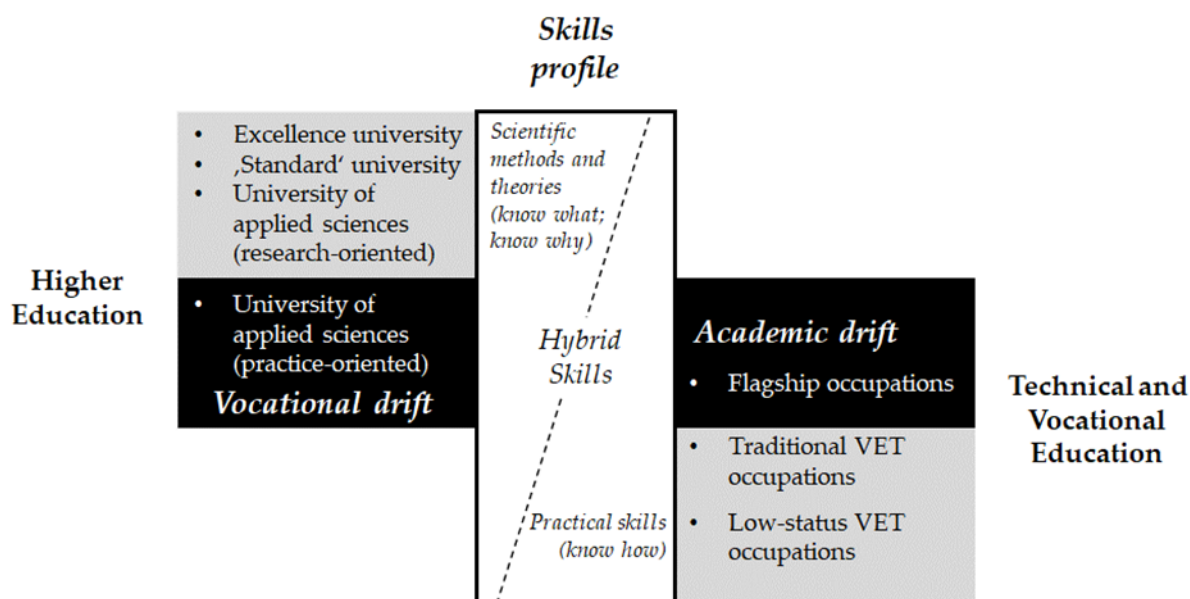


Figure 1 illustrates the persistence of both traditional research-oriented universities and vocational-oriented higher education institutions. There is a growing overlap between these institutions and the vocational end of the TVET spectrum, particularly in certain disciplines and faculties. Some areas of TVET are also experiencing a shift towards academic pursuits. The skills profiles across these different levels exhibit blurred lines and transitions, emphasizing the need for a balance between theoretical knowledge and practical skills. The term „hybrid skill” captures this dynamic, although it may not always accurately reflect the specific skills profile. As higher education and TVET courses increasingly cover similar subject areas, the distinction between them becomes less clear in terms of learning content, acquired skills, qualifications, and employment prospects. However, the pillar structure of the education system remains intact.

This is the background to our opening question – to what extent do these trends open new prospects and opportunities for development cooperation? In this paper we explore the developments of the linkage between TVET and Higher Education in some detail, with a view to presenting and explaining general trends and concrete examples of the People’s Republic of China and the Palestinian territories.

2 Heuristic and Methodology

To examine the diverse forms of linkages between TVET and higher education in different countries, we utilize a heuristic that encompasses four dimensions: objectives, system, organisation and programme.

The objectives dimension focuses on addressing the societal needs for educational system permeability. By integrating TVET and higher education in different ways, bridges can be built to allow individuals with vocational qualifications to access higher education. This dimension also considers creating new pathways for socially disadvantaged groups to benefit from higher education. Similarly, higher TVET can provide new opportunities for school leavers who have completed their general education.

The systems dimension establishes the framework within which the education system operates and within which the other dimensions develop. The different forms of linking TVET

and higher education are embedded within an existing education system, which may have varying degrees of permeability.

The organisational dimension examines the educational institutions that offer hybrid courses. These courses can be provided by existing TVET and/or university facilities. It is observed that organisations are expanding their profiles significantly and incorporating hybrid courses. Additionally, new (hybrid) educational institutions can be established, combining TVET and higher education.

The programme dimension focuses on the specific structure of hybrid education courses that encompass both TVET and higher education elements. Existing TVET programmes can be supplemented with elements of general education or higher education. This aspect is particularly relevant for promoting educational system permeability, allowing individuals to transition between different sections of the education system. It is also possible to incorporate relevant occupational elements within university degree courses, either parallel or sequentially (Deisinger, 2015).

Our heuristic serves three main purposes: Firstly, they provide a framework to describe the current state of linkages between TVET and higher education in a particular country. Secondly, they facilitate comparisons between different systems. Thirdly, they enable professionals to systematically think of new forms of linkages in a particular system.

In this paper, particularly the first two purposes are illustrated. To examine and categorise the forms of linkages between TVET and higher education, case studies from China and the Palestinian territories are employed. The study involves analysing documents such as government reports, recommendations, regulations, requirements, and research studies. The results were extensively discussed during an expert workshop attended by researchers specialising in the academisation and tertiarisation of TVET, as well as experts from development cooperation working in the respective countries.

3 Analysing the linkages between TVET and Higher Education

The heuristic presented will now be used in this section to categorise the *status quo* in specific country contexts, and subsequently to identify development options. To this end, two very different contexts, the People's Republic of China and the Palestinian territories, have been taken to illustrate the overarching approach taken by the heuristics.

3.1 People's Republic of China

In China, the TVET system is predominantly school-based but lacks respect compared to higher education (Hao & Pilz, 2021). The focus on higher education creates pressure on the employment system, although there is a demand for skilled workers in practical occupations (Chan, 2015). China has Higher Vocational Colleges and recently introduced Vocational Universities (Hao, 2012). The government invests in expanding Higher Vocational Colleges to raise the social standing of TVET. These colleges accept school leavers who meet the requirements for tertiary vocational courses. TVET at the tertiary level lasts two to three years and offers over 200 programmes (MoE, 2019). As Vocational Universities have only been introduced in 2019, the structure and programmes are still in development. That is why the study focuses on the former form of Higher Vocational Colleges.

If we apply our heuristic to the development of tertiary TVET in China, the objectives dimension presents a complex picture. The government aims to ensure a supply of skilled specialists, improve employment rates for academic graduates, and enhance the social standing of TVET through academisation and tertiarisation. The restructuring of vocational upper secondary schools into tertiary Higher Vocational Colleges is expected to make TVET more appealing to a new student body. On an individual level, there is a desire to attain higher-level education (Hao & Pilz, 2021). The differentiated policy for entrance to tertiary TVET provides an

opportunity for young people who lack access to universities to pursue vocational academic-level education, increasing their chances of securing better jobs and improving their social status.

The permeability within the Chinese TVET system is regulated by entrance examinations at different education levels. The central university entrance examination holds significant importance for academic careers. The points obtained in these examinations determine admission to elite universities, average universities, technical and vocational universities, or direct entry into the labour market. China's TVET system includes an entrance examination for tertiary level TVET, allowing graduates of vocational upper secondary schools to access academic TVET. The political intention is to develop a path from secondary education to tertiary TVET and emphasise TVET within the education system. Consequently, there has been an improvement in permeability within the TVET system between upper secondary and tertiary levels due to academisation and tertiarisation (State Council of the People's Republic of China, 2019, 2021).

Regarding the organisational dimension, Higher Vocational Colleges offer tertiary-level TVET within existing educational facilities. These facilities undergo restructuring along with changes in curriculum focus and responsibilities. However, criticism arises due to the marginal difference in curricula and training profiles between the new Higher Vocational Colleges and former vocational upper secondary schools (Li & Pilz, 2011).

In terms of the programme dimension, both traditional TVET and higher education in China are predominantly theoretical. The distinction lies in the level of TVET qualifications attainable. The upgrading of vocational upper secondary schools to Higher Vocational Colleges signifies a deeper acquisition of technical competencies and a curriculum upgrade from a medium qualification level to a higher vocational qualification level.

3.2 Palestinian territories

In the context of the Palestinian territories, higher education holds a high reputation. However, the unemployment rate among university graduates is high, reaching around 54%, as degree programmes often do not align with the actual needs of the economy. Employers frequently face challenges finding suitable candidates for job vacancies. In response, efforts have been made to make both higher education and TVET more practice-oriented.

Several universities in the West Bank have developed models to collaborate with the private sector and make Bachelor's degree programmes more practice-oriented. In particular, Al-Quds University in East Jerusalem, in partnership with more than 250 companies and with the support of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and the Baden-Wuerttemberg Cooperative State University, offers five dual studies programmes. Within these programmes students alternate between the university and the training companies.

Drawing on the heuristic proposed here, institutions across all education sectors, including universities, vocational schools, and relevant ministries, as well as the private sector and development cooperation, are striving to establish stronger linkages between education programmes and practical needs in response to societal demands (objectives dimension). This priority even surpasses the need for stronger connections between TVET and higher education. Due to the already high rate of academisation in the Palestinian territories, the permeability between different levels of education is probably not the most urgent issue (system dimension).

Regarding the systems dimension, efforts have been made by policymakers, educational institutions, and the international donor community over the past 20 years to strengthen TVET and increase its attractiveness. The establishment of a National TVET Commission aims to consolidate responsibility for TVET, currently distributed among various ministries such as the Ministry of Labour and the Ministry of Education. There have been suggestions to establish a new „TVET University” under the National TVET Commission, but no clear concept for the

structure of hybrid formats offered by this institution has been developed so far. Ongoing developments in the programme dimension of the heuristics used here will remain relevant.

In terms of the organisational structure, Al-Quds University can be taken as an example of a step-by-step-way to integrate practice-oriented dual higher education studies into existing university structures, for example through a Dual Study Deanship that establishes and maintains relationships with training companies. Also, a steering committee was established, in which representatives of the private sector suggest amendments of the curricula etc. to the university management. Vocational schools in the Palestinian territories often face low interest due to factors such as lack of accreditation, absence of remuneration, and limited collaboration with the private sector. From a development cooperation perspective, higher education plays a crucial role, not only in producing graduates ready for practical employment but also in bridging the gap between industry needs and the innovative capabilities of universities through students who alternate between university and industry.

Important characteristics of the dual study programmes (programme dimension) include for example that the practical in-company training accounts for 40% to 50% of the dual study programmes and that trilateral training agreements are being signed by the training companies, the students and the university. Soft skill and communication training became increasingly important elements of the curricula, as these skills are in strong demand by the training companies.

4 Implications for development cooperation

The current situation calls for a structured reflection on the linkages between vocational and higher education. However, it is important to consider the specific education policy context of each country, as education sectors and their relationships can vary significantly. Therefore, the following considerations are general in nature and do not provide a concrete concept for any particular country.

In many countries, TVET is typically divided into two areas. Firstly, there is school-based TVET, which caters to a relatively small percentage of each year group and focuses on learners who have not obtained university entrance qualifications. Secondly, there is the informal sector, where TVET is often primarily acquired through practice learning. Moreover, higher education is often criticised for not sufficiently training practical skills. Many higher education institutions struggle to bridge the gap between the skills profiles of their graduates and industry requirements, which often include appropriate communication, analytical skills and the ability to identify and solve problems. While certain faculties with direct professional relevance, such as medicine, law, engineering, and economics, offer practice-oriented courses, resistance within universities can hinder the embracement of labour market needs in the curricula.

To address these challenges, stronger links between TVET and higher education can pursue different objectives based on different starting points. One objective is to provide learners from families with a lower level of education access to perceived higher-quality educational opportunities, for example by opening up higher education to TVET graduates or to provide vocational pathways on their tertiary level as in the Chinese example. However, an academic drift of TVET will only indirectly mitigate the lack of adequately trained persons in technical professions, which is often a significant problem in developing countries. By linking TVET to higher education, the quality of TVET can be enhanced through stronger theoretical and academic content for more specialised technical skills.

Higher education as well as TVET potentially benefit from a stronger exposure to professional environment (practice-integrated higher education approaches). For higher education, the learners may for example, develop the necessary communication skills and can get an orientation about practical problems on which they can then focus on in the academic parts of their programmes as in the example of Palestinian territories. Integration of practical elements

potentially makes certain higher education programmes more relevant and increases the employability of the graduates without fundamentally changing the core structures of universities.

Given the difficult initial conditions and the limited experience with pilot projects, ideas regarding the expansion of initiatives in development cooperation are still in a preliminary status. Further-reaching considerations could include the following principles in particular:

- Hybrid education courses should align skills profiles with labour market demands; it is important to consider that universities, often funded through fees, are primarily influenced by the demands of fee-paying parents; in development cooperation, raising awareness among parents about post-graduation employment opportunities can enhance the practical relevance of training programmes.
- In the context of sustainable development, TVET and higher education should address capacity gaps in areas where there might (still) be limited labour markets: training skilled specialists in key sectors such as the digital economy, renewable energy, and financial technology is crucial for establishing and developing these sectors. Utilising applied research and innovation transfer in universities can further support this goal within the framework of development cooperation.
- Education courses should be accessible to learners from disadvantaged backgrounds, with appropriate support provided when necessary; besides providing equal access to learning opportunities, it is also important to consider gender-inclusive job opportunities and foster their creation during student and apprentice training; without adequately equipped workplaces and an enabling corporate culture, efforts to increase women's employment, including at managerial levels, may not succeed.
- Universities require suitable quality assurance mechanisms to protect the reputation of practice-integrated higher education. Parallel promotional activities should be conducted to enhance the attractiveness of TVET courses; this can be achieved by providing information about the potential benefits of hybrid educational concepts.

Overall, these recommendations aim to bridge the gap between vocational and higher education, align education with labour market needs, promote inclusivity, and enhance the practical relevance of training programmes.

References

- Chan, W.T. (2015). Higher education and graduate employment in China: Challenges for sustainable development. *Higher Education Policy*, 28, 35-53. <https://doi.org/10.1057/hep.2014.29>
- Deißinger, T. (2015). Verberuflichung und Verallgemeinerung – internationale Perspektiven und die Frage nach der Tertiärisierung der beruflichen Bildung. In B. Ziegler (Ed.), *Verallgemeinerung des Beruflichen – Verberuflichung des Allgemeinen?* (pp. 57–80). Gütersloh.
- Dunkel, T., & Le Mouillour, I. (2013). Berufsbildung auf höchstem Niveau – europäische Erfahrungen. In E. Severing & U. Teichler (Eds.), *Akademisierung der Berufswelt?* (pp. 143–168). Gütersloh.
- Euler, D. (2021). Shaping the relationship between vocational and academic education. Socioeconomic trends and their implications for the future of apprenticeships. In Cedefop/OECD (Eds.), *The next steps for apprenticeship* (pp. 39–49). Luxembourg.
- Frommberger, D., & Schmees, J. K. (2021). Bridging vocational with upper secondary and higher education: international developments. In C. Nägele, N. Kersh, & B. E. Stalder (Eds.), *Trends in vocational education and training research* (pp. 64–72). <https://doi.org/10.5281/zenodo.5415726>
- Hao, T., & Pilz, M. (2021). Attractiveness of VET in China: A study on secondary vocational students and their parents. *Journal of Education and Work*, 34(4), 472–487. <https://doi.org/10.1080/13639080.2021.1946492>.
- Hao, Y., (2012). The reform and modernization of vocational education and training in China. Discussion Papers, Research Group Globalization, Work, and Production SP III 2012-304, WZB Berlin Social Science Center.
- Li, J., & Pilz, M. (2011). Berufsbildung in der Volksrepublik China. In C. Kreklau & J. Siegers (Eds.), *Handbuch der Aus- und Weiterbildung* (219. Supplementary delivery, August 2011), (pp. 1–24). Deutscher Wirtschaftsdienst.

- MOE (2019). Vocational teaching standards in higher vocational education and training [gaodeng zhize xuexiao yhuanze jiaoxue biao zhun]. 18.02.2022. http://www.moe.gov.cn/s78/A07/zcs_ztzi/2017_zt06/17zt06_bznr/bznr_gzjxbz/
- MoHe (2021). Decision of the Minister of Higher Education and Scientific Research No. (13/5) for the year 2021 regarding the instructions for the additional standards for dual education programs (in Arabic). <http://www.aqac.mohe.gov.ps/Portals/0/Laws/13.pdf?ver=2021-07-12-095936-690>. 20.09.2022
- State Council of the People's Republic of China (2019). National implementation plan for VET reform [guojia zhiye jiaoyu gaige shishi fang'an]. http://www.gov.cn/zhengce/content/2019-02/13/content_5365341.htm. 18.02.2022.
- State Council of the People's Republic of China (2021): The General Office of the Central Committee of the Communist Party of China and the General Office of the State Council have issued the „Opinions on Promoting the High-Quality Development of Modern Vocational Education and Training”. [zhonggong zhongyang bangong ting guowuyuan bangong ting yinfa „guanyu tuidong xiandai zhiye jiaoyu gao zhiliang fazhan de yijian]. http://www.gov.cn/zhengce/2021-10/12/content_5642120.htm. 21.06.2022
- Wolter, A. (2019). Abschied vom Bildungsschisma. In D. Euler, V. Meyer-Guckel, & E. Severing, (Eds.), *Studienintegrierende Ausbildung. Neue Wege für Studium und Berufsbildung* (pp. 21–41). Essen.

Biographical notes

Dr Steffen Entenmann is project manager and technical advisor for education, vocational education and training and labor markets at Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. His professional focus lays at the nexus between scientific research, education and economic development, especially with regards to the sustainable use of natural resources.

Dr Dieter Euler is Professor Emeritus for Educational Management and Business Education at the University of St. Gallen, Switzerland. He studied Management, Business Education and Social Philosophy at Cologne University and the London School of Economics and Political Science (LSE). His main topics are educational innovations, social competencies, pedagogical university development, digital media didactics and design-based research.

Dr Dietmar Frommberger is Professor of Vocational and Business Education at the University of Osnabrück. His research and teaching focuses on structural developments in vocational education and training, vocational education and training in international comparison, and initial and continuing training of vocational education and training personnel.

Dr Junmin Li is a senior researcher at the Chair of Economics and Business Education at the University of Cologne, Germany. Her research is concerned with international comparative TVET research, school quality development, in-company training, learning task and the integration of refugees into the labour market.

Dr Johannes Karl Schmees is a Postdoctoral Fellow at the Norwegian University of Science and Technology, Trondheim, Norway. His research focuses on international and comparative VET.

Esmond, B., Ketschau, T. J., Schmees, J. K., Smeplass, E., Steib, C., & Wedekind, V. (2023). Theorising VET: European differences, commonalities and contestation. In C. Nägele, N. Kersh, & B. E. Stalder (Eds.), *Trends in vocational education and training research, Vol. VI. Proceedings of the European Conference on Educational Research (ECER), Vocational Education and Training Network (VETNET)* (pp. 96–107). <https://doi.org/10.5281/zenodo.8208387>

Theorising VET: European Differences, Commonalities and Contestation

Esmond, Bill

w.esmond@derby.ac.uk, University of Derby, UK

Ketschau, Thilo J.

ketschau@paedagogik.uni-kiel.de, University of Kiel, DE

Schmees, Johannes K.

johannes.k.schmees@ntnu.no, Norwegian University of Science and Technology, NO

Smeplass, Eli

eli.smeplass@ntnu.no, Norwegian University of Science and Technology, NO

Steib, Christian

christian.steib@uni-oldenburg.de, University of Oldenburg, DE

Wedekind, Volker

volker.wedekind@nottingham.ac.uk, University of Nottingham, UK

Abstract

Context: VET is faced with profound challenges in the post-COVID era: fundamental questions about the purposes of VET, its limitations and its theoretical justification, have acquired renewed importance. Across national boundaries in Europe, the theorisation of VET has been approached differently. One of the oldest theoretical rationales for VET was developed over a century ago in Germany under the name of *Berufsbildungstheorie*. The difference between this and other countries has been variously associated with different VET systems, academic traditions and relationships to broader socio-economic policies in each country, each with their own continuities and ruptures over time. In several European countries we can point to a shift from early philosophical writing about VET and education more generally to the use of techniques from the social sciences, and the profusion of post-foundational approaches has further undermined the claims of normative theory; yet, both in general education and increasingly in VET, an increased interest in the notion of *Bildung* as a more humanistic approach to education than the narrow calculations of human capital theory is also evident.

Approach: In this paper we therefore ask whether these approaches retain relevance for contemporary VET, addressing this through three related perspectives that build in various ways on these theoretical traditions. The first compares the development of *Berufsbildungstheorie* by key architects of the German VET system to theorisation of VET in English-speaking countries, which has drawn on a wider range of social sciences, especially since the 1980s. This contrast is discussed here drawing on an extensive review of VET literature emanating from English-speaking countries. The significance and limitations of the *Berufsbildungstheorie* tradition is illustrated further in the second of these three sections, when the German vocational transition system is analysed using social systems theory. Finally, neo-institutionalism is used to demonstrate the process by which countries aspire to imitate visibly successful models of VET despite



cultural, institutional and theoretical differences that make the transfer of policies from one jurisdiction to another a highly problematic exercise.

Findings: These illustrative cases provide important insights into the continuing relevance of *Berufsbildungstheorie* or any normative theory of VET. The theorisation of VET in the English-speaking countries has taken place through a critique based mainly on the social sciences, which has drawn attention to VET's positioning within the networks of neoliberal policy in these countries and its reproductive logic. The discussion of German VET as a transition system also illustrates the way that classic theories are perceived to have less explanatory value for contemporary systems. Finally, the paper on neo-institutionalism provides an explanation for aspirations to imitate the perceived successes of other jurisdictions in spite of the barriers to 'policy borrowing' across national contexts, suggesting once again that such approaches can have explanatory value in different contexts.

Conclusion: Each of these accounts illustrates in its own way how the social sciences have come to dominate the theorisation of VET, even in German-speaking countries. Yet the importance of constructing and connecting normative, pedagogical and critical dimensions of VET can hardly be disregarded in an age where international policymaking so often advances a unifying, purely economic imperative. Therefore the future of both theory and practice of VET is likely to depend not only on 'rational' analysis of VET and its context but on the development of criteria that enable us to judge the value, human potential and social justice of our ideas and actions. Therefore, the analytical power of social science theories could be enriched by a normative dimension, possibly retrieved from *Bildung* or *Berufsbildung* concepts. However, as concepts that were developed in Europe, they need to be renewed and revised with attention to contemporary issues and understandings, for example with attention to ideas that draw on and recognise fully the experience and contribution of the global South.

Keywords: *Berufsbildungstheorie*, comparative VET, educational theory, neo-institutionalism, social systems theory

1 Introduction

VET faces new challenges in the wake of pandemic, economic crisis and European war. Policy discourses have been dominated by the challenges of economic recovery, emphasising retraining, advances in digitisation and artificial intelligence (AI). However, the rupture of COVID, calling forth emergency responses and undermining societal norms has raised possibilities for thinking about VET in new ways (Avis et al., 2021). This process has correspondingly accelerated interest in the different ways that VET has been theorised at different times in the past, and in different national contexts, as well as how these theoretical foundations developed in different spaces of knowledge production. In addition to wider European interest in the concept of *Bildung*, the field of VET has begun to take interest in classical theories of VET (Kuhlee et al., 2022; Zuurmond et al., 2023; bwp@, forthcoming). This last-named Special Issue explores the distinctive role of foundational VET theory in Germany, sometimes described as *Berufsbildungstheorie*, including the 'classical' work of Georg Kerschensteiner (1966/1904), Aloys Fischer (1967/1932) and Eduard Spranger (1923) as well as critical accounts that helped to shape modern VET systems (e.g. Siemsen, 1926, 1948; Lempert, 1971; Blankertz, 1974) and which have significant implications for other European countries. Our aim in this paper is to build on this discussion and to examine the continued relevance of these foundations for VET systems in Europe today.

The theoretical foundations on which VET research builds are diverse, and have an international provenance: in this, not only different theoretical traditions, but distinctive patterns of knowledge production are significant. Whilst these sites have received less attention than the path-dependent differences among European VET systems (e.g., Greinert 2005; Crouch et al.

1999), the location of research in education departments that also provide VET teacher education programmes has been significant in generating and building on various forms of theorisation. VET research has also drawn on concepts from outside the discipline of education departments, as well as from countries such as France and the USA which lack a substantial tradition of VET research or even practice, all of which has extended the range of theoretical resources available to the field. These institutional aspects together represent the social basis on which educational research has been constructed.

The field is also subject to powerful external forces in the shape of policy discourses supported by powerful international institutions with universalising prescriptions. Thus, international bodies as the European Union, UNESCO, ILO World Bank and OECD have generated a significant volume of well-resourced empirical research, although this tends to be under-theorised and sometimes explicitly seeks to reframe VET around a universalising neoliberal model. Correspondingly, not only university departments but other research institutions and national agencies contribute to thinking about VET that can often serve very different ends from those accepted in educational practice.

This paper seeks to provide insight into the way that recognised theoretical approaches are still able to inform policy and practice and to what extent these are subject to distinctive national approaches. It will examine how far a reinvigorated theorisation of VET, addressing contemporary challenges, can draw on these older concepts in order to reaffirm educational aims and practices within VET, and across its boundaries; and whether the future of VET also requires augmentation by new theoretical approaches that can enable researchers to answer questions posed by contemporary crises of health, inequality, globalisation and technological change.

The following sections in turn discuss the differences between German foundations of VET theory and the distinctive approaches in the ‘Anglosphere’ or English-speaking countries; the continuing relevance of theory in the light of contemporary issues for German VET, specifically its role in youth transitions; and the relationships among VET systems and theorisation of VET in the light of neo-institutional understandings.

2 Theorising VET without VET theory

By contrast with the German ‘in-house’ foundations of VET theory described as *Berufsbildungstheorie*, VET research elsewhere in Europe positions itself to varying degrees outside such boundaries. The countries where distinctive VET pathways, and consequently VET research, emerged later, have produced neither the extensive state support that characterises the DACH countries, nor the endogenous theorisation of the field peculiar to Germany. The influence of international bodies promoting economic perspectives, marketisation and neoliberal concepts has been pervasive in its influences on education policy in all European countries but has encountered resistance from various national traditions (e.g., Dovemark et al., 2018). Consequently, a more heterogeneous theorisation of the field, drawing on a wider range of disciplines and theoretical resources, has informed research in most other European countries.

This distinction is especially salient in the English-speaking world, or ‘Anglosphere’. In these countries both the practice and study of VET emerged later than in continental Europe, usually taking the form of post-school, and often part-time education. Developing in tension with a neoliberal reframing of education as early as the 1970s, VET research has a more diversified institutional base, is liminal to the broader field of education research and competes with alternative institutional and external claims to expertise. Here we can speak not of ‘VET theory’ but of a theorisation of VET that draws on concepts from other disciplines.

The distinctive features of VET in these countries are widely associated with the long-term consequences of the UK’s early capitalist development and a liberal market philosophy

based on the ideas of Adam Smith (2012 [1776]; see e.g., Winch 2000 for an extended discussion). As the economic structures and forms of organisation that sustained VET in the early post-war years gave way to more service-based economies, these countries came to occupy the front rank of the neoliberal ascendancy and its diminution of VET to the acquisition of narrowly defined occupational competences (Brockmann et al., 2008; Wolf, 1995). In international comparisons of VET systems, as in comparisons of welfare states, or of political economies, Anglophone countries tend to be associated with ‘liberal market’ approaches to economic and social issues that frame education, in contrast to ‘collective’ German models (e.g., Busemeyer & Trampusch, 2012). The Anglosphere has been especially influential in an international ‘policy-making assemblage’ (Thompson et al., 2022) in which well-resourced research contributes to an international reframing of VET on neoliberal lines (e.g., OECD, 2010, 2014).

Yet these are also countries where such ideas have been strongly contested; where liberal and democratic educational ideas have strong roots that include Dewey’s (1916) critique of vocationalism; and with their own traditions of the collective and critical. If Britain’s industrial revolution of ‘artisan discoveries’, mechanised mass production and colonial markets needed little education for its working-class children, a relatively privileged but ever-growing layer has long needed schooling for technical and administrative purposes, which reformers have sought to extend on civic lines. These tensions are recognised in Dewey’s admiration of vocational learning and critique of ‘narrow trade education’ (1916, p. 372). Also, they are reflected in Anglophone critique of neoliberal reforms and of human capital theory from the 1980s to the present (e.g., Brown et al., 2020; McGrath & Badroodien, 2006).

Thus, the first commentaries on VET to emerge from the further education teacher institutions in England and the journal they founded in 1948, *The Vocational Aspect of Education*, at first discussed contemporary policy and practice largely independently of theoretical considerations; but from the 1980s these began to be joined by increasingly critical voices, such as Gleeson and Mardle’s (1980) study, written at a time when UK policy discourse demanded ‘synchronisation’ of education and training with ‘manpower’ requirements. Illustrating the central role of socialisation in sustaining ‘the affectual skills which underpin the social relations of production’ Gleeson and Mardle (1980, p. 5) drew on contemporary concerns with autonomy and ideology to argue that the apparent freedoms of further education enabled young people to enter the production process imagining this had been done voluntarily. By the 1980s, however, even these limited labour market opportunities, facilitated by the part-time education of apprentices, became overshadowed by state provision of training for the young employed. Moore’s (1987) argument that this process supported ‘a particular ideological representation of „the needs of industry”’ (Moore, 1987, p. 230) represented a shift in critique to the way that further education prepared the model citizen of ‘post-industrial’ society. This theoretical critique of the ‘new vocationalism’ offers a nuanced explanation for the ‘work-based’ (but often unrelated to any meaningful employment or expertise) qualifications that came to dominate these countries, including the National Vocational Qualifications (NVQs) in England, Competency-Based Training (CBT) reforms in Australia and similar ‘occupational’ routes elsewhere. Over the next 40 years, a critique of this narrow approach, based on critical sociology, came to dominate VET research in the Anglosphere, not least in relation to the reduction of knowledge to competencies.

Compelling as these explanations of VET policy in the Anglosphere may have proved, these accounts have exercised considerably less influence over policy than even more critical approaches in the DACH countries (for example, the influence of critical theorists on Germany’s 1969 Vocational Training Act). To some extent these limitations of Anglophone approaches to theorising VET reflect their more diversified institutional base (c.f. Bates et al., 1999). This competes with alternative institutional and external claims to expertise and is liminal to a broader (but also marginalised) field of educational research. Whilst VET research has drawn on educational perspectives to critique VET as a marginalised and marginalising

educational pathway, educational theory itself has been strongly influenced by submission to external disciplines, notably the idea of ‘foundational subjects’ (philosophy, sociology, psychology and history of education) which reflects the historical emergence of UK education departments (Furlong & Whitty, 2017).

Critique of VET based on the social sciences has made important contributions to the study of VET in the Anglosphere and this is likely to continue during ongoing crises of health, economy and environment. Yet understandings based on the social sciences alone have limitations for determining the future direction of VET. Philosophical work that echoes the *Bildung* tradition (but perhaps lacks its idealist or exclusionary aspects) can have an important role to play here: it is unsurprising that Winch, who has made the strongest philosophical contribution to VET in recent years, has sought to publicise the *Berufsbildungstheorie* tradition in recent years (e.g. Kuhlee et al., 2022). Certainly, the Anglosphere already draws on important philosophical concepts of capability and social justice as tools to conceptualise a renewal of VET at a time of economic, social and climate crisis (e.g., McGrath et al. 2022; Alla-Mensah & McGrath, 2023; Esmond & Atkins, 2022). Additional concepts and criteria old and new, with origins in Europe, the Americas or especially the global South, may prove necessary not only to understand VET’s challenges and difficulties but to imagine and map out the way to its future possibilities.

3 Theorising transitions as a function of the welfare state

Besides examining the genesis of VET theory and dealing with basic concepts, norms and premises of VET, theoretical studies also offer starting points for analysing the connections between VET on the one hand and social, political and economic conditions on the other hand. Such an investigation may already have strong normative connotations a priori by drawing on social philosophical foils such as Critical Theory. However, they can also become explanatory analyses of high complexity by drawing on social science concepts, which in turn do not have to dispense with normative conclusions – an approach pursued in the following discussion.

According to Stauber and Walther (1999, p. 9), the educational system of a society must be characterised as a structure of inclusion and exclusion, i.e., of the social opportunities that are opened or closed to young people. This observation is essentially true for the German educational system, which is characterised by a strong institutional autonomy and delimitation of the different types of schools and educational programmes, as well as a strictly formalised system of entitlement (cf. Kutscha, 2005, p. 165; Kell, 1995, pp. 291–295; Beck et al., 1980, p. 52; Schweikert & Grieger 1975, pp. 1–2, 6–7).

A particular challenge for young people leaving secondary education is the transition from lower secondary education to fully qualifying VET in the dual apprenticeship system (cf. Lex & Zimmermann, 2011, pp. 604–605; Bojanowski & Niemeyer, 2009, p. 14). This is particularly noteworthy because, under formal legislation, taking up VET in the dual apprenticeship system does not require a school leaving certificate (cf. Euler, 2012, pp. 322–323). Thereby, a considerable proportion of young people, especially young people leaving *Hauptschule* (basic secondary school) after nine years of schooling at age 15, or *Realschule* (advanced secondary school) after ten years of schooling at age 16, do not manage this transition successfully (cf. Euler, 2012, pp. 322, 324; Biermann et al., 2009, p. 28). As a result, a new segment has emerged, the so-called vocational transition system (VTS). The programmes offered here do not represent fully qualifying VET but are merely intended to prepare for it (cf. Konsortium Bildungsberichterstattung, 2006, p. 79) to increase the chances of the young people for successful transition towards VET or gainful employment by further promoting their general vocational skills (cf. Euler & Severing, 2006, p. 69).

Despite this intention, the measures and educational programmes of the VTS have increasingly taken on the function of an educational retention for young people. The VTS

guarantees that they remain in the educational system until they have accessed VET, found employment or reached the end of their compulsory education (cf. Kutscha, 2010, p. 314; Euler & Severing, 2006, p. 70). Due to the lack of standards and regulations, the VTS includes a wide spectrum of offerings from different providers (VET schools, educational companies, independent providers) in conjunction with a variety of support measures and governmental responsibilities (cf. Frommberger et al., 2012, pp. 124–125; Kutscha, 2010, p. 313).

To analyse the factors and effects of VTS, recourse to systems theory seems promising. According to Luhmann, modern society is characterised by the primacy of functional differentiation, on the basis of which self-referential and autopoietic functional systems are differentiated from the social system as a whole (cf. Luhmann, 2012, pp. 404–406; 1998a, pp. 42–43, 571; 1998b, pp. 738–739, 743–746, 761, 778–780). From a system-theoretical point of view, against the background of the welfare state, the VTS and its location as an anomaly in the order of social systems and subsystems can be highlighted, as defined initially and in a formative manner by Niklas Luhmann with his theory of social self-referential, autopoietic systems (cf. Luhmann, 2015, pp. 132–133; 2002, pp. 124, 198). In order to work out this anomaly, the corresponding reference systems and concepts must be defined in a first step. The primary aim of the transitional system is to reduce the educational weaknesses of young people, e.g., through pre-employment measures or by catching up on general school-leaving certificates (cf. Kutscha, 2010).

On the one hand, the VTS is connected to the educational system, since it is analogously involved in the development of individual educational biographies and awards entitlements as a result of participation in measures. At the same time, it is justified by the selection function of the educational system, since this system produces the addressees of the transition system in the form of young people who cannot be placed. On the other hand, the VTS is just as close to the economic system, which in turn enables and regulates the utilisation of social human capital for economic purposes via the employment system as its sub-system. In doing so, it ties in with the educational system and the entitlements provided by it and transforms these into labour power required by the economic system. The employment system is therefore also the buyer of the entitlements granted by the VTS and at the same time defines its success conditions by accepting the previously unplaceable young people or not. Ultimately, however, the existence of the VTS is based on the idea of welfare and thus the welfare state (cf. Luhmann, 1981). This is not constructed as a system or sub-system, but manifests itself as a regulatory function of the political system, and becomes effective as an intervention in other functional systems. It is not constructed as a subsystem of the political system because it follows a different logic and fulfils a different function. Accordingly, the function of the welfare state is the social inclusion of precarious strata of the population; it is depicted in the binary „code” (Luhmann, 1998a, p. 388) as *cared for* or *not cared for*. But in turn it cannot be constructed as a separate functional system, since it is based on the fulfilment of the function for the political system. The welfare state primarily serves its need to retain power, which is the self-referential basis of the political system, and which in turn can be realised most securely and with the least effort under conditions of social stability, which is promoted by caring for precarious sections of the population.

With this statement, the welfare state justification of the vocational transition system becomes clear. Since young people without direct or prospective access to the employment system after their school career tend to become part of the social precariat, the welfare state initiates a social mechanism with the VTS that tries to prevent or at least weaken this tendency. The primarily political function of the VTS is fulfilled by taking in and keeping unplaceable individuals without excluding them from social participation and, at best, ensuring that the educational qualifications required for participation in the neoliberal labour market are obtained in the form of an entitlement.

4 Theorising internationalisation of VET

Historically, VET systems and practices are considerably national in scope (Gessler et al., 2021). So far, the development of VET systems has been dominantly described as a consequence of a variety of the capitalist economy. Historical institutionalism and its core concept of path dependency, however, are (in their strict forms) unable to account for increasingly important international influences on VET systems. Here, competing ‘best practices’ of VET on how to reduce youth unemployment, how to efficiently train professionals, how to match skills and the economy and how VET can be used to prepare for participating in society beyond work are dominating the international reform discourse. These agendas, however, are highly normative in their nature.

In this regard, sociological neo-institutionalism can contribute to a critical examination of if and how global institutions, both formal and informal, change VET (Hatch, 2018). It explores how (VET) organisations adapt and conform to institutional norms, rules, and practices in order to gain legitimacy and maintain social acceptance. Central to this theoretical approach is that decisions of organisations are following institutional pressures, normative expectations and symbolic legitimacy, which could lead to practices that are not necessarily the most rational or optimal from a functionalist perspective. Thus, the understanding of organisations as rational actors is challenged, and a broader examination of the socio-institutional context is needed to grasp the intricacies of organisational behaviour.

Following Türck, we can distinguish three levels on how neo-institutionalism is used. Therefore, the operation of an organisation (micro), the way an organisation is influenced by their environments (meso) and finally the way organisations influence their (larger) environments (macro) can be analytically separated. Particularly the latter macro perspective is interesting when it comes to analysing the impacts of international organisations on VET systems.

Looking at current trends dominating the international discourse, one inevitably is confronted with two approaches: on the one hand the Germanophone dual apprenticeship model is internationally advertised as a (‘complex but effective’) youth unemployment killer (e.g. Lascárez Smith & Schmees, 2021), on the other hand Anglophone competency-based training (CBT) is an international bestseller when it comes to (‘simple and efficient’) skills development (critical Gessler, 2020). Both ‘best practices’ are highly successful and can be described as ‘international blueprints’ as they are representing standardised frameworks, guidelines, and/or models that are designed to guide and shape practices or policies at an international level. These blueprints often emerge through collaborations among multiple countries, organisations, or experts, addressing global challenges or promoting desired outcomes in various domains. Chabbot and Ramirez (2006, p. 174) conceptualised links between discourses from the global through the national, and further to the local level. In this conceptualisation, national actors adopt these ideas to create reform pressure. In doing so, these actors prove their willingness to acknowledge current problems concerning VET, as well as their willingness to implement solutions perceived to be rational.

Both observations can be associated with the same mechanism: As successful perceived VET policy in a particular country is decontextualised by the import of ideas through IOs and also national (non-)governmental organisations that create international blueprints for ‘best practices’. The process of isomorphism (Boxenbaum & Johnson, 2017) helps explain how VET organisations tend to develop an international discourse around these blueprints. Critical examination of such shared beliefs in their search for legitimacy and rationality reveals unreflected import of non-contested assumptions of which system layout will optimise the training. From a neo-institutional perspective, the theory explains how countries can implement policies more on the basis of shared beliefs than because of rational arguments (beyond the discourse). Accordingly, the discourse entails a narrative causal relationship of these blueprints (described by

sociological institutionalism as a ‘myth’, see Koch, 2009, p. 113), e.g., that implementing the dual apprenticeship system will lead to a low youth unemployment rate (see OECD, 2010).

The theory of sociological neo-institutionalism, as well as the mechanisms explained by it regarding the internationalisation of VET systems, complement existing VET theories that are functionalist in nature by explaining how *Bildung* unfolds, how skills gaps can be closed, or how literacy spreads. While these attempts are important, they need to be accompanied by theories (further developed in VET research and by VET researchers) that examine these functionalist approaches and practises in a critical way. In this regard, sociological neo-institutionalism enables new forms of organisational analysis in VET research. At a macro level, neo-institutionalism helps us understand the structural similarities and isomorphic tendencies that exist among VET systems across different countries. This understanding is particularly valuable when questioning assumptions related to the exporting or importing of ‘best practice’ ideals in VET. By using a neo-institutional lens, we can question the assumption that what works well in one VET system will automatically lead to positive outcomes in another.

An open question when using neo-institutionalism (in any field) is, however, on which ontological base blueprints, reforms agendas, or current trends are assessed: as a myth or as irrational? Sociological Institutionalism can describe and analyse the process by which these international myths are constructed, how they work, and finally diffuse in different ways, at different levels and around the globe. However, it fails to provide criteria for being able to assess a myth (in VET) as myth. From our observation, these classifications are done so far by gut feelings, logical arguing, or empirical evidence – actors are asked to provide their opinion on these reforms. However, the overarching theoretical base is missing in all these approaches. Therefore, in order to analyse the described phenomenon, neo-institutionalism as VET theory should (and need) to include a normative dimension, in order to contribute to the value-oriented world of education and training.

5 Conclusion

This paper has illustrated the significance of *Berufsbildungstheorie* through very different accounts. Each has shown that the fruitfulness of theoretical approaches lies in their ability to provide different analytical angles and insights into the multifaceted nature of VET. The diversity of theoretical approaches in VET across European countries (and beyond) reflects the existence of different perspectives and academic traditions. They illustrate both commonalities and differences: future VET theories may strive to bridge national differences but are also likely to be attentive to divergences in VET across countries.

Whilst the starting point of these contributions is the recovery of *Berufsbildungstheorie*, in each case the powerful explanatory role of the social sciences is illustrated. Their rise has been significant in the declining influence of older philosophical approaches. (In this, we count not only *Berufsbildungstheorie* but the work of Dewey which is still widely referenced but rarely forms the basis of policy and practice in the Anglosphere, although this is more the product of atheoretical instrumentality.) Correspondingly, the explosion of post-foundational approaches near the end of the twentieth century has raised questions about whether normative theories can be constructed in any sphere of human action. Yet the claims of social science to provide any ‘rational’ analysis of VET also require criteria to determine what may be rational, notwithstanding the need to be attentive to questions of space, discourse, power and identity in formulating either. We therefore suggest that the concepts of *Bildung* and specifically *Berufsbildung* concept have the potential to be renewed and revised with due attention to the experience and contribution of the global South. These theories can also themselves delve into the normative functions of VET systems, shedding light on the underlying values, goals, and societal expectations they aim to fulfil. By doing so, they can provide a deeper understanding of intentions as well as manifest and latent functions embedded within VET practices and

policies. Moreover, future VET theories should serve as a basis for critique, offering analytical tools to critically examine and evaluate the effectiveness, equity, and relevance of VET.

The striving towards *Bildung* in general education (e.g., Biesta, 2002, 2011) reflects a thirst for meaning, critique and coherence instead of the technicist instrumentality that so often pervades contemporary education in all settings and countries. This has already found echoes in European VET, notwithstanding critique of the way *Bildung* can construct exclusionary identities (Wischmann, 2015). German models of *Berufsbildungstheorie* are no less open to critique, especially their earlier national particularism and submission to authority. Yet alternatives are possible: Bostad and Solberg (2023) for example oppose the more inclusive ‘folk’ origins of Nordic versions of *Bildung* (Norwegian *folkedanning*, Swedish *folkbildning*) to Horlacher’s (2017) depiction of German *Bildung* as a class-differentiated concept (which Kerschensteiner and Spranger adapted for their own VET rationale). Just as the former provided a rationale for a folk education and the comprehensive school, could a more enabling and socially just concept of *Berufsbildung* emerge from the present global ferment of ideas around VET?

References

- Alla-Mensah, J. & McGrath, S. (2023). A capability approach to understanding the role of informal apprenticeship in the human development of informal apprentices. *Journal of Vocational Education & Training*, 75(4), 677–696, <https://doi.org/10.1080/13636820.2021.1951332>
- Avis, J., Atkins, L., Esmond, B. & McGrath, S. (2021). Re-conceptualising VET: Responses to covid-19. *Journal of Vocational Education & Training*, 73(1), 1–23, <https://doi.org/10.1080/13636820.2020.1861068>
- Bates, I., Hodkinson, P. & Unwin, L. (1999). Editorial. *British Educational Research Journal*, 25(4), 419–425.
- Beck, U., Brater, M., & Daheim, H. (1980). *Soziologie der Arbeit und der Berufe. Grundlagen, Problemfelder, Forschungsergebnisse*. Rowohlt.
- Biermann, H., Buchmann, U. & Friese, M. (2009). Professionspolitische Handlungsbedarfe. In Sektion Berufs- und Wirtschaftspädagogik (Ed.), *Memorandum. zur Professionalisierung des pädagogischen Personals in der Integrationsförderung aus berufsbildungswissenschaftlicher Sicht* (pp. 21–30). http://www.good-practice.de/memorandum_integrationsfoerderung_0409.pdf [17.03.2014].
- Biesta, G. (2002). Bildung and modernity: The future of Bildung in a world of difference. *Studies in Philosophy of Education*, 21, (4/5), 343–351. <https://doi.org/10.1023/A:1019874106870>.
- Biesta, G. (2011). Disciplines and theory in the academic study of education: a comparative analysis of the Anglo-American and Continental construction of the field, *Pedagogy, Culture & Society*, 19(2), 175–192.
- Blankertz, H. (1974). Bildung – Bildungstheorie. In C. Wulf (Ed.), *Wörterbuch der Erziehung* (pp. 65–69). Piper.
- Bojanowski, A. & Niemeyer, B. (2009). Bedingungsanalysen zum pädagogischen Personal. In Sektion Berufs- und Wirtschaftspädagogik (Ed.), *Memorandum. Zur Professionalisierung des pädagogischen Personals in der Integrationsförderung aus berufsbildungswissenschaftlicher Sicht* (pp. 11–21). URL: http://www.good-practice.de/memorandum_integrationsfoerderung_0409.pdf [17.03.2014].
- Bostad, I. & Solberg, M. (2023). Rooms of togetherness: Nordic ideals of knowledge in education. In D. Tröhler, B. Hormann, S. Tveit & I. Bostad (2023) *The Nordic education model in context: Historical developments and current renegotiations*. Routledge.
- Boxenbaum, E., & Jonsson, S. (2017). Isomorphism, diffusion and decoupling: Concept evolution and theoretical challenges. In R. Greenwood, C. Oliver, T. B. Lawrence & R. E. Meyer (Eds.), *The Sage handbook of organizational institutionalism* (2nd ed., pp. 77–101). Sage.
- Brockmann, M., Clarke, L., Méhaut, P., & Winch, C. (2008). Competence-based vocational education and training (VET): The cases of England and France in a European perspective. *Vocations and Learning*, 1(3), 227–244.
- Brown, P., Lauder, H. & Cheung, S.-I. (2020). *The Death of Human Capital? Its Failed Promise and How to Renew It in an Age of Disruption*. Oxford University Press.
- Bussemeyer, M.R. & Trampusch, C. (2012). *The Political Economy of Collective Skill Formation*. Oxford University Press.
- bwp@ [Berufs- und Wirtschaftspädagogik - online] (forthcoming). Spezial 19: Retrieving and recontextualising VET theory.
- Chabbot, Colette & Ramirez, Francisco O. (2006). Development and Education. In: Maureen T. Hallinan (Ed.): *Handbook of the Sociology of Education* (Handbooks of sociology and social research, pp. 163–187). Springer.
- Crouch, C., Finegold, D. & Sako, M. (1999). *Are Skills the Answer? The Political Economy of Skill Creation in Advanced Industrial Countries*. Oxford University Press.

- Dewey, J. (1916). *Education and Democracy*. MacMillan.
- Dovemark, M., Kosunen, S., Kauko, J., Magnusdottir, B., Hansen, P. & Rasmussen, P. (2018). Deregulation, privatisation and marketisation of Nordic comprehensive education: Social changes reflected in schooling. *Education Inquiry*, 9(1), 122–141.
- Esmond, B. & Atkins, L. (2022). *Education, skills and social justice in a polarising world: between technical elites and welfare vocationalism*. Routledge.
- Euler, D. (2012). Rückblick – Einblick – Ausblick. Das Übergangssystem im Übergang zum Inklusionsprinzip? *Zeitschrift für Berufs- und Wirtschaftspädagogik*, 108(3), 321–328.
- Euler, D. & Severing, E. (2006). *Flexible Ausbildungswege in der Berufsbildung*. http://www.bmbf.de/pub/Studie_Flexible_Ausbildungswege_in_der_Berufsbildung.pdf [11.04.2014].
- Fischer, A. (1967/1932). Beruf und Berufserziehung. In K. Kreitmair (Ed.), Aloys Fischer. *Leben und Werk. Gesammelte Abhandlungen zur Berufspädagogik* (7th ed.; pp. 441–458). Bayerischer Schulbuch-Verlag.
- Frommberger, D., Held, G., Milolaza, A., Reinisch, H. & Steib, C. (2012): Zusammenfassung und Diskussion der Möglichkeiten und Grenzen der Förderung von Übergängen im Berufsbildungssystem an den vier Schnittstellen der DECVET-Initiative. In BMBF (Ed.), *Durchlässigkeit und Transparenz fördern. DECVET – Ein Reformansatz in der beruflichen Bildung* (pp. 123–136). BMBF.
- Furlong, J. & Whitty, G. (2017). Knowledge traditions in the study of education. In G. Whitty & J. Furlong (Eds.), *Knowledge and the Study of Education*. Symposium.
- Greinert, W.-D. (2005). *Mass Vocational Education and Training in Europe: Classical Models of the 19th Century and Training in England, France and Germany during the First Half of the 20th*. Cedefop.
- Gessler, M. (2020). Internationaler Berufsbildungstransfer: Der Kontext macht den Unterschied. *Berufsbildung. Zeitschrift Für Theorie-Praxis-Dialog*, 74(184), 32–34.
- Gessler, M., Nägele, C. & Stalder, B. (2021). Scoping review on research at the boundary between learning and working: A bibliometric mapping analysis of the last decade. *International Journal for Research in Vocational Education and Training*, 8(4), 170–206.
- Gleeson, D. & Mardle, G. (1980). *FE or Training? A Case Study in the Theory and Practice of Day Release Education*. Routledge & Kegan Paul.
- Hatch, M. J. (2018). *Organization theory: Modern, symbolic, and postmodern perspectives*. Oxford University Press.
- Kell, A. (1995). Das Berechtigungswesen zwischen Bildungs- und Beschäftigungssystem. In H. Blankertz, J. Derbolav, A. Kell & G. Kutscha, G. (Eds.), *Sekundarstufe II – Jugendbildung zwischen Schule und Beruf. Teil 1. Handbuch* (pp. 289–320). Klett.
- Kerschensteiner, G. (1966/1904). Berufs- oder Allgemeinbildung. In G. Wehle (Ed.), *Georg Kerschensteiner. Ausgewählte Pädagogische Schriften. Band 1. Berufsbildung und Berufsschule* (pp. 89–104). Schöningh.
- Koch, S. (2009). Die Bausteine neo-institutionalistischer Organisationstheorie – Begriffe und Konzepte im Laufe der Zeit. In S. Koch (Ed.), *Neo-Institutionalismus in der Erziehungswissenschaft. Grundlegende Texte und empirische Studien* (pp. 110–131). VS Verlag für Sozialwissenschaften.
- Konsortium Bildungsberichterstattung (2006). *Bildung in Deutschland. Ein indikatorengestützter Bericht mit einer Analyse zu Bildung und Migration*. Bertelsmann.
- Kuhlee, D., Steib, C. and Winch, C. (2022). Founding German vocational education: Kerschensteiner, Spranger and Fischer as key figures in the classical German VET theory. *Journal of Philosophy of Education*, 56(3), 383–398. <https://doi-org.ezproxy.derby.ac.uk/10.1111/1467-9752.12669>
- Kutscha, G. (2005). Berufsvorbereitung und Förderung benachteiligter Jugendlicher. In M. Baethge, K.-P. Buss & C. Lanfer (Eds.), *Expertisen zu den konzeptionellen Grundlagen für einen Nationalen Bildungsbericht – Berufliche Bildung und Weiterbildung/Lebenslanges Lernen* (pp. 165–195). BMBF.
- Kutscha, G. (2010). Berufsbildungssystem und Berufsbildungspolitik. In R. Nickolaus, G. Pätzold, H. Reinisch & T. Tramm (Eds.), *Handbuch Berufs- und Wirtschaftspädagogik* (pp. 311–323). Klinkhardt.
- Láscares Smith, D. & Schmees, J. K. (2021). The Costa Rican business sector's concepts of the transfer of German dual training. *Revista Actualidades Investigativas En Educación*, 21(2), 1–30. <https://doi.org/10.15517/AIE.V21I2.46792>
- Lempert, W. (1971). *Leistungsprinzip und Emanzipation*. Suhrkamp.
- Lex, T. & Zimmermann, J. (2011). Wege in Ausbildung. Befunde aus einer schrittweisen Betrachtung des Übergangsprozesses. *Zeitschrift für Erziehungswissenschaft*, 14(4), 603–627.
- Luhmann, N. (1981). *Politische Theorie im Wohlfahrtsstaat*. Olzog.
- Luhmann, N. (1998a). *Die Gesellschaft der Gesellschaft. Erster Teilband*. Suhrkamp.
- Luhmann, N. (1998b). *Die Gesellschaft der Gesellschaft. Zweiter Teilband*. Suhrkamp.
- Luhmann, N. (2002). *Das Erziehungssystem der Gesellschaft*. Suhrkamp.
- Luhmann, N. (2012). *Soziale Systeme. Grundriß einer allgemeinen Theorie* (15th ed.). Suhrkamp.
- Luhmann, N. (2015). *Die Wirtschaft der Gesellschaft* (7th ed.). Suhrkamp.

- McGrath, S. & Badroodien, A. (2006). International influences on the evolution of skills development in South Africa. *International journal of educational development*, 26(5), 483–494.
- McGrath, S., Powell, L., Alla-Mensah, J., Hilal, R. & Suart, R. (2022). New VET theories for new times: the critical capabilities approach to vocational education and training and its potential for theorising a transformed and transformational VET, *Journal of Vocational Education & Training*, 74(4), 575–596, <https://doi.org/10.1080/13636820.2020.1786440>
- Meyer, J. W. & Rowan, B. (1977): Institutionalized Organizations: Formal Structure as Myth and Ceremony. *American Journal of Sociology*, 83(2), 340–363. <https://doi.org/10.2307/2778293>.
- Moore, R. (1987). Education and the Ideology of Production, *British Journal of Sociology of Education*, 8(2), 227–242.
- OECD [Organisation for Economic Co-operation and Development] (2010). *Learning for jobs: Synthesis report of the OECD reviews of vocational education and training*. OECD. <https://www.oecd.org/education/skills-beyond-school/Learning%20for%20Jobs%20book.pdf>.
- OECD [Organisation for Economic Co-operation and Development] (2014). *Skills beyond school: Synthesis report: OECD Reviews of secondary vocational education and training*. Paris: OECD.
- Schweikert, K. & Grieger, D. (1975). *Die Steuerungsfunktion von Zertifikaten und formalisierten Ausbildungsgängen für das Beschäftigungssystem*. Göttingen: Schwartz.
- Smith, A. (2012) [first published 1776]: *Wealth of Nations*. Ware.
- Siemsen, A. (1926). *Beruf und Erziehung* (Schriftenreihe Neue Menschen). Laubsche Verlagsbuchhandlung.
- Siemsen, A. (1948). *Die gesellschaftlichen Grundlagen der Erziehung*. Opladet.
- Spranger, E. (1923). Grundlegende Bildung, Berufsbildung, Allgemeinbildung. In E. Spranger (Ed.) *Kultur und Erziehung* (pp. 159–177). Quelle & Mayer.
- Stauber, B. & Walther, A. (1999). *Institutionelle Risiken sozialer Ausgrenzung im deutschen Übergangssystem. Nationaler Bericht für Deutschland (West)*. <http://www.iris-egris.de/downloads/tser-bericht-deutschland.pdf> [15.03.2014].
- Steib, C. (2020). *Das der beruflichen Bildung ungeliebte Kind. Eine systemtheoretische Analyse der Herausbildung und Verfestigung des „(beruflichen) Übergangssystems“ in der Bundesrepublik Deutschland*. Eusl.
- Thompson, G., Sellar, S. & Buchanan, I. (2022). 1996: the OECD policy-making assemblage, *Journal of Education Policy*, 37(5), 685–704. <https://doi.org/10.1080/02680939.2021.1912397>
- Winch, C. (2000). *Education, work and social capital: Towards a new conception of vocational education*. Routledge.
- Wischmann, A. (2018). The absence of ‘race’ in German discourses on *Bildung*. Rethinking *Bildung* with critical race theory, *Race Ethnicity and Education*, 21(4), 471–485, <https://doi.org/10.1080/13613324.2016.1248834>
- Wolf, A. (1995). *Competence-based assessment*. Open University Press.
- Zuurmond, A., Guérin, L., van der Ploeg, P. & van Riet, D. (2023). Learning to question the status quo. Critical thinking, citizenship education and *Bildung* in vocational education, *Journal of Vocational Education & Training*. <https://doi.org/10.1080/13636820.2023.2166573>

Biographical notes

Dr Bill Esmond is Professor at the University of Derby, UK. His 2022 monograph with Liz Atkins, *Education, skills and social justice in a polarising world* examines the significance of workplace learning for stratification within English further education.

Thilo J. Ketschau is Research Assistant at the Kiel University, Germany. He researches i.a. in the fields of critical-emancipatory theory of vocational training and education for sustainable development.

Dr Johannes K. Schmees is Postdoctoral Fellow at the Norwegian University of Science and Technology, Trondheim, Norway. His research focuses on international and comparative VET.

Dr Eli Smeplass is Associate Professor at the Norwegian University of Science and Technology, Trondheim, Norway. Her research focuses on inclusion in VET, international comparative VET and theorising VET.

Dr. Christian Steib is a temporary Academic Advisor at the Carl von Ossietzky University of Oldenburg, Germany. He researches i.a. on the vocational transition system and vocational training policy in Germany.

Dr Volker Wedekind is Professor of Education and Head of the School of Education, University of Nottingham, UK. He has extensive experience of research and policy work in African VET and is Honorary Professor at the University of Witwatersrand.

Esposito, R. S. (2023). Strengthening Dual VET as an Attractive Educational Pathway for High-Achieving Pupils in Switzerland – a Governance Perspective on Strategies, Instruments, and Justifications. In C. Nägele, N. Kersh, & B. E. Stalder (Eds.), *Trends in vocational education and training research, Vol. VI. Proceedings of the European Conference on Educational Research (ECER), Vocational Education and Training Network (VETNET)* (pp. 108–118). <https://doi.org/10.5281/zenodo.8208395>

Strengthening Dual VET as an Attractive Educational Pathway for High-Achieving Pupils in Switzerland – a Governance Perspective on Strategies, Instruments, and Justifications

Esposito, Raffaella Simona

raffaellasimona.esposito@fhnw.ch, School of Education, University of Applied Sciences and Arts Northwestern Switzerland

Abstract

Context: The question of which educational pathway pupils choose after compulsory education addresses an important issue of a country's education policy. While in many European countries, general education predominates at the upper-secondary level, around two-thirds of pupils choose a (primarily dual) vocational education and training (VET) programme in Switzerland. However, statistics show that high-achieving pupils who aspire to enter tertiary education prefer a school-based pathway rather than dual VET. Representatives of dual VET thus fear that these pupils drift into school-based general or vocational education programmes and thus are lost for dual VET. One important focus of Switzerland's VET policy lies, therefore on the attraction of high-achieving pupils to dual VET.

Approach: Referring to the theoretical framework of the Sociology of Conventions and based on two cantonal cases studies, this study investigates how in recent times, actors have been positioning dual VET as an attractive educational pathway for high-achieving pupils in the context of the transition from lower to upper-secondary level in Switzerland. The data basis consists of publicly available qualitative policy documents and expert interviews with representatives of the cantonal education administration.

Findings: The cantons studied have pursued both a direct (by making the Federal Vocational Baccalaureate more appealing) and an indirect (limiting school-based VET programmes that are considered as unwanted competition to dual VET) governance strategy to strengthen dual VET as an attractive pathway for high-achieving pupils at the upper-secondary level in Switzerland. The wide range of steering instruments used to put these strategies into practice at a cantonal level are justified by the actors relying on a so-called «dual VET justification standard».

Conclusion: The distribution of young people among different education programmes should not only be understood as consequence of individual preferences and decisions but rather also as a result of strategic steering interventions by a country's education policy.

Keywords: governance, VET, dual, federal vocational baccalaureate, sociology of conventions

1 Introduction

In many European countries, general education predominates at upper-secondary level. Switzerland, on the other hand, has a very high proportion of vocational education and training (VET) at this education level (Kriesi et al., 2022; OECD, 2015): Around two-thirds of youths



choose a – primarily company-based (so-called dual) – VET programme. Furthermore, Switzerland’s VET system stands out with its exceptionally high proportion (90%) of dual VET compared to school-based VET in international comparison (OECD, 2015; State Secretariat for Education, Research and Innovation, 2022). In German-speaking Switzerland, VET has a strong support from society and education policy.¹ But also beyond national borders the Swiss VET model gets idolized as model of success (Kriesi et al., 2022; Lamamra & Moreau, 2016; Steinmann, 2022). Low (youth) unemployment rate, proximity to practice and labour market as well as its contribution to a high completion rate at upper-secondary level are considered the main strengths of Swiss VET. To maintain these strengths, the Swiss Observatory for Vocational Education and Training concluded in its latest trend report, that «VET needs to be an appealing pathway for different groups of young people» (Kriesi et al., 2022, p. 30). Swiss VET policy is thus challenged to position dual VET between integration and excellence and has therefore not only invested a lot to integrate young people at the lower end of the academic performance range into the formal VET system, but also focuses on the question of how high-achieving pupils² can get attracted to dual VET (Elsholz & Neu, 2019; Esposito, 2023; Kriesi et al., 2022).

Statistics show that young people who aspire to enter tertiary education prefer a school-based pathway rather than dual VET (Leemann et al., 2019). This can be seen, a.o., in the rising quota of baccalaureate schools, that is being tried to slow down by means of political steering measures in the German-speaking part of Switzerland (Leemann et al., 2022) as representatives of dual VET fear that to many high-achieving pupils could drift into school-based general education programmes and are thus ‘lost’ for dual VET.

Introduced in 1994, the Federal Vocational Baccalaureate (FVB), the entrance qualification for universities of applied sciences acquired on the VET pathway, is considered to play an important role in making the dual VET system more attractive for high-achieving pupils and enhancing the reputation of VET (Kriesi et al., 2022). Since 2014, the promotion of the FVB has been an important education policy goal at national level in Switzerland. With the «Vocational Baccalaureate 2030» project³, the Swiss Confederation has recently stressed the importance of positioning the FVB as an attractive educational option for the «particularly ambitious»⁴.

As part of the VET system, full-time Vocational Middle Schools (VMS) target pupils with good school grades and provide a way to acquire an FVB. Interestingly, even though strengthening the FVB is an important issue, Swiss education policy paid only little attention to VMS, especially in German-speaking Switzerland. Rather, VMS are fundamentally questioned and sometimes even limited by means of steering measures, because they are regarded as endangering dual VET’s appeal (Esposito, 2023).

The underlying political question of which educational pathway high-achieving pupils choose after compulsory education, addresses a central area of tension within the Swiss education landscape: the «ideal proportion of general education and vocational education» (Kriesi et al., 2022, p. 1). Related to this, this paper argues that the battle for high-achieving pupils taking place at upper-secondary level in Switzerland, not only evokes the omnipresent competition between general and vocational education (a.o. Jäpel, 2016; Jütter, 2023; Kiener, 2007;

¹ The dynamics discussed in this paper regarding the relation between general education and VET as well as between dual and school-based VET do not apply to the same extent to French- and Italian-speaking Switzerland (a.o. Cortesi, 2017; Gonon & Bonoli, 2022).

² The term «high-achieving pupils» refers to pupils with good or very good school grades at lower-secondary level.

³ <https://www.sbfi.admin.ch/sbfi/de/home/bildung/maturitaet/berufsmaturitaet/projekte-zur-berufsmaturitaet.html>

⁴ <https://berufsmaturitaet.ch/de/betriebe>

Schellenbauer et al., 2010; Wettstein & Amos, 2010), but also manifests itself in competitive dynamics between school-based and dual VET programmes and thus in a situation of competition *within* the Swiss VET system.

Based on two cantonal case studies and drawing on a qualitative analysis of educational policy documents as well as on expert interviews with representatives of the cantonal education administration, this study investigates how in recent times actors have been positioning dual VET as an attractive educational pathway for high-achieving pupils in the context of the transition from lower to upper-secondary level in Switzerland. For this purpose, the following questions are addressed:

- What *strategies* do relevant actors use to position dual VET as an attractive educational pathway for high-achieving pupils?
- How, i.e., by means of what *instruments* do actors put these strategies into practice at the cantonal level?
- How do actors *justify* their positions and steering efforts?

Taking a governance perspective, this study complements previous studies in the field of research on educational transitions which have mainly focused on individual factors of educational decisions.

The paper is structured as follows: Following the introduction elaborates on both the FVB in general and VMS as education programmes for high-performing pupils including an FVB. The next section explains why the Sociology of Conventions is an appropriate theoretical framework to address the research questions. Design, data, and methods are presented in Section 4. Based on the findings presented in Section 5, Section 6 consists of some further concluding reflections.

2 Access routes to tertiary education within the Swiss VET system

Switzerland's upper-secondary education consists of general education (baccalaureate schools and specialized middle schools) as well as (dual and school-based) VET programmes. Through all these educational pathways, graduates can obtain a university entrance qualification. The FVB is the university entrance qualification acquired on the VET pathway, that gives its holders access to universities of applied sciences, but not to traditional universities.⁵ The FVB is an optional general education qualification that can be obtained either by attending a vocational baccalaureate course during the apprenticeship (FVB1 option) or by taking up this course at least one year after completing the apprenticeship (FVB2 option) (econcept, 2020; Jäpel, 2016; Trede et al., 2020).⁶ The FVB is therefore always related to a professional qualification. Holders of a FVB thus have a double qualification: they have a professional qualification and can formally enter the labour market and are entitled to enrol in a Swiss university of applied sciences.

One way to obtain a FVB1 option is by completing a Vocational Middle School (VMS). VMS are four-year school-based VET programmes offered in specific fields such as commerce, IT and health. They consist of a full-time school-based setting geared towards tertiary education as well as a longer internship, where apprentices acquire practical skills. As VMS combine a

⁵ Holders of a FVB have the possibility of entering a traditional university by successfully completing a supplementary «federal vocational baccalaureate – university» programme (also known as the «Passerelle Dubs» (<https://www.sbf.admin.ch/sbfi/de/home/bildung/maturitaet/berufsmaturitaet.html>)).

⁶ A third option to acquire a FVB is by passing the Federal Vocational Baccalaureate Examination, but this option is not relevant for the sake of this paper.

federal VET diploma (formal qualification to enter the labour market) and an FVB, they are considered demanding educational programmes. Up to now, VMS received only little attention and support from education policy in German-speaking Switzerland. Rather, their existence has been repeatedly questioned by certain actors, especially representatives of dual VET.

The admission to FVB is regulated at the cantonal level. Accordingly, there are significant differences between the cantons in both the admission regulations and the corresponding FVB rate (Hänni et al., 2022; Leumann, 2019; Trede et al., 2020). This study does not understand such differences solely as differences in students' academic performances (a.o. Combet, 2019; Meyer, 2009) or as «naturally-grown» (Kost et al., 2017, p. 3), but it rather assumes that these differences also result from targeted governance mechanisms as regulations and restrictions at the institutional level of the transition to upper-secondary level (Esposito, 2023; Hafner et al., 2022; Leemann et al. 2022).

In 2014, fostering and promoting the FVB has been defined as one of three key areas of action at national level aiming to «strengthen the attractiveness of VET as a whole», foster that «[t]he FVB will continue to be an attractive educational option for high-achieving pupils»⁷ and ensure the recruitment of future skilled workers (Federal Vocational Baccalaureate Commission 2016: 3). With the «Vocational Baccalaureate 2030» project launched in 2022, VET representatives have once again clearly committed to the primary goal of «making it [the FVB, R.E.] attractive for high-achieving young people»⁸ at national level. Although the FVB is considered a model of success (Trede et al., 2020) and its introduction is regarded as a «success story of Swiss education policy» (Kost et al., 2017, p. 1), the proportion of FVB holders has stagnated (Trede et al., 2020) and holders of a FVB come from only a few professions (Trede et al., 2020).

3 The Sociology of Conventions as theoretical framework

The research questions are examined through the theoretical lens of the Sociology of Conventions (SoC) (Boltanski & Thévenot, 1999; Diaz-Bone & de Larquier, 2022). From a SoC perspective, the political governance of transitions is a situation of coordination of action fraught with uncertainty about their course and outcome. To cope with this situation, actors rely on a limited number of socio-historically established principles of action, worth and justice, so-called conventions (Boltanski & Chiapello, 2005; Boltanski & Thévenot, 1999). Each of these conventions (industrial, civic, opinion, market, domestic, inspired, network, green) refers to a specific common good and thus generates its own way to legitimize or valorize objects, decisions, etc. (see Table 1). This can lead to disputes and criticism as actors often rely on different conventions in the same situation.

Table 1
Conventions in education⁹

Convention	Common good, quality, logic of action
<i>Industrial</i>	Efficiency, productivity, expertise, performance, long-term planning, standardization
<i>Fame</i>	Reputation, fame, visibility, popularity, image
<i>Market</i>	Price, value for money, competition

Source: Derouet (1989); Imdorf and Leemann (2023).

⁷ <https://www.sbf.admin.ch/sbfi/de/home/bildung/maturitaet/berufsmaturitaet/projekte-zur-berufsmaturitaet.html>

⁸ <https://www.sbf.admin.ch/sbfi/de/home/bildung/maturitaet/berufsmaturitaet/projekte-zur-berufsmaturitaet.html>

⁹ Only the conventions relevant to this paper are shown in Table 1. For a complete overview see Imdorf & Leemann (2023).

Conventions can also relate positively to each other and form compromises (Diaz-Bone & de Larquier, 2022). By investing in material and cognitive formats, conventions gain stability, scope and power in the coordination of actions (Dodier, 2010; Thévenot, 2014). Standards are a format with a particularly high scope and are accepted unquestioningly in coordination situations. They require a closure of the actors' eyes to alternative forms that could have been used for coordination and thus reinforce the trust in the established (Thévenot, 2009).

4 Design, Data and Methods

The study is based on a case study design (Yin, 2009) with two German-speaking cantons.¹⁰ Both have a high proportion of VET at upper-secondary level and strengthening dual VET is an important education policy goal at cantonal level. The data consists of publicly available policy documents (a.o. education policy initiatives, statements of the cantonal parliament; political decisions and reports, etc.). Additionally, qualitative problem-centered interviews (Meuser & Nagel, 2009) were conducted with representatives of the cantonal education administration. The data were analyzed using a theory-based qualitative content analysis (Gläser & Laudel, 2010) including argumentation-analytical strategies (Toulmin et al., 1979).

5 Findings

The results point to a direct and an indirect governance strategy pursued by the cantons to position dual VET as an attractive pathway for high-achieving pupils at upper-secondary level in Switzerland. The direct strategy focuses on making the FVB, that targets specifically these pupils, more appealing. The indirect strategy, on the other hand, tries to strengthen dual VET as a pathway for high-achieving pupils by limiting supply and access to school-based VET programmes (especially VMS) that are regarded as competition to dual VET in this regard (Section 5.2). By means of what steering instruments do actors put these strategies into practice at a cantonal level? And how do they justify their actions and decisions? These questions will be answered in the following sections.

5.1 Direct governance strategy: making the Federal Vocational Baccalaureate more appealing

Canton A

Legitimized by the argument, that the FVB contributes to the recruitment of future skilled workers (industrial convention) (Interview, A2, anonymized, Document A7, anonymized), the promotion of the FVB has been a central goal of Canton A's education policy since 2013. To achieve the officially defined and targeted 15% FVB quota (Interview A1 and A2, anonymized), Canton A has launched a «long-term campaign» (Document A1, anonymized) and introduced a «quite broad range of measures» (Interview A1, anonymized). Three elements are presented below.

First, Canton A introduced a more flexible training model to acquire the FVB parallel to the training (FVB1 option). According to this new model pupils with high school grades can already complete part of the FVB course in their penultimate year of lower-secondary education (Documents A3, A4, anonymized).¹¹ They thus get 'bound' to VET already in lower-secondary education. In Canton A high-achieving pupils have the possibility to enter general education

¹⁰ To ensure that personal data are protected, the cantons studied are not named, all data are anonymized, and certain sources are not disclosed in the text. Upon reasonable request, a list of the sources and references not made public can be obtained from the author.

¹¹ The flexibilized model is currently limited to the fields of technology and commerce/industry.

baccalaureate school already in the last year of lower-secondary education. As these high-achieving pupils are very likely to continue their chosen general education baccalaureate school pathway, they are 'lost' for VET as potential apprentices. Canton A's flexibilization of the FVB1 training model can therefore be seen as a steering instrument that counters this dynamic and strengthens the position of dual VET regarding the battle for high-achieving pupils taking place at upper-secondary level in Switzerland.

Second, for the FVB2 option, the admission requirements represent the central instrument that regulates access to the FVB (Hänni et al., 2022). This was confirmed by a representative of the cantonal education administration: «When we look at the admission procedure, of course, the primary objective is to strengthen the FVB» (Interview A2). Hänni et al. (2022) showed, that entrance exams reduce the probability of someone doing a FVB as learners perceive mandatory entrance exams as the highest subjective hurdles amongst all admission requirements when considering taking up a FVB course. Until school year 2023/2024 the access to the FVB2 option was regulated by a mandatory entrance exam in Canton A. Newly, the canton abolished this mandatory entrance exam for the FVB2 option for apprentices who accomplished their VET Diploma «with good grades» (Documents A5, A6, anonymized).¹² Lowering the admission requirements for the FVB2 option is thus a steering instrument used by Canton A to strengthen the FVB and «make VET more attractive for pupils» (Document A7, anonymized).

Third, to promote the FVB quota, Canton A set up so-called «VET ambassadors» (Interview A1, Document A2, anonymized). In the context of compulsory information events at the end of primary school, VET ambassadors inform young people (and their parents) about «what VET is» and that «there is a FVB, so if you don't get into the general education baccalaureate school, you won't end up in hell» (Interview A1). The ambassadors «stand up for the values of VET and represent the attractiveness of the VET pathway», (Document A2, anonymized), as an attractive alternative pathway to enter tertiary education. The aim of this format is to contribute to a «strong positioning and an image boost for VET» and «attract good learners to the dual VET pathway in the long term» (Document A2, anonymized). From a SoC perspective, «VET ambassadors» are «intermediaries» (Bessy & Chauvin, 2013; Diaz-Bone, 2018) acting as a third-party mediator between the training companies as well as the education administration as providers of VET and the young people (and their parents) as demanders. With their informative actions, «VET ambassadors» strive to have a (positive) impact on the symbolic value (Bessy & Chauvin, 2013) of dual VET and the cantonal FVB quota. «VET ambassadors» are thus a format of the convention of fame, that has been introduced into the governance of the transition to upper-secondary level and that functions as a steering instrument supporting the attractiveness and the image of dual VET for high-achieving pupils.

Canton B

In view of demographic developments, Canton B's State Council stated in 2016 that the «battle of competition» (Document B4, anonymised) between dual VET and VMS, will further increase in the future. Legitimized by, on the one hand, fears whereafter dual VET lacks in competitiveness regarding the attraction of high-achieving pupils (convention of fame) and, on the other hand, the need for future skilled workers (industrial convention) (Document B4, anonymised), Canton B has defined «Strengthening dual VET» as a strategic education policy goal (Document B1, B2, B3, B5, anonymized). To «increase the attractiveness and strengthen our dual VET system for high-achieving pupils» (Document B4, anonymised), existing VET offers in Canton A were optimized and further (new) offers developed (Document B4, anonymized):

¹² Abolishing the mandatory entrance examination for FVB2 option can also be observed in other German-speaking cantons of Switzerland.

On the one hand, modified FVB courses were introduced, and, on the other hand, the one-year programme Passerelle Dubs, which allows FVB holders to not only to enrol at universities of applied sciences but also traditional universities, has been established (Document B6, anonymised). Canton B actively promoted the new FVB options by intensifying information and communication (flyers and brochures, homepage, trial days, information events, reports) – especially for the most important target groups at lower-secondary level (pupils, parents, teachers) (Document B4, anonymised). With these formats Canton A has invested a lot in enhancing the reputation and attractiveness of dual VET for high-achieving young people. The underlying justification for introducing these instruments refers to the convention of fame, which has been additionally stabilised, expanded and strengthened as a legitimising reference logic through the different formats introduced.

5.2 Indirect governance strategy: limiting the access to school-based VET programmes that compete with dual VET

Canton A

At a time when Canton A was going through difficult financial times, it was decided to limit the number of training places at VMS to save costs. Officially justified as a cost-saving measure (market convention), Canton A therefore introduced a ceiling of a maximum of five VMS classes in the fields of IT and commerce in 2012 (Interviews A1, A2). This was legally anchored in the corresponding cantonal admission regulations for VMS (Document A8, anonymised). In addition to the market justification of being able to save costs with the ceiling, one actor also pointed out to a politically undesirable competition between VMS and dual VET.

«For a long time, school-based VET has been regarded as costly competition to traditional dual VET, because in some sectors, the state takes over tasks that are performed elsewhere by professional associations and companies. This argument has ... always played an important role in the political discourse...»

(Document A9, anonymized, translation, R.E.)

We can interpret this ceiling as a hard governance instrument (Moos, 2009), by means of which Canton A can directly control the further development of the VMS and thus ensure, that VMS do not increase more than politically desired.

Canton B

For young people of a specific part of Canton B, which is geographically somewhat cut off from the rest of the canton, the upper-secondary level education offers can only be reached with major time effort. For this reason, pupils of this part of the canton were previously allowed to attend VMS in the neighbouring cantons. For Canton B, these out-of-canton VMS attendances meant compensatory payments to the neighbouring cantons and thus an additional burden on the cantonal financial budget. In view of the tight financial situation of Canton B, a cost-cutting package was decided. This package included that contributions for non-cantonal VMS attendances are no longer be paid. Legitimized by a cost-oriented justification (market convention) the pupils of the specific part of the canton would therefore no longer have access to VMS of the neighbouring cantons. Consequently, criticism was voiced through political initiatives, intending a continuation of the financing.

The following statement of a representative of the economic liberal party exemplifies a second key argument in the political debate about the financing of non-cantonal VMS attendances:

«With the full-time VMS ... we are directly competing with dual VET. ... Basically, the canton is committed to strengthening VET, i.e., the genuine dual VET with an apprenticeship with an apprenticeship contract and not as a full-time school with an internship» (*Document B2, anonymized, translation, R.E.*)

The statement shows that the justification to limit access to VMS are no longer only based on the argument of saving costs (market convention), but also refer to the convention of fame, whereafter dual VET should be protected as «unquestioned standard» (Esposito, 2022; Leemann, 2019) against any form of competition. Regarding the education policy debate regarding the financing of non-cantonal VMS attendances, an actor summed up, that it «is a financial policy proposal, but at the same time it is also a strengthening of the dual VET pathway. ... There is a conscious intention to steer in this direction» (Document B2, anonymized).

6 Conclusions

The cantons studied have pursued both a direct and an indirect governance strategy to strengthen dual VET as an attractive pathway for high-achieving pupils at upper-secondary level in Switzerland. The direct strategy tries to increase the attractiveness of the dual VET pathway by making the Federal Vocational Baccalaureate (FVB) more appealing. The indirect strategy, on the other hand, tries to strengthen dual VET as a pathway for high-achieving pupils by limiting full-time school-based VET programmes, especially Vocational Middle Schools [VMS]), that are often regarded as undesired competition to dual VET.

To put these either direct or indirect strategies into practice at a cantonal level, the cantons have used a wide range of steering instruments: Canton A introduced a ceiling on the number of VMS classes, flexibilized training model for the FVB1 option, lowered the access requirements for the FVB2 option by abolishing the mandatory entrance exam for pupils with good grades, and introduced so-called «VET ambassadors». Canton B suspended the financing of non-cantonal VMS attendances to limit VMS, modified the FVB offer, and started the «Passerelle Dubs» programme (passerelle from FVB to university). On the one hand, these investments, try to foster the attractiveness of dual VET regarding high-achieving pupils, but, on the other hand, also go along with ‘costs’: As this paper has shown, these ‘costs’ must a.o. be understood in the sense of a «sacrificing of alternatives», i.e., limiting alternative education programmes, e.g. VMS, at the upper-secondary level.

Different educational pathways correspond to different interests, competences and needs, address different biographical circumstances and life plans of young people, and reflect the variety and quality of the Swiss education system. Do governance strategies and instruments, that steer this variety of education programmes at the upper-secondary level in favour of dual VET and at the expense of other education programmes correspond to Switzerland’s typical liberal-democratic social order, according to which the talents and inclinations of individuals should be the basis for the choice of education (Leemann et al., 2023)? And does the indirect governance strategy of limiting other pathways to a.o. strengthening dual VET really allows to fully exploit the entire potential of the Swiss VET system regarding the training of high-achieving pupils (Esposito 2023)?

Regarding the justifications of the governance strategies pursued and instruments used, similar justificatory patterns could be identified among the two cantons: In addition to market (limiting VMS is a cost cutting measure as it relieves the cantonal financial budget) and industrial (strengthening the FVB contributes to the recruitment of future skilled workers) oriented justifications, the actors often mobilized the convention of fame to legitimize their political actions by the following argument: The image and reputation of dual VET as an attractive pathway for high-achieving young people should be strengthened so that dual VET becomes more competitive regarding the battle for high-achieving pupils taking place at upper-secondary level

in Switzerland. The aim is to maintain dual VET as the «unquestioned standard» (Esposito, 2022; Leemann, 2019) – also regarding the training of high-achieving pupils.

To grasp this repeatedly mobilized specific justificatory compromise, whereafter the convention of fame gets strengthened by the market and the industrial convention, the term «dual VET justification standard» is introduced here. As this paper, as well as examples from other Swiss cantons with a high proportion of VET at upper-secondary level (Esposito, 2023), have shown, this «dual VET justification standard» function as a stable, powerful, and widely unquestioned justificatory compromise legitimizing political decision making and taking in favour of dual VET within the coordination of action regarding the transition to upper-secondary level in Switzerland.

Summing up, the distribution of young people among different education programmes should not only be understood as consequences of individual preferences and decisions, but rather also resulting from strategic steering interventions by a country's education policy.

References

- Boltanski, L., & Chiapello, E. (2005). The new spirit of capitalism. *International Journal of Politics, Culture, and Society*, 13(3), 161–188. <https://www.jstor.org/stable/20059681>
- Boltanski, L., & Thévenot, L. (1999). The sociology of critical capacity. *European Journal of Social Theory*, 2(3), 359–377.
- Combet, B. (2019). The institutional dimension of class-based educational decision-making: Evidence from regional variation in Switzerland. *Zeitschrift Für Soziologie*, 48(4), 301–320. <https://doi.org/10.1515/zfsocz-2019-0021>
- Cortesi, S. (2017). *La formation en école à plein temps du secondaire II en Suisse: Hétérogénéité institutionnelle et traditions de formation*. Dissertation, University of Basel. http://edoc.unibas.ch/diss/DissB_62589
- Derouet, J.-L. (1989). L'établissement scolaire comme entreprise composite: Programme pour une sociologie des établissements scolaires. In L. Boltanski & L. Thévenot (Eds.), *Justesse et justice dans le travail* (pp. 11–42). Presses universitaires de France.
- Diaz-Bone, R., & de Larquier, G. (2022). Conventions: Meanings and applications of a core concept in economics and sociology of conventions. In R. Diaz Bone & G. de Larquier (Eds.), *Handbook of Economics and Sociology of Conventions* (pp. 1–27). Springer International Publishing. https://doi.org/10.1007/978-3-030-52130-1_2-1
- Dodier, N. (2010). Konventionen als Stützen der Handlung. Elemente der soziologischen Pragmatik. *Trivium*, 5, 1–21. <https://doi.org/10.4000/trivium.3565>
- Econcept. (2020). *Auslegeordnung zur Positionierung der höheren Fachschulen*. Final report. <https://www.sbf.admin.ch/sbf/de/home/bildung/hbb/hoehere-fachschulen/positionierung-hf.html>
- Elsholz, U., & Neu, A. (2019). Akademisierung der Arbeitswelt – Das Ende der Beruflichkeit? *AIS-Studien*, 12(1), 6–18. <https://doi.org/10.21241/SSOAR.64880>
- Esposito, R. S. (2022). *Ausbildungsqualitäten – Andersartig, aber gleichwertig? Ein Vergleich konkurrierender Gesundheitsausbildungen in der Schweiz*. Springer VS. <https://doi.org/10.1007/978-3-658-36353-6>
- Esposito, R. S. (2023). Swiss VET – A successful model and its sacrifices. On the balance of power between company- and school-based VET in the political governance of the transition to upper-secondary level in Switzerland. In V. Tütlys, L. Vaitkutė, & C. Nägele (Eds.), *Vocational education and training transformations for digital, sustainable and socially fair future. Proceedings of the 5th Crossing Boundaries Conference in Vocational Education and Training, Kaunas*, (pp. 147–154). <https://doi.org/10.5281/zenodo.7808528>
- Gläser, J., & Laudel, G. (2010). *Experteninterviews und qualitative Inhaltsanalyse als Instrumente rekonstruierender Untersuchungen* (4th ed.). Springer VS. <http://d-nb.info/1002141753/04>
- Gonon, P., & Bonoli, L. (2022). Bildung: Etwa doch ein Polenta- und Röstigraben? *Transfer, Berufsbildung in Forschung und Praxis (SGAB)*, 1. <https://sgab-srpf.ch/bildung-etwa-doch-ein-polenta-und-roestigraben/>
- Hafner, S., Esposito, R. S., & Leemann, R. J. (2022). Transition to long-term baccalaureate school in Switzerland: Governance, tensions, and justifications. *Education Sciences*, 12(2). <https://doi.org/10.3390/educsci12020093>
- Hänni, M., Kriesi, I., & Neumann, J. (2022). Entry into and completion of vocational baccalaureate school in Switzerland: Do differences in regional admission regulations matter? *Education Sciences*, 12(3). <https://doi.org/10.3390/educsci12030188>
- Imdorf, C., & Leemann, R. J. (2023). Education and conventions. In R. Diaz-Bone & G. de Larquier, *Handbook of economics and sociology of conventions* (pp. 1–33). Springer. https://doi.org/10.1007/978-3-030-52130-1_69-1
- Jäpel, F. (2016). *Die Berufsmaturität als Ausbildungsalternative: Einflussfaktoren individueller Bildungsentscheidungen am Übergang in die nachobligatorische Ausbildung*. Haupt Verlag.

- Jütter, A. (2023). *Berufsbildung oder Allgemeinbildung? Die Rolle von Leistung, Interesse und sozialer Herkunft beim Übergang von der Schule in Ausbildung und Studium*. Dissertation, University of Konstanz. <https://kops.uni-konstanz.de/entities/publication/c66d5c52-6939-4bf8-8950-64e09b80f1a8>
- Kiener, U. (2007). Anders? Gleich? – Grenzziehungen (in) der Berufsbildung. In M. Chaponnière (Ed.), *Bildung und Beschäftigung: Beiträge der internationalen Konferenz in Bern* (pp. 487-503). Rüegger.
- Kost, J., Lüthi, F., & Fischer, J. (2017). Die Berufsmaturitätsquote zwischen Volatilität und Stabilität – eine bildungspolitische Herausforderung. *Transfer, Berufsbildung in Forschung und Praxis (SGAB)*, 1. <https://transfer.vet/die-berufsmaturitaetsquote-zwischen-volatilitaet-und-stabilitaet-eine-bildungspolitische-herausforderung/>
- Kriesi, I., Bonoli, L., Grønning, M., Hänni, M., Neumann, J., & Schweri, J. (2022). *Areas of tension in vocational education and training in switzerland and other countries – developments, challenges and potential* (5th Trend Report). Swiss Federal University for Vocational Education and Training. <https://www.sfuvet.swiss/research/obs/publications/trend-reports>
- Lamamra, N., & Moreau, G. (2016). Introduction: Les faux-semblants de l'apprentissage en Suisse. *Formation Emploi*, 133, 7-16. <https://doi.org/10.5281/ZENODO.5775965>
- Leemann, R. J. (2019). Educational Governance von Ausbildungsverbänden in der Berufsbildung – die Macht der Konventionen. In R. Langer & T. Brüsemeister (Eds.), *Handbuch Educational Governance Theorien* (pp. 265-287). Springer VS. https://link.springer.com/chapter/10.1007/978-3-658-22237-6_13
- Leemann, R. J., Esposito, R. S., & Hafner, S. (2023). Ein Bedrohungsszenario ist nicht angebracht. Replik zum Interview zum Bildungsbericht 2023 mit Stefan C. Wolter. *Transfer, Berufsbildung in Forschung und Praxis (SGAB)*. <https://transfer.vet/ein-bedrohungsszenario-ist-nicht-angebracht/>
- Leemann, R. J., Esposito, R. S., Pfeifer Brändli, A., & Imdorf, C. (2019). Handlungskompetent oder studierfähig? Wege in die Tertiärbildung: Die Bedeutung der Lern- und Wissenskultur *Transfer, Berufsbildung in Forschung und Praxis (SGAB)*. <https://www.sgab-srfp.ch/de/newsletter/handlungskompetent-oder-studierfaehig>
- Leemann, R. J., Pfeifer Brändli, A., & Imdorf, C. (2022). Access to baccalaureate school in Switzerland: Regional variance of institutional conditions and its consequences for educational inequalities. *Education Sciences*, 12(3), 1-27. <https://doi.org/10.3390/educsci12030213>
- Leumann, S. (2019). Zulassungspraktiken und Umsetzungsmodelle der Berufsmaturität. *Trend im Fokus*, 1. Swiss Federal University for Vocational Education and Training.
- Meuser, M., & Nagel, U. (2009). Das Experteninterview – konzeptionelle Grundlagen und methodische Anlage. In S. Pickel, D. Jahn, H.-J. Lauth, & G. Pickel (Eds.), *Methoden der vergleichenden Politik- und Sozialwissenschaft: Neue Entwicklungen und Anwendungen* (1th ed., pp. 465-479). Springer VS. https://link.springer.com/chapter/10.1007/978-3-531-91826-6_23
- Meyer, T. (2009). Wer hat, dem wird gegeben: Bildungsungleichheit in der Schweiz. In C. Suter, S. Perrenoud, R. Lévy, U. Kuhn, D. Joye, & P. Gazareth (Eds.), *Sozialbericht 2008. Die Schweiz vermessen und vergleichen* (pp. 60-81). Seismo.
- Moos, L. (2009). Hard and soft governance: The journey from transnational agencies to school leadership. *European Educational Research Journal*, 8(3), 397-406. <https://doi.org/10.2304/eej.2009.8.3.397>
- OECD. (2015). Focus on vocational education and training (VET) programmes. *Education indicators in focus*, 33. <https://www.oecd-ilibrary.org/docserver/5jrxtk4cg7wg-en.pdf?expires=1667571923&id=id&ac-name=guest&checksum=256E0FC71EC208EE6495468BC0F68E6B>
- Schellenbauer, P., Walser, R., Lepori, D., Hotz-Hart, B., & Gonon, P. (2010). *Die Zukunft der Lehre: Die Berufsbildung in einer neuen Wirklichkeit*. Avenir Suisse. <https://www.avenir-suisse.ch/publication/die-zukunft-der-lehre/>
- State Secretariat for Education, Research and Innovation (SERI). (2022). *Vocational and professional education and training in Switzerland. Facts and figures 2022*. <https://www.sbf.admin.ch/sbf/en/home/services/publications/data-base-publications/vocational-and-professional-education-and-training-in-switzerland.html>
- Steimann, O. (2022). *Leitlinien der Wirtschaft. Bildungs-, Forschungs- und Innovationspolitik*. Economiesuisse. <https://economiesuisse.ch/sites/default/files/publications/Bildungs-%2C%20Forschungs-%20und%20Innovationspolitik.pdf>
- Thévenot, L. (2009). Governing life by standards: A view from engagements. *Social Studies of Science*, 39(5), 793-813. <https://doi.org/10.1177/0306312709338767>
- Thévenot, L. (2014). Voicing concern and difference: From public spaces to common-places. *European Journal of Cultural and Political Sociology*, 1(1), 7-34. <https://doi.org/10.1080/23254823.2014.905749>
- Toulmin, S., Rieke, R., & Janik, A. (1979). *An Introduction to Reasoning*. Macmillan.
- Trede, I., Hänni, M., Leumann, S., Neumann, J., Gehret, A., Schweri, J., & Kriesi, I. (2020). *Berufsmaturität. Bildungsverläufe, Herausforderungen und Potenziale* (4th Trend Report). Swiss Federal University for Vocational Education and Training. https://www.sfuvet.swiss/sites/default/files/trendbericht_4_de_v1-web.pdf
- Wettstein, E., & Amos, J. (2010). *Schulisch organisierte berufliche Grundbildung: Bericht*. <https://edudoc.ch/record/109417?ln=en>

Yin, R. K. (2009). *Case study research: Design and methods* (4th ed.). Sage.

Biographical notes

Dr Raffaella Simona Esposito is currently research associate and postdoc in the research project «Governance of Transitions in the Swiss Education System. A Study on the Political Regulation of Moving from Primary to Lower-Secondary and from Lower-Secondary to Upper-Secondary Education (GovTrans)» at the School of Education Northwestern Switzerland.

Fischer, M. (2023). A tool for the self-assessment of informal learning for workers in the metal and electrical industry. In C. Nägele, N. Kersh, & B. E. Stalder (Eds.), *Trends in vocational education and training research, Vol. VI. Proceedings of the European Conference on Educational Research (ECER), Vocational Education and Training Network (VETNET)* (pp. 119–128). <https://doi.org/10.5281/zenodo.8209052>

A Tool for the Self-Assessment of Informal Learning for Workers in the Metal and Electrical Industry¹

Fischer, Martin

m.fischer@kit.edu, Karlsruhe Institute of Technology

Abstract

Context: The paper describes one of the earliest practical attempts for the recognition of prior learning in Germany. However, this attempt was limited to one sector (metal and electrical industry) and one region (the German state Baden-Württemberg) and remained beyond formal recognition procedures.

Approach: The recognition of informally acquired competences requires their documentation and visibility. What role can those potentially willing to be recognized play in this, and which (web-based) instrument is suitable for this? This research question was to be answered in a participatory technology development process in cooperation with those affected (shop floor workers), but also with the involvement of social partners, human resources managers, works councils, chambers, employment agencies and academics.

Findings: Shopfloor people have difficulties understanding the competency designations that are being discussed in academia and policy, but they are able to say what they can do. However, they use different words for their doing (varying from company to company, department to department, person to person). Therefore, for the purpose of self-assessment a framework is needed that simultaneously offers a stimulus for reflection and a structure for classification. This framework is provided by a (web-based) task inventory. Such a task inventory had to be developed, by which low-skilled workers can indicate which tasks they are able to perform.

Conclusion: The web-based task inventory AiKomPass (aikompass.de) is available online in six languages for anyone to use free of charge. With the help of the tool, users create a personal profile that belongs only to them. This profile is used for various purposes inside and outside companies and even in the context of formal recognition procedures. However, this approach does not replace a formal recognition procedure, as the profile is only based on self-assessment and says little about the quality of task performance. However, it does say a lot about the scope of (self-assessed) task-related competences. The AiKomPass tool can be used internationally as it can be assumed that tasks as such in the metal and electrical industry are similar in industrialized countries and as the instrument is not directly linked to national training regulations.

Keywords: informal learning, competence assessment, recognition, metal and electrical industry

¹ This paper is an abridged and modified version of Fischer (forthcoming).



1 Context: Recognition of informally acquired competences in Germany

In the context of creating a common European labour market also Germany joined the decision of the European Council (2012) according to which every European citizen should have the right to have their informally acquired competences recognized by 2018. However, preparations for an official recognition procedure in Germany only began at the end of 2015, when the „guardians“ of the dual training system, the chambers, were given the task of developing and introducing a procedure for recognizing informally acquired competences. Until then, there had been reservations and fears in the public debate that the established initial vocational training system in Germany could be endangered by such a recognition procedure. The official procedure was established in October 2018 and is still under development for different occupations (VALIKOM, n.d.). An earlier practical attempt in Germany towards the recognition of informally acquired competences was a sector specific one in the metal and electrical industry of the German state Baden Württemberg. This approach is now the focus of my consideration: Although the relevance of the formal VET system in Germany has often been highlighted, there was (and still exists) a remarkable number of persons who do not have a formal qualification (15–20% of an age cohort in Germany remain without any vocational qualification (Baethge, 2014, p. 53); Baden-Württemberg has one of the highest numbers of employees in Germany who work without a formal qualification and cannot prove their competences (around 14% of all employees in 2022 (Statistisches Landesamt Baden-Württemberg, 2023)). In times of a shortage of skilled workers, it was the idea of those politically responsible that a ‘treasure’ exists in the form of formally unqualified people that only needed to be lifted. For this reason, an online tool for the recognition of prior learning should be developed in meanwhile three publicly funded research and development (R&D) projects, which were dedicated to the metal and electrical industry in Baden-Württemberg from 2012 onwards. At the time, this was one of the first practical research approaches that dealt with the validation of informally and non-formally acquired competences. However, it is important to notice that this approach was only related to one industry in one German state and remained beyond formal recognition procedures.

How to recognize informally acquired competences with the help of a web-based instrument? This was the research question. In order to answer this question, one has to consider the following: It is a generally shared assumption that many competences – and especially work-relevant competences – are acquired through learning in the process of work (Boreham et al., 2002; Fischer et al., 2004). However, informally, non-formally and formally acquired competences are difficult to distinguish from each other. The same competence, e.g. mastery of a certain machine, may have been acquired informally (e.g. by ‘copying’ from colleagues), non-formally (e.g. in a course) or formally (e.g. in initial vocational training). And competences are also acquired informally in formal settings, e.g. teamwork skills when learning in groups, or foreign language skills in specialised training. Formal/informal/non-formal learning are therefore, in contrast to many definitions (CEDEFOP, 2009; OECD, 2006), not discrete categories that can be completely separated from each other, but attributes that have been assigned to learning by the state and society (Colley et al., 2003). Informal learning is an attribute rather than a property of learning. To give just one piece of evidence for this: Attributes of informal learning vary from country to country: In most countries, for example, ‘work experience’ counts as a result of informal learning. In Germany, work experience must be made available to trainees in initial vocational training. This is what the German Vocational Training Act says. Work experience is therefore an integral part of a formal qualification here. Therefore, there is no ‘universal’ informal competence. It follows from this:

- 1) If one wants to record informally acquired competences, one cannot exclude anything from the spectrum of relevant competences from the outset.

- 2) If potentially all competences can be acquired informally, only the people concerned themselves can give indications for a closer determination.

2 Approach: Participatory development of an online tool

The recognition of informally acquired competences requires their documentation and visibility. What role can those potentially willing to be recognized play in this, and which (web-based) instrument is suitable for this? This research question should be answered in a participatory technology development process (cf. Fischer, 2000, p. 249 et seq.) in cooperation with those affected (shopfloor personnel), but also with the involvement of social partners, personnel managers, works councils, chambers, employment agencies and academia.

In order to identify work tasks in the metal and electrical industry, an interview study and workplace observations (according to the BAG method (Analysis of Occupational Work Tasks; see Reinhold et al., 2003)) were carried out. The project involved 75 interviews in 10 companies. The analysis of work activities focused mainly on semi-skilled and unskilled workers, but also on skilled workers (persons who no longer work in their learned occupation or in fields that do not correspond to a specific vocational qualification of initial vocational training in Germany, e.g. industrial maintenance or production planning). Technical supervisors were also interviewed where they could provide information on the nature, extent and systematisation of the work involved. It was important to include in the study people who were actively involved in the work activities, i.e. who either carried them out themselves or were supervisors of those who carried them out. Human resources staff, managers and works councils were also involved, as these are the people involved in personnel decisions.

Expert surveys were conducted to validate the instrument that was developed. Furthermore, interested workers were able to test the competence tool for the recognition of informally acquired competences in a participatory pre-test phase and thus help to optimise the usability of the tool. These tests were accompanied scientifically and served to further develop, test acceptance, and validate the instrument.

3 Findings and Results: Self-assessment based on task inventories

3.1 Findings

Against the background described above, an online tool was to be developed and then made available to any person interested in taking stock of their competences. Under such a premise, it quickly became apparent in our empirical study that employees in the metal and electrical industry have little use for the competence designations discussed in vocational education (Fischer et al., 2014) – at least as a means of self-assessment.

What people can give more information about are the tasks they perform or have performed and mastered in gainful employment. However, one encounters the fact that these tasks are described differently from person to person (depending also on companies and departments): What for one person means „maintaining machines and equipment“ is for another „repair“ and for a third „keeping the machines running“. Therefore, task descriptions as a structure for classification and a framework for self-reflection must be presented in a generally understandable form so that people can express themselves in terms of „I can“ or „I can't“ and so that these statements can then be compared. This is done through so-called task inventories (Frieling et al., 2003), whereby work tasks in a professional field of activity are described and presented in a structured form.

Regardless of whether competences have been acquired through learning in the process of work or in institutional learning environments, it always requires a separate reflection on what kind of skills have emerged from the respective learning process. If it is and should be the subjects themselves (as in our projects) who document and make visible their skills, then a

framework must be provided that simultaneously offers a stimulus for reflection and a structure for classification. This framework is provided by a task inventory.

However, such an inventory of tasks did not exist for the metal and electrical industry. We had to develop it first. All kinds of information were used for this purpose (training regulations, framework curricula, (company) qualification profiles, job advertisements, German Industrial Standards and the collective wage agreement).

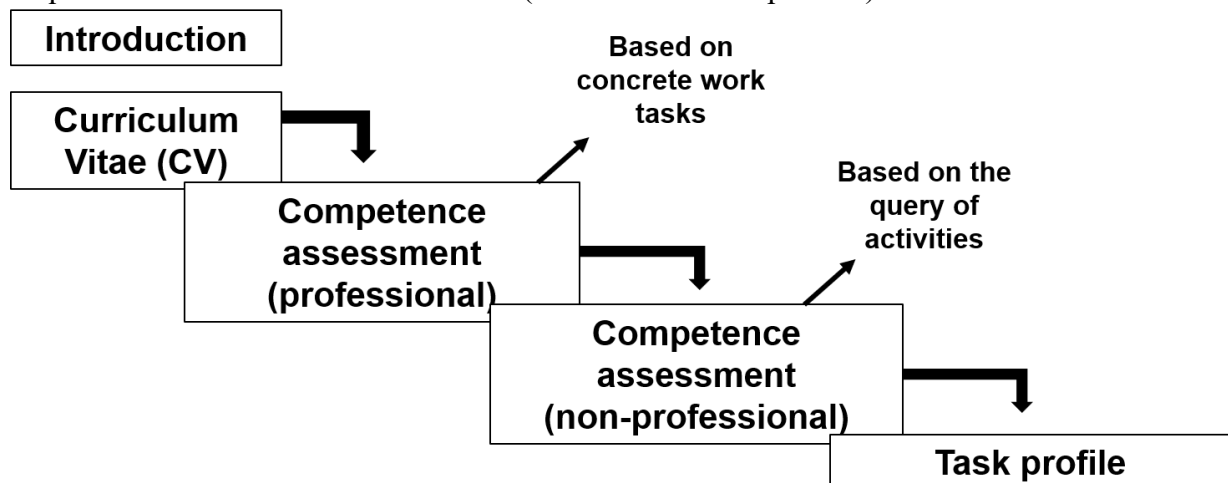
3.2 Structure of the web tool AiKomPass

In the year 2023 the developed tool AiKomPass (www.aikompass.de) is available online in six languages (German, English, French, Italian, Swedish and Ukrainian) and can be used free of charge. With AiKomPass, users can select from a structured list those tasks that they are able to perform and/or that they are currently still performing. The tasks come from the fields of work preparation, production, maintenance and production and warehouse logistics in the metal and electrical industry. So-called digital competences have been added in the meantime. This specialist task inventory is expanded to include activities that are important in their free time, as well as the option to store a CV including references, certificates, etc. The result of using AiKomPass is an individual overall profile that can be used for personal and professional development and in the validation of informally acquired competences.

The compilation of mastered work tasks is presented within this personal task profile and is the result of a self-assessment. When using the tool, individual task profiles are created which on the one hand provide detailed information about the work experience of the users and on the other hand, through their structuring and the completeness of the underlying task inventory, also allow a comparison with competence requirements (e.g., a training regulation). However, the validation of self-assessed competences requires further analysis and interpretation by relevant experts.

Figure 1

Sequence of a session with AiKomPass (Author's own compilation)



The profile to be created in the AiKomPass consists of several areas (Fig. 1) through which the user is guided in a structured way. Alternatively, the individual areas can be processed in any order via navigation. Each section contains various fields that the user can edit as required; mandatory fields have been deliberately omitted.

AiKomPass records individual stages of working life in the CV section. Special tasks in the company, training for professional activities as well as voluntary activities can be listed. It

was one of the findings during the research process that compiling a CV helps to recall previous activities and related competences.

The most important function of the AiKomPass tool is the compilation of work tasks from the metal and electrical sector that the person has already successfully worked on and/or can still work on in their working life. All work tasks compiled in AiKomPass are assigned to task groups. The task groups are in turn grouped into sub-work fields. The sub-work areas are assigned to four work areas: Work preparation, production, maintenance and production and warehouse logistics.

Figure 2

Creating an overall task profile with AiKomPass (Author's own compilation)

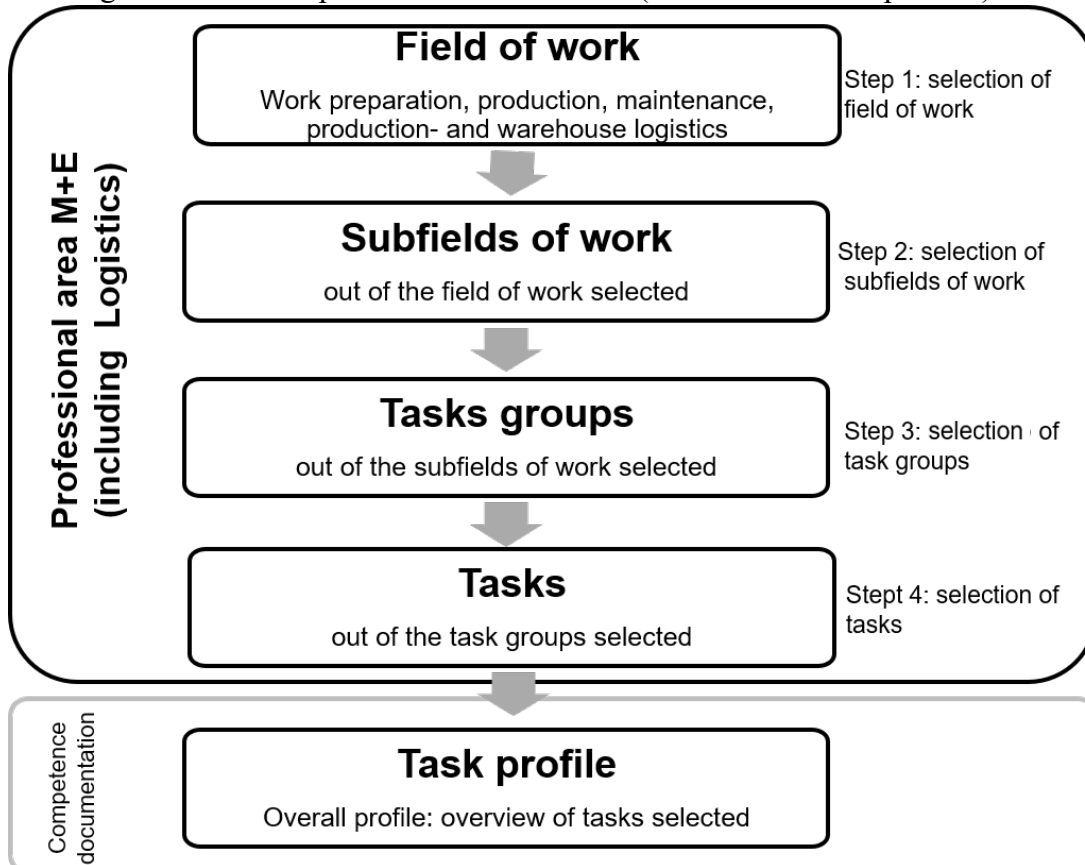
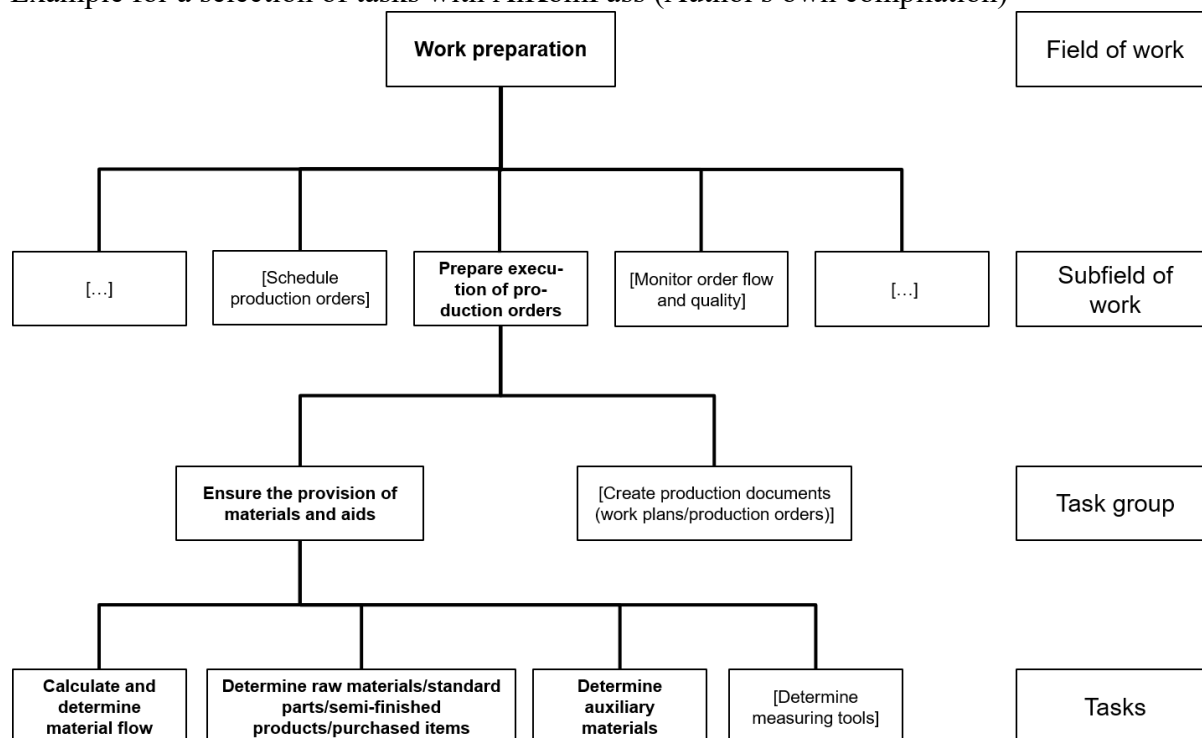


Figure 3

Example for a selection of tasks with AiKomPass (Author's own compilation)



Users start by selecting the relevant work fields. In the second step, the corresponding sub-work areas appear, such as ‘Scheduling production orders’ in work preparation, ‘Manufacturing’ in production or ‘Servicing’ in maintenance (Fig. 2). In the third step, the task groups of the selected sub-work fields appear. After selecting the task groups, the tasks related to them can be selected (Fig. 3). The total list of mastered tasks is presented in a structured overview at the end.

Professional experience outside the metal and electrical industry can be compiled in the section ‘Non-subject-specific task profile outside M+E’. Here, not only the activities are recorded, but also the knowledge and skills that were acquired in the process. Furthermore, there is the option to record language and computer skills as well as leisure/voluntary activities.

3.3 Possible uses of AiKomPass

The PDF document as a result of AiKomPass is a personal overall profile that is created individually by the information provided by the user. The PDF document belongs exclusively to the user. The purpose for which the profile is used is not specified. There are many possibilities for use, whereby four groups of possible uses can be identified: individual use, company use, out-of-company use and recognition of competences.

The personal task profile created in the AiKomPass can be used individually

- to get an overview of one's own knowledge and skills;
- to discuss with managers possibilities of changing one's own work tasks;
- to attach the profile to a job application;
- to find out in which areas there is a need for further training.

The AiKomPass instrument can be used in the following ways in a company:

- within the framework of personnel and staff planning;
- to accompany staff appraisals;

- to match the competences of employees with the requirements of a job description or a company competence profile;
- to plan and initiate further training and qualification of employees.

Off-site uses:

- job placement and job counselling;
- reflection on job-relevant competences and job objectives;
- development of occupational, work and training profiles.

Within the framework of competence recognition, AiKomPass offers the possibility,

- to prepare for an examination or a validation of competences;
- to prepare for the recognition of examination achievements through connectivity with training regulations and occupational profiles;
- to support an equivalence assessment of vocational qualifications and recognition procedures.

4 Discussion, conclusion and outlook

As mentioned above, the task-related competence profile created with the help of AiKomPass belongs exclusively to the user. For reasons of data protection and data privacy, we do not know anything about the use of AiKomPass – apart from what direct users (e.g. shop floor workers) and indirect users (e.g. company managers, employment agencies, responsible persons for the official German recognition procedure) have reported, mainly during the runtime of our projects. This limitation has to be kept in mind.

The test phase and subsequent pilots have shown that interested people (even without a formal vocational qualification) can use AiKomPass and create an individual task-related competence profile for themselves. Whether this can be done without any outside help depends above all on the existing language competence. Although there are no complicated descriptions of competences in AiKomPass – quite the contrary – it is important to realize that AiKomPass is a language-based tool, the use of which assumes the understanding of the existing work field and task descriptions. Within the framework of the EU project ‘Labour INT’, AiKomPass has already been translated into English. Other languages have been added. The focus here is, for example, on immigrants who have already acquired knowledge and skills relevant to work in their country of origin, but which they can neither formally prove nor are able to describe. However, experiences show that the desired ‘internationalization’ of AiKomPass is not exclusively a linguistic translation problem, as people from other cultural circles sometimes do not have the words available in their national language that would have to be used for task descriptions in the German metal and electrical industry. Therefore, more image- and graphic-based representations of task inventories would be helpful here, which would also have to be supplemented with additional explanations if necessary.

Apart from the above-mentioned limitation, it can be said that AiKomPass can in principle be used internationally, at least in European countries, because tasks as such in the metal and electrical industry are probably quite similar in industrialized countries although the design of tasks and their allocation to individual professions and persons may vary. Moreover, the instrument is not bound to national training regulations. Nevertheless, AiKomPass can be connected to questions of formal recognition of vocational qualifications. In a master thesis (Köhn, 2017), it was shown for the German training occupation ‘electronics technician for devices and systems’ that with very minor modifications, AiKomPass is able to map correspondences to the training framework plan. This means that with appropriate guidance it can be seen which tasks someone would have to have confirmed in the AiKomPass tool so that the skills expressed in it fully correspond to the training occupational profile. Persons involved in the official German recognition procedure have reported that they use AiKomPass sometimes in order to get an

overview of the (self-assessed) scope of task-related competences of a person. From employment agencies we received feedback that people could only be placed in work because certain competences became apparent through AiKomPass.

Of course, there is also the question of the quality criteria for this kind of competence recognition via self-assessment. It is true that users can give false information. However, experience shows that, according to their supervisors, users from the shop floor tend to underestimate rather than exaggerate their competences. However, this cannot be guaranteed in individual cases.

An at least equally serious problem with this type of competence diagnosis via self-assessment is that the possible range of work tasks mastered alone says little about the quality of task processing. However, at least information about the scope of an individual competence profile is provided, and this scope can be compared with the scope required in the training occupation profile, whereas all known vocational competence diagnostics procedures in Germany attempt to derive statements about the entire vocational qualification from a more or less small selection of competences tested in greater depth (Fischer, 2018). Statements about the scope of a person's existing competences are particularly relevant for the formal recognition of informal learning, because here – in contrast to competence diagnostics during or after formal training courses – it cannot be assumed that these persons have already become acquainted with the elements of a training framework plan, at least as input. Statements about the existing or missing scope of competences on the basis of the AiKomPass also establish the connection to further training planning, so that specific gaps can be closed.

Finally, it can be discussed whether and to what extent competences can be recorded at all with the help of a task inventory. On one hand, it should be borne in mind in this discussion that the construct of competence is a hypothetical construct in which it is assumed that behind a performance or responsibility there is an ability to perform that performance or to exercise the responsibility in a responsible manner (Fischer, 2018). While responsibilities are known and performance is observable, this is not the case with abilities. From the fact that competences are not observable in terms of abilities, it follows that they „... are always a form of attribution based on a judgement of the observer“ (Erpenbeck & Rosenstiel, 2003, p. XI, own translation). Such an interpretation and attribution is not provided by the use of AiKomPass alone.

On the other hand, more so than in general education, vocational education and training is not only about understanding, assessing and evaluating facts, but also about being able to cope with them in a practical way in the context of professional work. The concept of ‘vocational action competence’ is therefore very important here (Dilger & Sloane, 2012). Since 2005, the German Vocational Training Act (2005, pp. 5–6) has spoken of ‘vocational action competence’, which is understood to mean the necessary vocational skills, knowledge and abilities for carrying out a qualified vocational activity in a changing world of work. Competent for what? This question is the focus of vocational education and training. Therefore, it is not entirely irrelevant for which tasks a person is competent. AiKomPass provides this attribution as a guided self-assessment.

For future research and development, the question therefore arises as to how self-assessment procedures can interact with ‘objective’ procedures of competence diagnostics. Furthermore, it is a value in itself for vocational research and development to have a task inventory for the metal and electrical industry, because this identifies which work tasks potentially occur in this industry, and by using an instrument such as AiKomPass, it identifies which tasks employees actually perform. Surprisingly, such an up-to-date task inventory did not exist in the occupational and labour sciences and had to be developed first. Such an inventory would have to be constantly developed further and could then be an instrument for recording the change in skilled work beyond individual competence diagnosis.

With the help of AiKomPass, even people without formal qualification and with little computer skills can create an individual competence profile, i.e., identify and document competences relevant to their work. This competence profile alone does not satisfy the test-theoretical quality criteria of competence diagnostics, but it is connectable. However, one of the most important findings from the evaluations and trials with AiKomPass was: A guided self-assessment can make the people concerned themselves actors in competence diagnostics, which can be a stimulus for their educational and career aspirations (Fischer et al., 2014). It was very often reported that the use of AiKomPass raised the self-esteem of the users and improved their motivation to close gaps in their qualification profile.

Wiebke Petersen (2016) distinguishes three levels of recognition of informal learning in her ‘Vocational pedagogical studies on functional development opportunities of an extended recognition perspective in European employment systems’:

1. Making visible to oneself: One's own skills and abilities, one's own knowledge and one's own competence in terms of one's own desired level of responsibility must become conscious and explicit. ... enables identification of one's own motivation and volition. ... self-recognition, which is expressed in the terms self-confidence, self-esteem and self-appreciation.
2. Making visible to others: Soft forms of recognition lead to social recognition and acknowledge that the subject has certain other abilities in addition to his or her formally certified abilities: social appreciation.
3. Legal recognition: legal recognition in the narrower sense – for example through a certified examination. The validation of informal learning in the sense of legal recognition is then rather a check whether the characteristics of the subject meet the requirements of the ‘generalized’ others.

The first two levels of recognition of informal learning can be achieved through the AiKomPass approach, the third level of recognition requires the involvement of third parties. But also, for possible external assessors the competence profile created by AiKomPass is a valuable source of information, as it gives an overview of (self-assessed) task-related competences of a person.

Unfortunately, there is no generally accepted theory for the classification of work activities through task inventories, it is rather a pragmatic approach to the analysis of work activities (Fleishman & Quaintance, 1984; Frieling et al., 2003, p. 170)), in the best case: organised on a participatory and cross-company basis. The development of such a theory is a scientific task for the future. This would facilitate the transferability of the results to other professional fields. Nevertheless, it became apparent in the course of our research that – as a means of self-assessment – only lists of activities could be meaningfully used by the participants in the study (mainly low skilled workers).

References

- Baethge, M. (2014). Qualitätsprobleme des deutschen Berufsbildungssystems. In M. Fischer (Ed.), *Qualität in der Berufsausbildung. Anspruch und Wirklichkeit* (pp. 39–62). WBV.
- Boreham, N. C., Samurcay, R., & Fischer, M. (Eds.) (2002). *Work process knowledge*. Routledge.
- Dilger, B., & Sloane, P. F. E. (2012). Kompetenzorientierung in der Berufsschule. Handlungskompetenz in den Versionen der Handreichungen der KMK zur Entwicklung lernfeldorientierter Lehrpläne. *BWP*, 4, 32–35.
- CEDEFOP – European Centre for the Development of Vocational Training. (2009). *European guidelines for validating non formal and informal learning*. Luxembourg. http://www.cedefop.europa.eu/en/Files/4054_EN.PDF
- Colley, H., Hodkinson, P., & Malcolm, J. (2003). *Informality and formality in learning*. learning and skills research centre. University of Leeds. http://www.uk.ecorys.com/europeaninventory/publications/concept/lsrc_informality_formality_learning.pdf
- Erpenbeck, J., & von Rosenstiel, L. (Eds.). (2003). *Handbuch Kompetenzmessung*. Schäffer-Poeschel.

- European Council. (2012). *Council recommendation of 20 December 2012 on the validation of non-formal and informal learning*. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32012H1222%2801%29>
- Fischer, M. (forthcoming). Self-assessment of informally acquired competences on the basis of work task inventories. In M. Pilz (Ed.), *Informal learning in vocational education and training: illuminating an elusive concept* (working title). Springer VS.
- Fischer, M. (2018). Verfahren der Messung beruflicher Kompetenzen/ Kompetenzdiagnostik. In R. Arnold, A. Lipsmeier, & M. Rohs (Eds.), *Handbuch Berufsbildung*. Springer Reference Sozialwissenschaften (pp. 263–277). Springer VS. DOI https://doi.org/10.1007/978-3-658-19372-0_22-1
- Fischer, M. (2000.). *Von der Arbeitserfahrung zum Arbeitsprozeßwissen. Rechnergestützte Facharbeit im Kontext beruflichen Lernens*. Leske + Budrich, unchanged new edition: Springer.
- Fischer, M., Boreham, N. C., & Nyhan, B. (Eds.). (2004). *European perspectives on learning at work: The acquisition of work process knowledge*. Cedefop Reference Series. Office for Official Publications for the European Communities.
- Fischer, M., Huber, K., Mann, E., & Röben, P. (2014). Informelles Lernen und dessen Anerkennung aus der Lernendenperspektive – Ergebnisse eines Projekts zur Anerkennung informell erworbener Kompetenzen in Baden-Württemberg. *bwp@ Berufs- und Wirtschaftspädagogik – online*, 26, 1–21. http://www.bwpat.de/ausgabe26/fischer_etal_bwpat26.pdf
- Fleishman, E. A., & Quaintance, M. K. (1984). *Taxonomies of human performance. The description of human tasks*. Academic Press.
- Frieling, E., Kauffeld, S., & Grote, S. (2003). Teiltätigkeitslisten als Methode der Kompetenzeinschätzung. In J. Erpenbeck & L. von Rosenstiel (Eds.). (2003). *Handbuch Kompetenzmessung* (pp. 169–184). Schäffer-Poeschel.
- German Vocational Act – Berufsbildungsgesetz. (2005). http://www.gesetze-im-internet.de/bundesrecht/bbig_2005/gesamt.pdf
- Köhn, D. (2017). *Sichtbarmachung von beruflichem Können. Untersucht anhand einer dokumentenbasierten Inhaltsanalyse am Beispiel des Tätigkeitsinventares von AiKomPass und des Ausbildungsrahmenplans für Elektroniker für Geräte und Systeme*. Karlsruhe Institute of Technology, Institute of Vocational and General Education. Master Thesis.
- OECD – Organisation for Economic Co-operation and Development. (2006). *New OECD Activity on recognition of non-formal and informal learning. Guidelines for country participation*. <http://www.oecd.org/edu/skills-beyond-school/recognitionofnon-formalandinformallearning-home.htm>
- Petersen, W. (2016). *ValNIL: „Validierung von non-formalem und informellem Lernen“ – berufspädagogische Untersuchungen zu funktionalen Entwicklungschancen einer erweiterten Anerkennungsperspektive in europäischen Erwerbstätigkeitssystemen*. Unpublished habilitation thesis, Karlsruhe Institute of Technology.
- Reinhold, M., Haasler, B., Howe, F., Kleiner, M., & Rauner, F. (2003). *Curriculum Design II: Entwickeln von Lernfeldern. Von beruflichen Arbeitsaufgaben zum Berufsbildungsplan*. Christiani.
- Statistisches Landesamt Baden-Württemberg (2023). *Sozialversicherungspflichtig Beschäftigte – Beschäftigte nach Abschluss und Nationalität*. <https://www.statistik-bw.de/Arbeit/Beschaeftigte/LRt0512.jsp>
- Valikom (n.d.). *Startseite*. <https://www.validierungsverfahren.de/startseite>

Biographical notes

Dr Martin Fischer is a retired professor for Vocational Education and Training at Karlsruhe Institute of Technology. At this University he was responsible for vocational teacher training. Research interests: Work process knowledge, vocational didactics, innovations in VET.

Gössling, B. (2023). Design principles for developing vocational skills of low-qualified adults. In C. Nägele, N. Kersh, & B. E. Stalder (Eds.), *Trends in vocational education and training research, Vol. VI. Proceedings of the European Conference on Educational Research (ECER), Vocational Education and Training Network (VETNET)* (pp. 129–139). <https://doi.org/10.5281/zenodo.8209056>

Design Principles for Developing Vocational Skills of Low-Qualified Adults

Gössling, Bernd

bernd.goessling@uibk.ac.at, University of Innsbruck

Abstract

Context: Adults with low or no formal qualifications in workplace preparation programs are considered a high-risk group. This raises the question of how vocational education and training can be changed to better address the needs of this group.

Approach: In a cross-case analysis, we, therefore, examined four training providers that are recognized as examples of good practice and studied which design principles are reflected in their work.

Findings: Based on an additional literature review, focus group interviews with trainers, and an analysis of implementation examples, we identified a set of 12 specific design principles.

Conclusion: The implementation of these principles can contribute to the further development of workplace preparation programs. Ongoing research indicates that this depends on sufficient resources, the work culture of the trainers, and cooperation with complementary social services and health care providers.

Keywords: design principles, vocational education and training, competency-based training, low-qualified adults, didactics

1 Introduction

Adults with low or no formal qualifications are at risk of losing their jobs or slipping into pre-carious employment. Upskilling can improve their situation and is becoming even more important due to increasing reskilling needs in response to the transformation of the world of work. However, prior research shows that low-qualified adults tend to participate less in continuing VET than better-educated individuals (Nieuwenhove & De Wever, 2022; Kruppe & Baumann, 2019; Müller & Wenzelmann, 2019). If they do participate in vocational training, their dropout rate is comparatively high (Baas & Philipps, 2019). And although already disadvantaged in terms of their education, the learning intentions of low-qualified workers can be below average (Kyndt et al., 2011).

Nevertheless, there are efforts in many countries to set up more workplace preparation programs to address urgent shortages of skilled workers. This is also the case in Austria, where the AMS - the Austrian labour office - finances competency-based VET programs for the unemployed as part of its active labour market policy. The aim of these programs is to ease the transition to employment, especially for those who are more likely than average to be affected by unemployment. This includes the group of low-skilled adults.



Often, these vocational education and training measures cannot achieve the purposes for which they were established. This leads to the question of how to design competency-based approaches to vocational education and training for low-qualified people. Therefore, the presented study aims to formulate a set of design principles to develop vocational competencies for the transition to the labour market.

2 Research Method

The didactic research project starts with an initial set of design principles based on a review of literature (including Gillen, 2013; Euler & Hahn, 2014; Weber & Hojnik, 2016). Design principles are defined as generalized educational concepts of medium range that have been practically proven. They are not educational technologies but require implementation efforts and independent decisions by the trainers. That means design principles serve as orientation for trainers (Gössling & Grunau, 2020; Euler, 2014).

The guiding assumption is to move away from teacher-centered types of education and training. Many low-qualified adults have had negative school experiences and therefore tend to reject school-like education. The design principles are meant to guide the way to competence-based education in contrast to teacher- and knowledge-centered education.

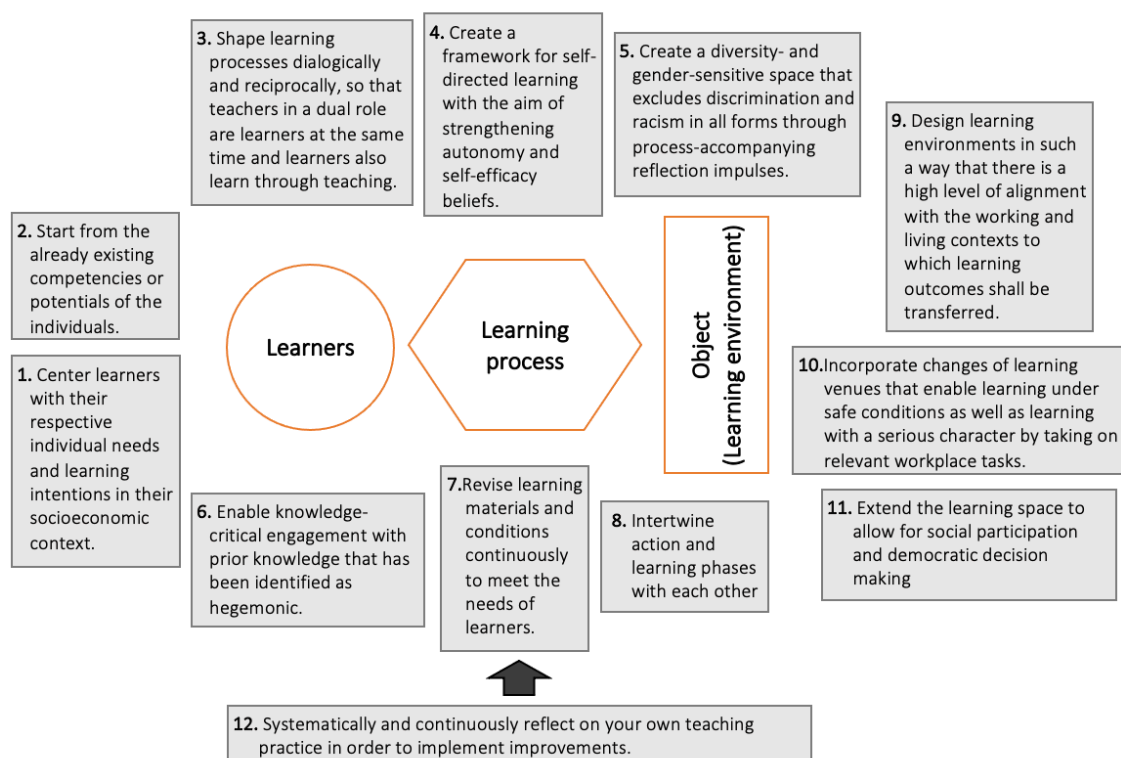
This is followed by a cross-case analysis that includes four vocational education and training providers that the labor office considered to be good practices. Focus groups with VET trainers of these providers were conducted first to revise and then revise design principles and second to gather implementation examples for the application of these design principles in educational practice. Case comparisons then reveal what it takes in different contexts to make competency-based education and training work.

3 Preliminary results and outlook

The study creates knowledge about the practice of competency-based training for the difficult-to-reach group of low-qualified adults from the perspective of the trainers involved. In this way, the gap between the theory of competency-based training and its implementation in practice is addressed. The cross-case analyses led to a set of 12 revised design principles and their implementation conditions (see Figure 1).

Figure 1

Set of design principles (Gössling et al., 2022, 58)



The cross-case analyses also lead to findings about the implementation conditions and the transferability of these basic principles. These results can be used for the development of VET programs targeted at the needs of low-qualified adults. Research on the feasibility of competence-based design principles continues.

References

- Baas, M., & Philipps, V. (2017). Über Ausbildung in Arbeit? Verläufe gering gebildeter Jugendlicher. In Forschungsverbund Sozioökonomische Berichterstattung (Eds.), *Berichterstattung zur sozioökonomischen Entwicklung in Deutschland. Exklusive Teilhabe - ungenutzte Chancen Dritter Bericht* (411–446). wbv Media. <https://doi.org/10.3278/6004498w012>
- Euler, D. (2014). Design-research – a paradigm under development. In D. Euler & P. F. E. Sloane (Eds.), *Design-based research. Beiheft 27 der Zeitschrift für Berufs- und Wirtschaftspädagogik (ZBW)* (15–44). Steiner.
- Euler, D., & Hahn, A. (2014). *Wirtschaftsdidaktik* (3., aktualisierte Aufl.). Haupt.
- Gillen, J. (2013). Kompetenzorientierung als didaktische Leitkategorie in der beruflichen Bildung. Ansatzpunkte für eine Systematik zur Verknüpfung curricularer und methodischer Aspekte. *bwp@ Berufs- und Wirtschaftspädagogik – online*, 24. http://www.bwpat.de/ausgabe24/gillen_bwpat24.pdf
- Gössling, B., Borbe, V., Hauser, L., & Thurrow, N. (2022). *Präzisierung und Entwicklung von Schlüsselkompetenzen in der beruflichen Aus- und Weiterbildung. Abschlussbericht des Kooperationsprojekts ‚Key Competencies‘ (KEYS) in Kooperation mit dem AMS Tirol*. Universität Innsbruck. <https://ams-forschungsnetzwerk.at/pub/13665>
- Gössling, B., & Grunau, J. (2020). Validation arrangements for formally low-qualified staff in geriatric care: The Design-based Research project KomBiA. *EDeR. Educational Design Research*, 4(2). <https://doi.org/10.15460/eder.4.2.1455>
- Kruppe, T., & Baumann, M. (2019). Weiterbildungsbeteiligung, formale Qualifikation, Kompetenzausstattung und Persönlichkeitsmerkmale. *IAB-Forschungsbericht*, 1/2019, 1–97. <http://hdl.handle.net/10419/204767>
- Kyndt, E., Govaerts, N., Dochy, F., & Baert, H. (2011). The learning intention of low-qualified employees: A key for participation in lifelong learning and continuous training. *Vocations and Learning*, 4(3), 211–229. <https://doi.org/10.1007/s12186-011-9058-5>

- Müller, N., & Wenzelmann, F. (2020). Berufliche Weiterbildung – Teilnahme und Abstinenz. *Zeitschrift für Weiterbildungsforschung*, 43(1), 47–73. <https://doi.org/10.1007/s40955-019-0141-0>
- Van Nieuwenhove, L., & De Wever, B. (2022). Why are low-educated adults underrepresented in adult education? Studying the role of educational background in expressing learning needs and barriers. *Studies in Continuing Education*, 44(1), 189–206. <https://doi.org/10.1080/0158037X.2020.1865299>
- Weber, F., & Hojnik, S. (2016). *Praxishandbuch Kompetenzorientierung. Theoretische Grundlagen und praktische Methoden eines kompetenzorientierten beruflichen Trainings*. Communicatio. https://www.ams-forschungsnetzwerk.at/downloadpub/AMS_PH_Kompetenzorientierung.pdf

Biographical notes

Dr Bernd Gössling is professor for Business Education with a special focus on research in Vocational Education and Training (VET) at the University of Innsbruck, Austria. His research interests include VET, design-based research and dual apprenticeship systems.

Grollmann, P., Bonoli, L., Fournier, L., Gonon, P., Markowitsch, J. & Tiemann, M. (2023). Symposium: (Comparing) vocational education – the neglected role of occupations. In C. Nägele, N. Kersh, & B. E. Stalder (Eds.), *Trends in vocational education and training research, Vol. VI. Proceedings of the European Conference on Educational Research (ECER), Vocational Education and Training Network (VETNET)* (pp. 133–139). <https://doi.org/10.5281/zenodo.8209060>

Symposium: (Comparing) Vocational Education – the Neglected Role of Occupations

Grollmann, Philipp

grollmann@bibb.de, Federal Institute for Vocational Education and Training, Bonn, Germany

Bonoli, Lorenzo

lorenzo.bonoli@hefp.swiss, Swiss Federal University of VET, Renens, Switzerland

Fournier, Lisa

lisa.fournier@bibb.de, Federal Institute for Vocational Education and Training, Bonn, Germany

Gonon, Philipp

gonon@ife.uzh.ch, University of Zürich, Switzerland

Markowitsch, Jörg

joerg.markowitsch@3s.co.at, 3s Unternehmensberatung, Vienna, Austria

Tiemann, Michael

tiemann@bibb.de, Federal Institute for Vocational Education and Training, Bonn, Germany

Abstract

Context: This symposium collects four papers that look at the relevance of the categories' vocation, occupation or profession for future developments in VET, for international comparisons and as a basic category of VET research.

Approach: On one hand, the term is the most significant denominator of the research field or discipline, on the other hand, one hardly sees any reflection on this terminology or a systematic discussion of its meaning. This argument weighs even more heavily when one looks at international comparative research on the topic. The repeatedly diagnosed relative insignificance of the concept of occupation in view of the developments in many vocational training systems and its significance for individual life courses is contrasted with the adherence to this term. This tension will be reflected and discussed based on experiences from different projects during the symposium.

Findings: Results from one large comparative European project, from a reflection and research on national reforms in VET in Switzerland and the analysis of interviews with high-level academic experts on digitalization all conclude that the concept of profession is still of great importance, but at the same time its validity is limited to certain work processes and objects or certain linguistic and cultural areas. However, the contributions are also based on different concepts of occupations and professionalism, which will be elaborated on in the discussion at the symposium.

Conclusion: In the last part of the symposium, the different concepts and findings will be placed in the model presented at the beginning and conclusions will be drawn for further development.



Keywords: international comparison, concepts of VET, vocation, occupation, profession

1 Comparing Vocational Education - the Neglected Role of Occupations – An introduction

Philipp Grollmann

(Federal Institute for Vocational Education and Training, Bonn, Germany)

This symposium collects four papers that look at relevant dimensions of vocational education and training (VET) for international comparisons. Papers will include conceptual considerations as well as empirical findings from different countries (Austria, Germany, Switzerland, France, the United Kingdom and the USA). Specific emphasis will be put on the concept of occupations (and related concepts such as vocation or profession) that is often neglected in comparative research on VET. Instead, recent comparisons have concentrated on the organisation of educational programmes and structures, the integration of general content into VET or mechanisms of systemic governance (e.g. Busemeyer & Trampusch, 2012; Nylund & Viro-lainen, 2019; or Pilz, 2016).

This type of governance research is, however, to a certain extent blind to questions that are directly focussing on other very relevant issues for educational research, such as the organization and practice of vocational teaching and learning in companies and schools or the subjective side of learning processes and its results. Whilst socio-cultural accounts of vocational and work-based learning and related concepts such as boundary crossing or the concept of tacit knowing have developed some significance in the international VET research discourse, they have only scarcely been tackled by comparative research in VET. This is particularly astonishing in view that they constitute particularities that make VET distinct from general or academic education and hence, are at the heart of vocational education (Cedefop, 2017).

On the one hand, (comparative) VET research has to start from the assumption that its subject is different from other forms or programmes of education and therefore needs a common concept of „occupation” or „vocation”; on the other hand, the concept of occupation is questioned repeatedly. Some of the most important reasons for this are the discussion about the decreasing importance of occupations in life histories with quite different jobs, the decreasing importance of occupations in increasingly liberalized and flexible labour markets and the disappearance of entire occupations due to the rapid development of digital technologies.

The first contribution will introduce a framework that was developed in two Cedefop projects over the last six years and that is intended to provide a frame of reference for the comparison of VET-systems and concepts. It integrates three perspectives on VET: an educational system perspective, a socio-economic perspective and an epistemological-pedagogical perspective. In accordance with the three perspectives the symposium will include considerations from different disciplines and empirical fields of research and reflect on the significance of „occupation” as an important parameter of VET research. This includes sociological, educational and economic considerations. At the end of each contribution findings from all the contributions will be related to the framework.

The second contribution looks at the development of occupation as the reference system for VET in a Swiss-German comparison and relates it to overall developments in the vocational education and training systems of the two countries.

The third contribution represents a look at changes relevant to VET from the socio-economic perspective and is based on insights and theoretical concepts from a number of interviews that were carried out with eminent academic experts from different countries and disciplines in the relation between rapid technological changes and the way how work is organised.

The last paper will analyse the significance of the concept of „occupation” and „occupational practice” for the comparison of VET and how this integrates into the general framework. Specific emphasis will be laid upon the role of „occupation” and „occupational practice” as a „tertium comparationis” in comparative research. Finally, a discussion advocating a psychological perspective on vocational education and „occupation” as a means of individual growth will round out the needed multidisciplinary view of „occupation” and VET.

References

- Busemeyer, M. R., & Trampusch, C. (2012). *The political economy of collective skill formation*. Oxford University Press.
- Cedefop (European Centre for the Development of Vocational Training). (2017). *The changing nature and role of vocational education and training in Europe. Volume 1, Conceptions of vocational education and training: An analytical framework*. Publications Office. <https://data.europa.eu/doi/10.2801/532605>
- Nylund, M., & Virolainen, M. (2019). Balancing ‘flexibility’ and ‘employability’: The changing role of general studies in the Finnish and Swedish VET curricula of the 1990s and 2010s. *European Educational Research Journal*, 18(3), 314–334. <https://doi.org/10.1177/1474904119830508>
- Pilz, Matthias. (2020). *Typologien in der international-vergleichenden Berufsbildungsforschung. Funktionen und ein neuer Ansatz*. <https://doi.org/10.25656/01:18825>

2 A New Framework for Comparing Vocational Education and Training (VET)

Jörg Markowitsch
(3s Unternehmensberatung, Vienna)

Comparative research on VET in Europe has taken on a new dimension as a result of the enlargements of the European Union and increased educational cooperation since the mid-1990s (Clarke et al., 2021). Especially due to the accession of Central and Eastern European countries to the European Union, the variety of systems to be considered as well as the intensity of research has increased massively in the last two decades (Tütlys et al., 2022). To manage this increasing complexity various VET typologies have been developed (for excellent overviews see for instance Rageth and Renold (2017), Gonon (2016) or Bosch (2016)). However, putting national VET systems into prefabricated boxes runs the risk of overlooking national specificities of VET and of reproducing cultural prejudices. Apart from that, many typologies focus on a very limited set of dimensions of comparison. More open systems for the analysis or descriptions of countries’ VET systems tend to be the exception. The paper presents a new framework for comparing VET building on previous conceptual frameworks in particular on works by Moodie (2008), Rojewski (2009) and Billett (2011) and uses design principles of the ‘morphological analysis’ (Zwicky, 1969).

The framework has been developed jointly by an interdisciplinary group of VET researchers over a seven-year period as part of Cedefop’s research on the future of VET. It essentially consists of 50 dimensions to analyse VET systems, as well as parts of them, structured according to three overlapping main perspectives: an epistemological and pedagogical perspective, an education system perspective, and a socio-economic or labour market perspective. It is expected that the research paper presenting the framework will be published in spring 2023. The presentation will focus on the methodological principles of the framework, illustrate various applications and provide an outlook on a possible new theory of comparative VET research.

References

- Billett, S. (2011). *Vocational Education - Purposes, Traditions and Prospects*. Springer. <https://doi.org/10.1007/978-94-007-1954-5>
- Bosch, G. (2016). Typologien nationaler Berufsbildungssysteme [Typologies of national VET systems]. *Zeitschrift für Berufs- und Wirtschaftspädagogik*, 112(1), 15-36.

- Clarke, L., Westerhuis, A., & Winch, C. (2021). Comparative VET European research since the 1980s: Accommodating changes in VET systems and labour markets. *Journal of Vocational Education & Training*, 73(2), 295-315.
- Gonon, P. (2016). Zur Dynamik und Typologie von Berufsbildungssystemen. Eine internationale Perspektive [On the Dynamic and typology of VET systems. An international perspective]. *Zeitschrift für Pädagogik*, 62(3), 307-322.
- Moodie, G. (2008). From vocational to higher education: an international perspective. Society for Research into Higher Education and Open University Press.
- Rageth, L. & Renold, U. (2019). The linkage between the education and employment systems: ideal types of vocational education and training programs. *Journal of Education Policy*, 35(4), 503–528. <https://doi.org/10.1080/02680939.2019.1605541>
- Rojewski, J. W. (2009). A conceptual framework for technical and vocational education and training. In R. Maclean & D. Wilson (Eds.), *International Handbook of Education for the Changing World of Work* (S. 19–39). Springer Netherlands. https://doi.org/10.1007/978-1-4020-5281-1_2
- Tütlys, V., Markowitsch, J., Pavlin, S., & Winterton, J. (Eds.). (2022). *Skill formation in Central and Eastern Europe*. Peter Lang.
- Zwicky, F. (1969). *Discovery, Invention, Research through the Morphological Approach*. Toronto: Macmillan.

3 „Occupation” as a neglected Category for VET Reforms

Philipp Gonon (Universität Zürich)

Lorenzo Bonoli (Eidgenössische Hochschule für Berufsbildung)

The development of the notion of occupation („Beruf”) as an organising principle of VET in Switzerland (and beyond) will be discussed. Specifically, dual apprenticeships, like in German-speaking countries and regions are closely linked to occupations. That is why in Germany and Switzerland around 230-320 different occupations are designed for learning and acquiring skills through VET. Specific organizations (in Germany employer and employee representatives and chambers, in Switzerland -interprofessional ad hoc-committees) are entitled to steer—together with firms, state and school representatives - the ongoing development and innovation of dual apprenticeships in VET.

Unlike other countries those intermediary bodies (Schriewer, 1986) – and not the state or schools – define the standards through occupations, which steer the educational part of practical work in firms. Occupations are the core references for firms, schools and the state.

In the following, we focus on Switzerland. Thus, professional associations play a dominant role in defining and shaping occupations and VET requirements and renewing the regulations for learning an occupation.

Although occupations – in times of globalization, technical changes and in the context of economic uncertainties, in short in the knowledge economy - are no longer stable concepts, nevertheless, they serve as the common reference for learning, general knowledge and acquiring specific skills. Also, the different learning programs, the organisation of competences and the targets, which have to be fulfilled are designed by the occupationally-based educational amendments (Bildungsverordnungen). Due to the fact of - globally-driven - rapid change but also the technical, i.e. digital transformation of society and economy in Switzerland there is an obligation to renew every of the 230 professions in a five-year period (Bürgi & Gonon, 2021).

Occupations reveal furthermore to be quite an important reference for all actors in the field regarding the reform of a national VET system as a whole. Although the concept of occupation is quite fluid, occupations are crucial for the further development of dual apprenticeships because they refer to work qualifications in the firm with educational standards, forwarded by professional organizations and state bodies. Insofar occupations are the backbone of the dual systems. These insights are also important for countries, which recently developed apprenticeships.

References

- Bürge, R., Eigenmann, P., & Gonon, P. (2022). Reshaping the role of professional associations and the federal state in Swiss vet: Ambiguous reactions to the knowledge economy. In G. Bonoli & P. Emmenegger (Eds.), *Collective skill formation in the knowledge economy* (S. 55–75). Oxford University Press. <https://doi.org/10.1093/oso/9780192866257.003.0003>
- Bürge, R. & Gonon, P. (2021). Varieties within a collective skill formation system: How VET governance in Switzerland is shaped by associations. *International Journal for Research in Vocational Education and Training*, 8(1), 46-64.
- Deißinger, T. (1998). *Beruflichkeit als „organisierendes Prinzip“ der deutschen Berufsausbildung*. Eusl-Verl.-Ges.
- Gonon, P. (2017). Renaissance der dualen Berufsbildung durch Modernisierung. In P. Schlögl, M. Stock, M. Moser, D. Schmid Kurz & F. Gramlinger (Eds.), *Berufsbildung – eine Renaissance?* (pp. 44-60). W. Bertelsmann. <https://doi.org/10.3278/6004552w044>
- Gonon, P. (2017). Beruflichkeit. *Berufsbildung. Zeitschrift für Theorie-Praxis-Dialog*, 71(164), 1.
- Gonon, P. (2016). Beruf und Profession im Kontext der Expansion der schweizerischen Berufsbildung. In T. Zimmermann, W. Jütte, & F. Horvath (Eds.), *Arenen der Weiterbildung* (pp. 190-199). hep Verlag.
- Kutscha, G. (1992). 'Entberuflichung' und 'Neue Beruflichkeit' – Thesen und Aspekte zur Modernisierung der Berufsbildung und ihrer Theorie. *Zeitschrift für Berufs- und Wirtschaftspädagogik* 88(7), 535-548.
- Schriewer, J. (1986). Intermediäre Instanzen, Selbstverwaltung und berufliche Ausbildungsstrukturen im historischen Vergleich. *Zeitschrift für Pädagogik*, 32, 69-90.

4 Theoretical Perspectives on Technological Change, Work and Occupations – Leading Academic Experts' Views

Lisa Fournier, Michael Tiemann
(Federal Institute for Vocational Education and Training, Bonn, Germany)

This contribution is based on the analysis of a series of interviews (see as an example Latour, 2018) with twelve leading academic researchers from France, the United Kingdom, Austria, the USA and Germany on the impact of digitalisation on the economy, work and society as a whole. The multiple perspectives expressed in these interviews constitute a widening of the discourse on the relationship between work and technology that can be made productive for the discussion on vocational education and training and the role of occupations.

The interviews are available online as approximately 25-minute videos and took place in 2018 and 2019. They broaden the view beyond the common thesis of the substitution of human labour by digital technological solutions to various considerations regarding the actors, effects and opportunities resulting from technological change.

The statements and present analyses are to be understood as theoretical markers of a strangely neglected field. Technical change is known to have an influence, but the mechanisms are seldomly explicated. They are also said to have an impact on occupations (see the economic substitution-idea (Frey & Osborne, 2017), but there, occupations are only seen as statistical, time-irrelevant concepts. Thus, the analysis of theoretical approaches should provide an insight into the effect of technologies on the structures of human-technology coexistence and their interdependencies, while it also points to very current specific conditions that are said to be capable of dissolving and altering even political and economic structures. This contribution to the symposium will be an extension to prior analysis of the interviews (Tiemann & Helmrich, 2019) with a designated look at the relevance of the different approaches to comparative work on VET and the role of the concept of occupation, theoretically and statistically.

First results indicate that a dichotomy of perspectives on the relevance of occupations prevails. Starting with two concepts of technological innovations in one there is the possibility for occupational roles of innovators (or tinkerers), in the other innovations are not explicitly brought about by specialists. While these two concepts can still be combined into an overarching model for technical innovation, the dichotomy between occupations becoming less relevant in increasingly differentiated and specialised societies on the one hand and occupations as continuously defining individuals and their roles and places in society do seem to be less easily

integrateable. What we can show is that an expert's or a field's view on the speed and depth of technological developments strongly influences which view they take regarding the future of occupations. Incremental changes in both, technology and occupational contents seem to be connected to occupations prevailing. And with this we can show the importance of how (and if) changes (in technologies) are mediated and brought about collaboratively for occupations, which is not just a function of varieties in capitalism.

References

- Frey, C. B., & Osborne, M. A. (2017). The future of employment: How susceptible are jobs to computerisation? *Technological Forecasting and Social Change*, 114, 254–280. <https://doi.org/10.1016/j.techfore.2016.08.019>
- Tiemann, M., & Helmrich, R. (2019). Auf dem Weg zu einer KI-Welt von morgen. Soziale, ökonomische und technologische Entwicklungen. *Berufsbildung in Wissenschaft und Praxis* 3, 19–22.
- Latour, B. (2018) 'Theory-interview on the relationship between societal and technological change', www.bibb.de/dokumente/pdf/a12_latour_kurz-transkript.pdf.

5 Occupations, Work Organisation and Occupational Practices – their Role in Comparative VET Research

Philipp Grollmann

(BIBB, Federal Institute for Vocational Education and Training, Germany)

This contribution is based on reflections on the further development and the application of the framework presented by Symposium Paper I. Specific emphasis will be laid upon the role of „occupation” and „occupational practice” as a „tertium comparationis” for comparative VET research. In an analysis of concepts of curriculum and comparative research in VET we found that the literature that in many cases does not refer explicitly to the notion of occupation or vocation. It only does so in an implicit way. Sometimes approaches refer to theory and practice, however, given the close connection between the knowledge and the practice itself, which is a genuine feature of VET, a simple theory-practice-divide is not useful (see also Dietzen, 2017, 2020).

Based on concepts and terms from the socio-cultural approach (Billett, 2017; Billett et al., 2018; Harteis, 2018) we examine if 'occupational practice' can serve as the major reference system for comparative VET. Concepts from this approach, such as situated knowledge, canonical occupational knowledge and vocational knowledge will be located within the framework for comparative VET. Situated knowledge is the knowledge that is required at certain workplaces or in specific organisations – the concept remains largely within the scope of the socio-economic perspective. Canonical occupational knowledge is the knowledge that is generally accepted as the knowledge required to practice a certain occupation and spans different perspectives from the framework. Situated and canonical occupational knowledge - can become 'vocational knowledge' by processes of learning, internalisation and identification located in the focus of the epistemological-pedagogical perspective.

In the contribution the benefits and limitations of making „occupational practice” the major reference for comparative research in VET will be discussed based on examples from the prior contributions and with reference to other concepts from VET research that were analysed in producing the framework for comparative research mentioned in the first contribution.

References

- Billett, S. (2017). Theorising occupational practice and its learning: Personal, institutional and brute factors. In P. Grootenboer, C. Edwards-Groves, & S. Choy (eds), *Practice theory perspectives of education and pedagogy* (pp. 67–86). Springer. <https://doi.org/10.1007/978-981-10-3130-4>
- Billett, S.; Harteis, Ch.; Gruber, H. (2018). Developing occupational expertise through everyday work activities

- and interactions. In K. A. Ericsson, N. Charness, P. J. Feltovich, & Robert R. Hoffman (Eds.), *The Cambridge handbook of expertise and expert performance* (pp. 105–126). Cambridge University Press .
- Dietzen, A. (2017). Knowledge Concepts in competence-based VET research perspectives on cognitivist and social-constructivist approaches. In M. Mulder (Ed.), *Competence-based vocational and professional education* (pp. 719–737). Springer.
- Dietzen, A. (2020). Implizites Wissen, Arbeitsvermögen und berufliche Handlungskompetenz. In R. Hermkes, G.-H. Neuweg , & T. Bonowski (Eds.), *Implizites Wissen. Berufs- und wirtschaftspädagogische Annäherungen* (pp. 87–107). wbv Media.

Biographical notes

Dr Lorenzo Bonoli is a professor at the Swiss federal university for VET, where he conducts research and teaches on the history and development of the Swiss education system as well as on international issues in this field.

Lisa Fournier works in the „Qualification, Occupational Integration, and Employment” division at the Federal Institute for Vocational Education and Training (BIBB) in Germany. Her research interests include occupational esteem and (the inheritance of) occupational status.

Dr Philipp Gonon is a professor em. at the University of Zürich, where he researches and teaches vocational pedagogy, history and theory of (vocational) education, quality assurance, program evaluation, as well as issues on international comparison in education.

Dr Philipp Grollmann is deputy head of the division „International VET Comparison, Research and Monitoring” at the Federal Institute for Vocational Education and Training (BIBB) in Germany. He looks back at 25 years of experience in European VET research

Dr Jörg Markowitsch studied mathematics and philosophy in Vienna. He is co-founder and managing partner of 3s, a Vienna - based Research and Consulting firm that researches and teaches on vocational and adult education and advises policy makers at national and EU level.

Dr Michael Tiemann is co-heading the division „Qualification, Occupational Integration, and Employment” at the Federal Institute for Vocational Education and Training (BIBB) in Germany. His research includes occupational content, technological change and knowledge work.

Lassnigg, L. (2023). Are we all exceptional? Structures of lifelong learning in comparative perspective. In C. Nägele, N. Kersh, & B. E. Stalder (Eds.), *Trends in vocational education and training research, Vol. VI. Proceedings of the European Conference on Educational Research (ECER), Vocational Education and Training Network (VETNET)* (pp. 140–148). <https://doi.org/10.5281/zenodo.8209066>

Are we All Exceptional? Structures of Lifelong Learning in Comparative Perspective

Lassnigg, Lorenz

lassnigg@ihs.ac.at, Institute for Advanced Studies (IHS), Vienna

Abstract

Context: This exploration was inspired by several attempts to understand the Austrian educational structures and results in a comparative context. The concept of „exceptionalism” that arises in several discourses and meanings was taken up, to reflect more systematically the various structural classifications, and the many aspects of diversity visible between these classifications. The reflections show that the available classifications include only very selective elements of educational structures, and thus make it difficult to deal with the complexities of these structures.

Approach: The conceptual approach starts with a tentative systematic of key elements of educational structures and an exploration of the possible variation of structures that is only considered in very selective ways in existing structural analyses. The limits of existing structural approaches appeared by trying to relate educational outcomes to expectations derived from these approaches. The alternative hypothesis of exceptionalism is applied to explain these anomalies.

Findings: The conceptual analysis shows a very wide room for structural diversity, when only a limited number of structural elements is considered; thus, the hypothesis of exceptionalism is more plausible than the hypothesis of narrowly defined structures or typologies. A set of empirical analyses has shown that results do not fit into the expectations formulated on basis of structural classifications. PIAAC competences do not comply to expectations based on welfare and education reform typologies. Similarly, the main expectations about advantages of Nordic or apprenticeship systems are not corroborated by empirical outcomes. Moreover, structural analyses show a high degree of structural diversity.

Conclusion: Research should be geared rather towards „possibility” in the sense of much more potential structural alternatives than conventionally assumed on basis of limited elements. In this sense, when a wider range of structural alternatives is under consideration, research and policy making might find a wider range of potential solutions to structural problems. Further research would need much more detailed data and information about structural elements, and more systematic and open search for structural patterns and exceptionalism.

Keywords: comparison, lifelong learning, education structures

1 Question: Exceptionalism vs. structural typologies

A look at comparative statistics gives Luxembourg an exceptional position (occasionally treated as a spike, not to distort estimations), so the question of exceptionalism is very plausible. In the literature the discourse about American Exceptionalism indicates a specific history and structure of education. The author was also tempted to coin the term ‘Austrian Exceptionalism’, because the Austrian educational structure shows very outstanding traits. Still strong influence



and state support of (Roman-Catholic) religious education institutions up till adult education; very early tracking at age ten in compulsory education and successful resistance against comprehensive school at secondary level; early start (age 15) and high participation in VET at upper secondary level; dualism of strong dual apprenticeship and full-time school in post-compulsory education; highly tracked upper-secondary education; long time persisting resistance to differentiation at tertiary level; late and slow establishment of non-university institutions; educational expansion through VET rather than higher education; strong linkage of higher level VET institutions to higher education; quite well-established highly differentiated non-state adult education; specific constellation of private schools/institutions (Lassnigg, 2016).

The (temporary) Finnish PISA-Miracle has also plausibly tempted some authors to speak about exceptionalism in the Nordic region. Another line of reasoning and analysis has emphasized the differences and variability of at first sight similar ‘types’ of countries or systems, e.g., the comparison of collective skills systems, or the debates about the Nordic model, or comparisons of nations within the U.K. (Busemeyer & Trampusch, 2011; Helms Jørgensen et al., 2015; Heikkinen & Lassnigg, 2015).

The alternative to exceptionalism can be seen in types of structures. The creation of structures of course always needs a kind of balance between conceptual reduction and empirical representation; however, the impression is that this balance is often distorted by a strong focus on the conceptual reduction to the disadvantage of the empirical representations. Mathias Pilz (2016) has comprehensively analysed typologies of VET that have been widely neglected in a more systematic manner by (empirical) comparative research. An important aspect of this analysis concerns the deep and complex embeddedness of VET into broader structures of education and the labour market, as well as stratification and industrial relations. This issue, of how to give more emphasis on the side of the empirical representations, is a main question behind the current paper. See some previous analysis concerning the structural relationships between vocational and higher education structures in Lassnigg and Vogtenhuber (2017).

2 Conceptual considerations: types of systems vs. idiosyncratic patchwork-assemblage

More systematic attempts by the author to find comprehensive structures of lifelong learning have failed to find some. Structures of lifelong learning are defined as structural combinations of the different parts and stages of education institutions from early to adult learning, including general and vocational education. Education research has mostly focused on certain stages, so institutional segmentations are mirrored in research. Powell and Solga (2010) have analysed these segmentations between VET and higher education in an exemplary way. Thus, familiar structural categories at the different stages are commonly used (e.g., institutional vs. family early education; comprehensive or tracked secondary education; more vocational or more general post-compulsory education; different structures of higher education; institutional structures of adult education are less analysed so far), however, not much attempts have been made so far to combine these structural categories at the different stages to comprehensive patterns (despite some ideas about that are quite common, and can to some extent be misleading, e.g., the combination of tracked secondary education and broad vocational education). Brunello and Checchi (2007) have argued that the effects of tracking have been analysed only in very selective manners at certain early stages of educational structures that do not reflect effects of overall structures.

Skills formation as a comprehensive process of lifelong learning is carried by individual trajectories through the overall education structure, with the different parts of the structure concurring in certain patterns as a result of complex incremental historical processes, generated by various practices of the various actors – thus the overall education structures cannot be understood as designed systems, but rather as idiosyncratic conglomerates of various elements, linked by various kinds of interfaces driven by distributed practices. Main elements are the different

kinds of institutions at the different stages of the overall structure, from the elementary (pre-primary) stage to the third cycle of higher education. Each stage can take different shapes (more uniform, or more diverse) and the interrelations between these elements can also be shaped differently, with different trajectories between similar institutions as well as similar trajectories between differing institutions. The most variety exists in VET, and the main point of the perspective taken here is that VET must not be understood as a separate alternative, but as a de facto integral element of the overall structure of skills formation which, however, can play its role in quite different ways.

Conceptually, exceptionalism might be seen as an alternative „working hypothesis“ to the idea of fixed overarching structures (or models) of education, that are in fact mostly only partial (e.g., compulsory education, secondary education, vocational education, higher education), and are seldom systematically related to each other (exception to some part the Blossfeld et al. 2016). VET structures are much more diverse than other levels of education, models are mostly reductive and standing aside of the overall structures (e.g. collective skills systems, the „dual system“, the community college...), moreover, VET is also most strongly influenced by external informal processes (firms). Structures of adult education are almost completely neglected as part of overall lifelong learning structures so far (the market metaphor is dominating, and information is mostly limited to – parts of – quantitative participation).

Exceptionalism is also based on the assumptions that (a) education structures emerged incrementally from originally unrelated starting points (university, apprenticeship, mass elementary school), and (b) formal education structures cannot not work on their own, but only by building on the informal processes that go on anyway. Both these assumptions are suppressed by the competing assumption of somehow pre-existing structures (that draw attention to some „inner logic“ of „systems“), that also tend to wash out signs of irregularity or anomaly. Based on exceptionalism the research task is not so much to identify structures and causally influential variables, but to fully understand, how an „exceptionalist“ overarching structure (e.g., in Austria or Luxemburg) works. This is also a (forgotten?) main idea of the early times of „comparative education“, when the look abroad was geared not primarily to finding structures or causal variables, but to getting new perspectives on the own structure.

3 Methodology, Methods, Research Instruments and Sources Used

Conceptually, some thought experiment can show the possible structural variety in education. To explore the dimensions of the potential space of the different kinds of elements can be identified that are in consequence creating the educational trajectories in specific educational structures. The following list gives a tentative inventory of main kinds of elements in overall structures of lifelong learning, that are in fact combined differently in different structures. It must be considered that empirical realisations of lifelong learning (opportunity) structures in (national or regional) space and time enact certain overall configurations of structural elements that can also change over time. Thus, a population at a certain point of time might have experienced various structural configurations in their education and lifelong learning trajectories. A further point is that the elements do not only establish static topological structures, but might be inter-actively related to each other in the course of the trajectories (i.e. practices in previous configurations by previous generations might influence practices in later configurations)

To illustrate the variety of potential configurations a list of elements can be provided:

1. institutionalization of elementary education and its relationship to family and welfare structures
2. begin and length of primary education
3. linkage of primary to secondary education
4. shape of lower secondary education (e.g., comprehensive, tracked, differentiated)

5. linkage of compulsory (lower secondary) to post-compulsory (upper-secondary) education
6. shape of post-compulsory education, begin, differentiation, general-vocational orientation
7. shape of VET within post-compulsory / upper-post-secondary or tertiary education (VET typology)
8. progression and participation in post-compulsory education, amount of (non)-participation/exit, early leavers
9. linkage of secondary to tertiary education
10. shape of tertiary education (institutional differentiation, participation, exit-reentry)
11. VET structures in tertiary education
12. opportunities of adult/further education (formal structures, second chance, participation).

The combination of (at least) these elements and their interaction with the societal context constitute the formal part of skills formation of adults; opportunities for informal learning that substantially interact with the formal structures can also take certain patterns, which are mostly neglected and unknown in such kinds of structural analyses. Thus, even if all formal elements would be known and identified, essential elements of the complete structures of lifelong learning still would be missing for full understanding.

To carry on the thought experiment about the diversity of structures the above listed twelve dimensions can be categorized; if only three categories for each dimension (in fact much more categories might be needed empirically) are assumed, a space of $3 \times 3 \times 3 \times 3 \times 3 \times 3 \times 3 \times 3 \times 3 \times 3 \times 3 \times 3 = 531.441$ cells emerges for the potential space of variability of education or lifelong learning structures. In this thought experiment, each new dimension would add three further potential structural characteristics that must not necessarily be determined by the earlier ones (if only two categories for each dimension are assumed, a potential space of 4.096 cells is reached); this gives an idea of the potential variability of lifelong learning structures.

Two further aspects can be considered here concerning the empirical identification of structures. First, the available comparative information about structural aspects only includes some part of the twelve dimensions – thus comparative information about the full structures of lifelong learning is simply not available. Second, the potential space allows for much more diversity than actual realisations exist. Only about 150-200 potential realisations (in terms of nations, or systems in world bank data) are found globally, and around 50-100 empirical data realisations are available in OECD-PISA data; among early PIAAC participants only around 30 realisations are available about wider spaces of lifelong learning. These two restrictions, lack of information and small number of cases limits the room for analysis and testing the effects of structural configurations. In effect, empirical analyses based on limited information and a limited number of cases might produce „structural evidence” that is biased by these limitations and systematically underestimates the „real” structural diversity. The problem of limited information can be illustrated by the evidence from early comparative research about outcomes/competences (e.g., PISA), that empirical results might depend on the selection of countries involved in the analysis, leading to the suggestion to include always the maximum available number of countries; the analysis shifted from aggregate country comparisons to the analysis of individual data, that mostly do not include enough „systems characteristics” to make structural comparisons (e.g., Fuchs & Wößmann, 2004).

What consequences might follow from the sketched thought experiment? First, some more in-depth questions can be derived that relate somewhat to the concepts of „Wirklichkeitssinn and Möglichkeitssinn” by the well-known Austrian writer Robert Musil (that is still considered in philosophical discourses) or the concept of „possibilism” as a method/approach ascribed to the scientific work of Albert O. Hirschmann (Lepenes, 2008): what does the high potential

diversity mean for empirical analyses? do the realised vs. non-realised structures say anything of importance? why not think about the emergence or creation of a new non-existing combination of elements? what can be inferred from the existing realisations to the newly emerged/created form? How far does the logic of comparisons and modelling based on existing structures inherently point towards convergence (transfer, make it like others) or towards reinforcing ongoing trends (league tables); an example of this narrowing down trend in comparison without considering the complexity of structures is the changing positioning of Germany with its „exceptional” dual apprenticeship system from a kind of „backward underdog” in times of appreciated tertiary expansion towards a paradigmatic good example of competency development and economic and social integration in more recent times of crisis and transition. Finally, the question might be asked for econometric modelling, how much the results are determined by (deviations from) „average structures” based on existing (included) realisations which, however, paradoxically in fact do not exist in this form in reality?

Some possibility for testing the structural vs. assemblage hypotheses can be found by looking at the variability among expected similar groups of countries (systems), based on, e.g., economic structure (income level), common history/politics/culture, varieties of capitalism groups, welfare models, or stylized educational structures (e.g., comprehensive reform, tertiary massification, collective skills formation types). Some examples of such analyses are illustrated by the following attempts by the author and colleagues.

4 Results

4.1 Age-specific profiles of PIAAC-competences in selected countries of different types of welfare and education reform

A first attempt to explore similarities between typical national systems was made by an in-depth study about age-specific patterns of competence levels and distributions in the adult population measured in the first round of PIAAC (Lassnigg & Vogtenhuber, 2014, 2016). The idea was, that the competences of the current population mirror the changes in education over time. Country cases from different types of welfare capitalism were selected that have experienced different trajectories of education reform during the decades in which the current population completed education. Nordic countries (Denmark, Finland, Sweden), and liberal countries (Canada, United Kingdom, United States) were compared to continental countries (Belgium, Germany, Netherlands, and Austria). Beside the different welfare types, these countries have experienced different „big” education reforms, comprehensive reforms during the 1960s/70s in Nordic countries, neoliberal deregulation and privatization reforms during 1980s/90s in liberal countries, and grossly institutional stability of tracked structures in continental countries.

The question was whether the three groups of countries would show characteristic profiles of competence levels and competence distribution/inequality in literacy and numeracy according to their welfare and reform types. The empirical results do not show typical patterns, rather they point to indications of „exceptional” cases within groups. Finland as the only country with a consequent comprehensive long term reform process shows the best scores at both dimensions, high scores and low inequality (different from other Nordic countries); the US and UK as protagonists of neoliberal policies show the worst results, low scores and high inequality (with the US also showing some decline of inequality). The continental group also shows diverse patterns, with the Netherlands scoring better or equal to the Nordic countries, and the most sharply tracked system of Austria – against expectations – scoring low at inequality with a better-than-expected math level (the unexpected Austrian results are corroborated by other analyses focusing on inequality patterns).

4.2 Comparisons of Nordic to apprenticeship countries by youth unemployment, background effects on PISA scores, and PIAAC scores/inequality

Another attempt to identify structural patterns compares Nordic to apprenticeship and continental countries by commonly held expectations about advantages of the respective structures, namely, to reduce youth unemployment in apprenticeship countries, and to reduce parents' background effects on achievement in Nordic countries (this background effect is particularly expected to be high in tracked systems). Two data bases are used for this comparison, for the comparison of youth unemployment a table in the OECD-Education-at-a-Glance-EAG-indicators that combines the categories of education, employment, unemployment and out-of-labour-force, allowing for combinations of these categories (and identifying the neither-in-education-nor-employment-NEETs group). In contrast to commonly used categories, this data show not only the clearly distinct categories of young people in education, employment or unemployment, but also the combinations of education and employment (that extends the formal apprenticeship by other forms of combining education and work, e.g., variants of part-time work), and of combining education and unemployment (meaning that young people in education are seeking employment, maybe beside education). The table at the time of analysis made a distinction of the 15-19-years (teens) and the 20-24-years age group, that gives an indication about the dynamic among young people (more currently, this table in the EAG-indicators has omitted the quite informative age distinction). For the comparison of the background effect on achievement an average of all PISA-waves was calculated that shows the combined PISA-score of all domains by two categories of parental background (low educated: ISCED2 and high educated: ISCED5/6).

Stylised comparisons have been calculated for groups of Nordic (Denmark, Finland, Norway, Sweden) and continental countries (Belgium, Germany, Netherlands, Austria, completed by Switzerland); the United Kingdom is included as liberal contrasting case, and apprenticeship countries (Germany, Austria, Switzerland) are considered also as a separate group (Lassnigg, 2020). Overall, the comparison shows considerable diversity within the country groups, and much less than expected country group differences at all dimensions. Some highlighted empirical results are:

- On the side of education, the combination of education and employment makes substantial proportions in addition to formal apprenticeship among young people, particularly in the teens-age group (in the Netherlands and Denmark this combination is particularly high); if this combination is considered the relation of young people to employment does not differ so much between the country groups.
- On the side of unemployment, a difference between the country groups is made mainly by the combined category of education and unemployment, this combination is higher in Nordic countries; however, youth unemployment in its „pure” form (without combination) is quite similar in the three country groups.
- Concerning the relation of parental education to PISA-scores the continental countries show quite similar results (Netherlands deviating a bit positively, Austria negatively, both a little „exceptional”), among Nordic countries a marked difference exists between markedly favourable results of Finland („exceptional”) vs. average results of other countries. The overly rough indicators point to slightly above average results in continental countries for both groups of parental education, and slightly contrasting results in Nordic and apprenticeship countries: in Nordic countries low educated background is related to slightly above average results and high educated background only to average results; in apprenticeship countries the pattern is reverse, with above average results with high educated background and average results with low educated background. In effect, inequality between the two background groups measured by these rough aggregate measures is average in continental countries, slightly below

average in Nordic countries (at the expense of the high educated background), and very slightly above average in apprenticeship countries (with „exceptionally” high inequality in Austria).

In sum, the expectations about the country-system types are partly fulfilled with inequality (the tracked continental systems do not show negative but average results), but not fulfilled with youth unemployment. Moreover, the average differences are small, and marked differences within groups exist. Remarkable characteristics can be found with these indicators in half of the selected countries: Finland and Netherlands show good results with low educated background and low inequality; the Netherlands and Denmark show an „exceptional” high proportion of young people in the combination of education and employment; in Sweden is unemployment combined with education and in Belgium „pure” unemployment higher than in other countries, and in Austria the PISA results with low education background are „exceptionally” below average leading to „exceptionally high inequality.

4.3 Some observations about wider educational structures: (secondary) VET and tertiary education, dynamic by generations.

The comparative empirical identification of education structures is difficult because of lack of information about main elements. Sources are OECD-indicators about current participation in some educational sectors that gives some „flow”-information about how the „stock” of the population is complemented and renewed – this current participation does not give information about the educational structure of the „stock” of the population. The latter can be derived in comparative ways from the PIAAC data. In addition, PISA gives some information about tracking within institutional sectors. Combining these sources allows to gain some indications about parts of overall education structures; adult education is still not included in this information. Comparison of age groups within the PIAAC population gives some indication about the dynamic of structures.

The three groups of countries show much overlap and some characteristic patterns: continental countries low tertiary education and high secondary VET; Nordic countries medium tertiary education and low to medium secondary VET; liberal countries high tertiary education and low to medium secondary education and low VET. Tracking is difficult to identify, with two different forms, institutional tracking and „hidden” tracking by different kinds of groupings by achievement. Liberal and Nordic countries show low degrees of institutional tracking, but high or medium levels of hidden tracking (visible in PISA data).

Movements between older and younger generations show a reduction of low educated and shifts towards secondary and tertiary education; strong VET countries move towards tertiary education, some combined with stable secondary education, others with reduction of secondary education; weaker VET countries move towards tertiary education and show less secondary education, but not necessarily less VET.

A closer inspection of structural patterns gives results that do not match systemic expectations:

- VET does not reduce low education
- an increase of tertiary education does not reduce VET
- the degree of tracking is related to VET in complicated manner, early tracking is unrelated to VET, „hidden tracking“ is slightly negative related to VET, but slightly positive to tertiary education

Taking the indications together, two complex patterns arise that point to a two-dimensional classification: (1) tracking and the proportion of VET: a high proportion of VET is related to early tracking, and early tracking is also related to low-medium VET; (2) tracking and expansion of tertiary education: medium tracking is related to expansive tertiary as well as to moderate tertiary development. In sum very mixed groups of countries show similar structural

development that is unrelated to PIAAC competences and might reinforce the hypothesis of exceptionalism.

5 Conclusions

Politics and policy hangs in several ways between these structural issues; it always has to deal with a specific structure within the overall contingency space, de facto without knowing where in this space the actual empirical realization is really situated; in addition, practical issues are relevant, e.g., how much can a policy be expected to work in a systemic way/path, or is it unsystematically distributed somewhere between the different elements? (An example for such problems might be the current preoccupation with „higher VET” or with „hybridity”). Is it possible to sufficiently identify favourable/unfavourable structural aspects? How much is the overall dynamic produced by elements beyond the reach of policy and politics? Etc.

If this account is true, it might have quite strong consequences for comparative statistical analyses because they (implicitly) tend to compare individual countries to some kind of average structures. If such an average structure does not exist anywhere, however, what do the coefficients tell us? For comparative analysis this kind of argument might accentuate again the contrasting perspectives of its purpose (which seem a bit forgotten with the big wave of comparative modelling), whether it can lead to generalized conclusions or advice of how to develop a national policy in line with some trends or findings about structures, or whether it can rather bring new perspectives from outside to the own idiosyncratic structure.

The conceptualization and explorative analysis lead to a set of tentative conclusions/propositions:

1. The combination of structural parts/elements to a comprehensive structure gives many degrees of freedom for realisations in a wide potential array of patterns, unless certain constraining successive patterns would exist from one educational stage to another (the discourse about structures often assumes such patterns for simplification, e.g., early selection/tracking, vocational participation, tertiary participation). Distributed governance structures for different educational sectors, as well as rising inclusion/participation in education increase the potential array for diverse structures; thus, how the overall complex structure of lifelong learning evolves is an empirical question, including structural elements and their distribution enacted through participation patterns.
2. The observation of education structures depends on their change/stability over time; the stock-of-population structure at a certain point can be easily observed, if there is no or only small change over time; otherwise the current stock-population-structure will be a patchwork of different successive time dependent observations by generations (cohorts) that have moved through the structure in certain dynamics; thus the overall formation of competences in a population stock at a certain point in time might be the product of different (past) structures, which are difficult/impossible to entangle ex-post; in comparative education elaborate empirical information across a wider array of countries is rather recent, thus different (past) structures that have produced the current stock are difficult (or impossible) to identify empirically.
3. The systematic comparative analysis of effects of structures/elements is related to the systemic vs. patchwork duality, as description/modelling by quantitative data involves the comparison of the country-observations to an artificial „average structure” implicit in the calculating model – if many real patterns (implicitly) included in the calculation differ from this artificial average structure, the results might be artificial (concerns parametric and non-parametric approaches). The necessity and propensity of conceptual simplification towards „models” might reinforce such artificial structures that do not exist. In the choice between exceptionalism and structural typologies some basic questions arise: if in reality distinct idiosyncratic patterns exist behind a superficial „average structure”, which methods of identification and comparison

would apply? How can an assemblage-patchwork structure vs. a systemic ('parametric') structure be identified methodically?

References

- Brunello, G., & Checchi, D. (2007). Does school tracking affect equality of opportunity? New international evidence. *Economic Policy*, 22(52), 781-861. <https://www.jstor.org/stable/4502215>
- Busemeyer, M. R., & Trampusch, C. (Eds.) (2011). *The political economy of collective skill formation*. Oxford University Press.
- Blossfeld, H.-P., Buchholz, S., Skopek, J., & Triventi, M. (Eds.). (2016). *Models of secondary education and social inequality: An international comparison*. Elgar.
- Fuchs, T., & Wößmann, L. (2004). What accounts for international differences in student performance? A re-examination using PISA data. Ifo-paper (March 24) Online: <https://www.oecd.org/education/school/programmeforinternationalstudentassessmentpisa/33680685.pdf>
- Heikkinen, A., & Lassnigg, L. (Eds.) (2015). *Myths and brands in vocational education*. Cambridge Scholars.
- Helms Jørgensen, C., Olsen, O. J., & Persson Thunqvist, D. (Eds.) (2018). *Vocational education in the Nordic countries. Learning from diversity*. Routledge.
- Lassnigg, Lorenz (2016) „Muddling Through“ once again - the long term development of the dualistic Austrian VET system. In E. Berner, & P. Gonon (Eds.), *History of vocational education and training in Europe. Cases, concepts and challenges* (pp. 125-145). Peter Lang. DOI: 10.3726/978-3-0343-2354-3.
- Lassnigg, L., & Vogtenhuber, S. (2014). Das österreichische Modell der Formation von Kompetenzen im Vergleich. In Statistik Austria (Ed.), *Schlüsselkompetenzen von Erwachsenen – Vertiefende Analysen der PIAAC-Erhebung 2011/12* (pp. 49-79). Statistics Austria.
- Lassnigg, L., & Vogtenhuber, S. (2016). Tracking, vocational education (VET) and the quality-inequality nexus – results about policy choices in structures of skills formation. Contribution to „Third PIAAC International Conference“ 6-8 November 2016, Madrid. Paper: <http://www.equi.at/dateien/piaac-madrid-draft.pdf>; Presentation: <http://www.equi.at/dateien/piaac-madrid-pdf.pdf>
- Lassnigg, L., & Vogtenhuber, S. (2017), VET producing second class citizens? Comparative analyses of the VET and tertiary education nexus. In F. Marhuenda-Fluixá (Ed.), *Vocational education beyond skills formation. VET between civic, industrial and market tensions* (pp. 411-434. Peter Lang.
- Lassnigg, L. (2020). Different structures, different results? Continental and Nordic education structures compared. In L. Moreno Herrera, M. Teräs, & P. Gougoulakis, Petros (Eds.), *Policies & Partnership with the World of Work – National and Cross-National Perspectives* (pp. 233-279) Premiss.
- Pilz, M. (2016) Typologies in comparative vocational education: Existing models and a new approach. *Vocations and Learning*, 9, 295–314.
- Powell, J. J. W., & Solga, H. (2010). Analyzing the nexus of higher education and vocational training in Europe: A comparative-institutional framework. *Studies in Higher Education*, 35(6), 705-721. DOI: 10.1080/03075070903295829

Biographical notes

Dr Lorenz Lassnigg is senior researcher at the Institute for Advanced Studies (IHS), Vienna (www.ihs.ac.at), research group Education and Employment (equi; <https://www.ihs.ac.at/ru/education-and-employment/>), he works about education policy, governance, lifelong learning.

Moodie, G., & Wheelahan, L. (2023). Double symposium on diversity in the social role of colleges. In C. Nägele, N. Kersh, & B. E. Stalder (Eds.), *Trends in vocational education and training research, Vol. VI. Proceedings of the European Conference on Educational Research (ECER), Vocational Education and Training Network (VETNET)* (pp. 149–156). <https://doi.org/10.5281/zenodo.8209072>

Double Symposium on Diversity in the Social Role of Colleges

Moodie, Gavin

gavin.moodie@utoronto.ca, University of Toronto

Wheelahan, Leesa

leesa.wheelahan@utoronto.ca, University of Toronto

Abstract

Context: This provides background to a project investigating the social role of vocational colleges in several jurisdictions.

Approach: The paper reports findings from the literature, 11 seminars in a series on the social role of colleges, and abstracts submitted for the double symposium.

Findings: The role colleges play is not as well understood or theorised as is the role of universities and schools, and this matters because colleges are vital for the well-being of their local communities. They support their regions and communities in many ways that are not prominent beyond immediate participants who have first-hand experiences of the roles colleges play. There is considerable diversity in colleges' social roles, but they have included equity, service learning, education extension services, work extensions services, cultural enrichment, community development or engagement, and local and regional development.

Conclusion: All post-secondary organisations including colleges share educational, occupational, and social roles, although these roles may have different emphases in different organisations and in different programs of different orientations and levels. Clearly much more work is needed to develop a shared understanding of colleges and their social role, which we propose be explored in five key research questions.

Keywords: vocational colleges, social role, regional role, international comparisons

1 Overview

This double symposium explores the important role that vocational colleges and similar types of institutions play in supporting social, educational, cultural and economic development in their local communities and regions. However, the ways in which they do so differ in different countries and this symposium includes diverse contributions from very different systems.

The domain of this symposium is the second vocationally oriented tier of post school education. This tier may offer other programs, but its key mission includes offering short-cycle tertiary education of about two years' duration with a vocational / professional orientation, classified in the International Standard Classification of Education ISCED 2011 as category 55 short-cycle tertiary vocational education (UNESCO Institute for Statistics, 2012, pp. 48-50).

The symposium comprised six presentations:

Leesa Wheelahan and Gavin Moodie: What do colleges do and why do they matter? Thinking about the role of colleges as local actors and comparing Australia and Canada;

Gareth Parry: On the roles and relations of further education colleges in England;

Maarit Virolainen: The Finnish UAS: Towards enhancing regional and national collaboration.



Pauline David: Vocational routes in France: The difficult articulation between pre-bac and post-bac;
 Silvia Annen: Academization, hybrid qualifications and skills shortage – competition and complementarity between vocational and higher education in Germany; and
 Stephanie Matseleng Allais: When bureaucracy combines with quasi-privatization: The complexity of institutional forms of vocational colleges in South Africa.

2 The institutionalisation of universities

Streeck and Thelen (2005, p. 9) elaborate institutions as sociological constructs: collectively enforced expectations of the behaviour of specified categories of actors or the performance of certain activities. These are distinguished from organisations, such as corporations. But organisations may become institutionalised:

We suggest that organizations come to be regarded as institutions to the extent that their existence and operation become in a specific way publicly guaranteed and privileged, by becoming backed up by societal norms and the enforcement capacities related to them (Streeck & Thelen, 2005, p. 12).

Universities as physical organisations embody the concept or the idea of the university as a sociological institution. The modern institutionalisation of the university has been shaped prominently in different forms by Newman (1852/2008), von Humboldt (1809/1970), Flexner (1930/1968) and Kerr (1963). The sociological institution of the university accords substantial historical and global meaning and standing to ‘categories such as student, professor, university, or graduate, or of topics such as physics or literature’ (Meyer et al., 2007, p. 187). This is despite universities’ organisational characteristics being ‘quite variable across national boundaries, and sometimes across strata or category within national states’ (Meyer et al., 2007, p. 195).

Universities’ service role has also been described as their civic role (Talloires Network of Engaged Universities, 2005) and also as their third mission. Compagnucci and Spigarelli (2020, pp. 5-6) argue that ‘the service(s) provided by the university to society, above and beyond teaching and research’ are the third mission of the university which ‘seek(s) to contribute to the social, cultural and economic development of communities’. Barker (2004, pp. 128-132) builds on Boyer’s (1990, 1996) scholarship of engagement to argue that the scholarship of engagement is open to the public, participatory, builds community partnerships, creates public information networks, and develops civic literacy.

Following the USA universities’ presidents’ declaration on the civic responsibility of higher education (Campus Compact, 2009) the Carnegie Foundation developed an elective community engagement classification of higher education organisations (Saltmarsh & Johnson, 2018, p. 2; 2020, p. 105). The Carnegie Foundation elaborates community engagement thus:

Community engagement describes collaboration between institutions of higher education and their larger communities (local, regional/state, national, global) for the mutually beneficial exchange of knowledge and resources in a context of partnership and reciprocity. The purpose of community engagement is the partnership of college and university knowledge and resources with those of the public and private sectors to enrich scholarship, research, and creative activity; enhance curriculum, teaching, and learning; prepare educated, engaged citizens; strengthen democratic values and civic responsibility; address critical societal issues; and contribute to the public good. (American Council on Education, 2023a)

The elective classification has been applied by 9 Irish organisations, 16 Canadian organisations including 1 community college, and 9 Australian universities (American Council on Education, 2023b). Of the 357 organisations which have gained the Carnegie community engagement

classification 15 have ‘community college’ in their name (Carnegie Foundation for the Advancement of Teaching, 2020).

Australian governments have sought to apply the concept of community service obligations to public institutes of technical and further education (House of Representatives Standing Committee on Education and Employment, 2014), but this has been criticised as being too narrow a conception of colleges’ public value (Zoellner, 2019).

In contrast, colleges are ‘categorically demarcated’ from universities and located closer to production to prepare graduates for specific work roles (Meyer et al., 2007, pp. 207, 209). Unlike universities, colleges are ‘mainly local organizations justified by specific economic and political functions or shaped by particular historical legacies or power struggles’ (Meyer et al., 2007, p.210). There is no idea of the college as a sociological institution commonly understood over time and place.

Neither is there a shared understanding of the roles of colleges. Bailey (2002, p. 70) complained that English further education colleges developed in the 20th century without ‘a clear purpose, focus or status’ and Meier (2013, p. 3) observed that ‘There is a history of ambiguity, even confusion, regarding the mission and purposes of the colleges’ of the USA.

Levin (2000, p. 1) analysed discussion of the mission of USA community colleges into three tracks: curricular focus in three domains of academic, vocational, and remedial; individual and community development, individuals’ social and economic mobility, and social stratification and social reproduction; and educational and training roles as a pipeline to baccalaureates, preparation for jobs, ‘and as a place for potential success and failure in society’. To these Levin added the economic role of community colleges.

Some argue that colleges’ roles should be residual, to ‘undertake(s) everything not being taken care of elsewhere’ (Meier, 2013, p. 15). In the UK ‘the further education sector may be described as the „ragbag” into which are deposited courses not provided elsewhere’ (Times Higher Education Supplement, 1973, p. 1), and Parkes (1991, p. 42) described the UK’s further education sector as filling the gaps not filled by alternative sectors. Dennison and Gallagher (1986, p. 142) suggested that the term ‘college’ had become so imprecise in North America as to be almost meaningless.

Some argue that colleges have adopted too many missions in an attempt to ‘be all things to all people’ (Bailey & Averianova, 1998, p. 1), diverting resources from their preferred college mission (Desai, 2012, p. 112). This might be termed the Corinthians critique: ‘To the weak became I as weak, that I might gain the weak: I am made all things to all people, that I might by all means save some’ (Bible, King James version, 1 Corinthians 9:22).

Sometimes colleges seem to have multiple missions because what are presented as separate purposes (Grubb, 2003, p 11) or roles (Meier, 2013, p. 4) are better understood as different activities or programs contributing to the same broad purpose.

Meier (2013, p. 5) notes that ‘Some observers perceive frenetic activity and weak traditions as symptoms of an inadequately realized „institutionalization project” (DiMaggio, 1988)’. This paper seeks to strengthen colleges’ institutionalisation by building on the roles of further education developed over several iterations by our former colleague and friend the late Jim Gallacher (Gallacher, 2011; Gallacher et al., 2012; Gallacher & Reeve, 2019).

We propose that all post-secondary organisations including colleges share three roles, although these roles may have different emphases in different organisations and in different programs of different orientations and levels:

- Educational, to develop graduates’ and society’s understanding of theoretical, abstract knowledge;
- Occupational, to develop graduates’ individual and work groups’ collective productive capacity; and

- Social, to advance society, and social justice and inclusion (Moodie & Wheelahan, 2023, pp. 53, 67).

While the social role is well established for universities it is less well established for colleges. Indeed, Bailey and Averianova (1998, p. 16) note that:

Cohen and Brawer (1975) stated that the community college is not a house for independently functioning agents of community uplift but a school. „The colleges would do better to accept the idea of no growth and use the time to improve what they have. The repeated calls for a 'new mission' are a debilitating diversion“ (p. 164).

Since we were interested in developing an international understanding of the social role of colleges, we invited colleagues from 12 countries to reflect on the social role of colleges in their country. We gave colleagues a prompt of 240 words and invited them to present on the social role of colleges, leaving them to interpret ‘colleges’ and ‘social role’ as they considered most informative and relevant for their country.

As Grubb (2003, pp. 1, 5) observed, colleges are ‘are enormously varied, both within countries and among countries’. Some colleges have multiple purposes while others are specialised, and some are closely integrated with universities while others are sharply demarcated from them. Some colleges concentrate on upper level programs such as bachelors and masters, some concentrate on mid level programs such as associate degrees and diplomas, while others concentrate on certificates and other lower level programs (Grubb, 2003, p. 7).

We note some of these differences in the following, as they shape colleges’ social role. However, these organizational differences do not qualify our project to institutionalise the college, for as Meyer, Ramirez, Frank and Schofer (2007, p. 195) observe, the university is strongly institutionalised despite universities’ organisational characteristics being ‘quite variable’.

3 Sectors

Contributors identified as ‘colleges’ in their country very different types of organisations. The ‘colleges’ described in Finland, Germany and Switzerland were similar to academic universities in offering mostly upper level bachelors’ and masters’ degrees. Other countries’ ‘colleges’ had multiple purposes and levels. There was also a third group of ‘colleges’ with a strong vocational/professional orientation, many of which have deep historical traditions of vocational provision.

Ireland highlights these differences by describing two types of ‘colleges’. Further education and training colleges have antecedents to the late 19th century, but they offer only lower level certificates. Irish ‘colleges’ also may include technological universities which offer mostly upper level qualifications similar to Finish, German and Swiss colleges. But if both Ireland’s technological universities and its further education and training colleges are included in the analysis, might Finland, Germany and Switzerland also have lower level colleges that are of a similar level to Ireland’s further education and training colleges?

For example, Germany’s tertiary education does not include the very important contribution of apprenticeships to the formation of skills because they are not considered ‘tertiary’. So, for example, Germany and similar countries do not consider vocational schools – *Berufsschulen* – in its discussion of vocational colleges. Neither does Germany seem to have organisations devoted to offering short cycle tertiary education.

4 ‘Social role’

There are many understandings of ‘social role’ discussed by contributors and in the literature, some of which are enumerated below. These are offered as examples of colleges’ social roles rather than distinct types, since there is considerable overlap between them.

4.1 Equity

Perhaps the most widely adopted social role of colleges and education generally is to promote equity, both for individuals and for groups, both on campus and in the community. This was described explicitly by Bragg (2022), Parry (2022) and Wheelahan (2022) and implied by others. Often it is advanced as a responsibility of colleges not identified separately as a social role but incorporated within colleges’ core education and occupational development.

4.2 Service learning

Closely related is service-learning or community-engaged learning in which students undertake community projects as part of their educational program. It is prominent in the USA where it is defined as ‘a form of experiential education in which students engage in activities that address human and community needs together with structured opportunities for reflection designed to achieve desired learning outcomes’ (Jacoby, 1996, 2014, cited by Montana State University Center for Faculty Excellence, no date).

4.3 Education extension services

What might be called education extensions services includes extra-curricular activities on campus for students, and adult and community education offered on campus and in the community. Libraries contribute strongly to education extensions services. Also important though perhaps underdeveloped are organisations’ digital repositories of their publications which are open to the public.

4.4 Work extensions services

By extension, work extension services include helping students or members of the community improve their work or likelihood of gaining rewarding work. An interesting potential contribution of colleges to developing their communities’ capacity for rewarding work is to foster skills ecosystems which improve links between the development of the workforce and the development of the individual and collective capacities of organisations and businesses (Buchanan, 2006).

4.5 Cultural enrichment

Colleges enrich and develop the culture of their students and general community with exhibitions and performances on campus and in the community.

4.6 Community development or engagement

Colleges have long developed communities’ capacity to achieve common goals both in formal programs and by contributing directly to their communities. Farnell et al. (2020, p. 6) understand community engagement very broadly and to be specific to context: ‘context-specific: engagement activities depend significantly on the type of institution’. This has been understood very broadly and attracted renewed scholarly interest as developing ‘Social capital – broadly, social networks, the reciprocities that arise from them, and the value of these for achieving mutual goals’ (Schuller et al., 2000, p. 1).

4.7 Local and regional development

Post secondary education institutions also often have roles in local and regional development, which is commonly understood economically though of course it is much broader. Colleges increasingly undertake applied research, by working with local employers to improve products and processes, or social partners to incorporate new knowledge into work-place practices (Colleges & Institutes Canada, 2023).

5 Conclusion

This paper has given the background to the project seeking to examine and develop colleges' social role. We argued that all post-secondary organisations including colleges share educational, occupational, and social roles, although these roles may have different emphases in different organisations and in different programs of different orientations and levels.

Clearly much more work is needed to develop a shared understanding of colleges and their social role. We propose these key research questions:

- 1 What should college qualifications look like?
- 2 What can colleges do that universities and schools can't do?
- 3 What roles do colleges play in supporting local and regional economic, social and cultural development?
- 4 How will the work of occupations served by colleges change in 5, 10 and 15 years time? How should qualifications change?
- 5 How can we support college teachers as 'dual-professionals' – industry experts and expert teachers? (Wheelahan, 2022)

References

- American Council on Education. (2023a). The elective classification for community engagement. <https://carnegieclassifications.acenet.edu/elective-classifications/community-engagement/>
- American Council on Education. (2023b). About the international elective classifications. <https://carnegieclassifications.acenet.edu/elective-classifications/community-engagement/about-international/>
- Bailey, B. (2002). Further education. In R. Aldrich, (Ed.), *A century of education* (pp 54-74). RoutledgeFalmer.
- Bailey, T., & Averianova, I. (1998). Multiple missions of community colleges: Conflicting or complementary? Teachers College, Columbia University. <https://ccrc.tc.columbia.edu/publications/multiple-missions-conflicting-complementary.html>
- Baird, K. (2001). What is a community service obligation (CSO)? An analysis of the issues involved in identifying and accounting for CSOs within public sector organisations. *Australian Journal of Public Administration*, 60(4), 50-66.
- Barker, D. (2004). The scholarship of engagement: A taxonomy of five emerging practices. *Journal of Higher Education Outreach and Engagement*, 9(2), 123-137.
- Boyer, E. L. (1990). *Scholarship reconsidered: Priorities of the professoriate*. Princeton University Press, <https://eric.ed.gov/?id=ED326149>
- Boyer, E. L. (1996). The scholarship of engagement. *Bulletin of the American Academy of Arts and Sciences*, 49(7), 18-33.
- Bragg, D. (2022). What research on community college baccalaureates teaches us about systematic inequities in higher education. Presentation to seminar series on the social role of colleges 4 October 2022. Centre for the Study of Canadian and International Higher Education (CIHE) at the Ontario Institute for Studies in Education, University of Toronto, <https://www.oise.utoronto.ca/cihe/events/cihe-speaker-series/social-role-of-colleges/>
- Buchanan, J. (2006). From 'skill shortages' to decent work: The role of better skill ecosystems. Board of Vocational Education and Training, NSW, <https://www.voced.edu.au/content/ngv%3A18365>
- Campus Compact. (2009). Presidents' declaration on the civic responsibility of higher education, <https://compact.org/resources/presidents-declaration-on-the-civic-responsibility-of-higher-education>
- Carnegie Elective Classification for community engagement classified in 2020 + classified in 2015. <https://carnegieclassifications.acenet.edu/elective-classifications/community-engagement/>
- Cohen, A. M., & Brawer, F. B. (1975). College responses to community demands. Jossey-Bass.

- Colleges & Institutes Canada (2023). Member Showcase: <https://www.collegesinstitutes.ca/colleges-and-institutes-in-your-community/member-showcase/>
- Compagnucci, L., & Spigarelli, F. (2020). The third mission of the university: A systematic literature review on potentials and constraints. *Technological Forecasting and Social Change*, 161, 120284.
- Desai, S. A. (2012). Is comprehensiveness taking its toll on community colleges? An in-depth analysis of community colleges' missions and their effectiveness. *Community College Journal of Research and Practice*, 36(2), 111-121.
- Dennison, J. D., & Gallagher, P. (1986). *Canada's community college. A critical analysis*. University of British Columbia Press.
- Dimaggio, P. (1988). Interest and agency in institutional theory. In L. G. Zucker (Ed.), *Research on Institutional Patterns: Environment and Culture* (pp. 3-21). Ballinger Publishing Co.
- Farnell, T., Benneworth, P., Čulum Ilić, B., Seeber, M., Šćukanec Schmidt, N. (2020). *TEFCE Toolbox: An Institutional Self-Reflection Framework for Community Engagement in Higher Education*. Zagreb: Institute for the Development of Education, <https://www.tefce.eu/toolbox>
- Flexner, A. (1930/1968). The idea of a modern university. In *Universities: American, English, German* (pp. 3-36). Oxford University Press.
- Gallacher, J. (2011). *Enhancing the role of higher education in Scotland's colleges: A discussion paper*. Centre for Research in Lifelong Learning, Glasgow Caledonian University.
- Gallacher, J., Ingram, R., & Reeve, F. (2012). Are vocational qualifications vocational? In M. Pilz (Ed.), *The future of vocational education and training in a changing world*. VS Verlag für Sozialwissenschaften, Wiesbaden (pp. 381-401). https://doi.org/10.1007/978-3-531-18757-0_22
- Gallacher, J., & Reeve, F. (2019). New frontiers for college education: The challenges. In J. Gallacher & F. Reeve (Eds.), *New frontiers for college education. International perspectives* (pp. 3-18). Routledge.
- Grubb, W. N. (2003). The roles of tertiary colleges and institutes: Trade-offs in restructuring postsecondary education. Oecd, <https://www.oecd.org/education/skills-beyond-school/35757628.pdf>
- Hermann, G. D., Richardson, E., & Woodburne, G. J. (1976). *Trade and technical education. Principles and issues*. Cassell Australia.
- House of Representatives Standing Committee on Education and Employment. (2014). TAFE: An Australian asset. Report of the inquiry into TAFE and its operation. Parliament of the Commonwealth of Australia, https://www.aph.gov.au/Parliamentary_Business/Committees/House/Education_and_Employment/TAFE/Report
- Jacoby, B. (1996). *Service-learning in higher education: Concepts and practices. The Jossey-Bass Higher and Adult Education Series*. Jossey-Bass Publishers.
- Jacoby, B. (2014). *Service-learning essentials: Questions, answers, and lessons learned*. John Wiley & Sons.
- Kerr, C. (1963). Chapter 1: The idea of a multiversity. In *The uses of the university* (pp. 1-45). Harvard University Press.
- Levin, J. S. (2000). The revised institution: The community college mission at the end of the twentieth century. *Community College Review*, 28(2), 1-25.
- Livingstone, D. W. (Ed.). (2009). *Education & jobs: Exploring the gaps*. University of Toronto Press.
- Meier, K. (2013). Community college mission in historical perspective. In J. S. Levin & S. T. Kater (Eds.), *Understanding community colleges*. Routledge.
- Meyer, J. W., Ramirez, F. O., Frank, D. J., & Schofer, E. (2007). Higher education as an institution. In P. J. Gumpert (Ed.), *Sociology of higher education: Contexts and their contributions* (pp. 187-221). Baltimore: Johns Hopkins University Press.
- Montana State University Center for Faculty Excellence (no date). *What is service learning?* <https://www.montana.edu/facultyexcellence/about/committees/Servicelearningcommittee.html>
- Moodie, G., & Wheelahan, L. (2023). Human capital theory and its discontents. In G. Parry, M. Osborne, & P. Scott (Eds.), *Access, lifelong learning and education for all* (pp. 51-79). Palgrave Studies in Adult Education and Lifelong Learning. Palgrave Macmillan.
- Newman, J. H. (1852/2008). *The idea of a university defined and illustrated in nine discourses delivered to the Catholics of Dublin*. Project Gutenberg EBook 24526. <https://www.gutenberg.org/ebooks/24526>
- Parkes, D. (1991). Home thoughts from abroad: Diagnosis, prescription and prognosis for British vocational education and training. *European Journal of Education*, 26(1), 41-53.
- Parry, G. (2022). On the roles and relations of further education colleges in England. Presentation to seminar series on the social role of colleges 10 November 2022. Centre for the Study of Canadian and International Higher Education (CIHE) at the Ontario Institute for Studies in Education, University of Toronto, <https://www.oise.utoronto.ca/cihe/events/cihe-speaker-series/social-role-of-colleges/>
- Saltmarsh, J., & Johnson, M. B. (2018). An introduction to the elective Carnegie community engagement classification. In J. Saltmarsh, & M. B. Johnson (Eds.), *The elective Carnegie community engagement*

- classification: Constructing a successful application for first-time and re-classification applicants* (pp. 1-15). Stylus Publishing.
- Saltmarsh, J., & Johnson, M. (2020). Campus classification, identity, and change: The elective Carnegie classification for community engagement. *Journal of Higher Education Outreach and Engagement*, 24(3): 105-114. <https://openjournals.libs.uga.edu/jheoe/article/view/2513/2594>
- Schuller, T., Baron, S., & Field. (2000). Social capital: A review and critique. In S. Baron, J. Field, & T. Schuller (Eds.) *Social capital: Critical perspectives* (pp. 1-38). OUP Oxford.
- Streeck, W., & Thelen, K. (2005). Introduction: Institutional change in advanced political economies. In W. Streeck, & K. Thelen (Eds.), *Beyond continuity: Institutional change in advanced political economies* (pp. 1-39). Oxford University Press.
- Talloires Network of Engaged Universities. (2005). Talloires declaration on the civic roles and social responsibilities of higher education, <https://talloiresnetwork.tufts.edu/who-we-are/talloires-declaration/?c=7>
- Times Higher Education Supplement. (1973, February 2). Wearing of the green. Quoted in Hermann, Richardson and Woodburne (1976).
- UNESCO Institute for Statistics. (2012). International Standard Classification of Education ISCED 2011. UNESCO Institute for Statistics, <http://www.uis.unesco.org/Education/Pages/international-standard-classification-of-education.aspx>
- von Humboldt, W. (1809/1970). On the spirit and organisational framework of intellectual institutions in Berlin. *Minerva*, 8(2), 242-250.
- Wheelahan, L. (2022). What do colleges do and why do they matter? Thinking about the role of colleges as local actors. Presentation to seminar series on the social role of colleges, 1 June. Centre for the Study of Canadian and International Higher Education (CIHE) at the Ontario Institute for Studies in Education, University of Toronto, <https://www.oise.utoronto.ca/cihe/events/cihe-speaker-series/social-role-of-colleges/>
- Zoellner, D. (2019). Beyond community service obligations: The institutional logics and public value of TAFE. Discussion points presented during the TAFE Directors Australia convention plenary panel on ‘The power to change: where and how should TAFEs evolve?’ 4 September 2019, Brisbane, https://www.cdu.edu.au/sites/default/files/the-northern-institute/tda_2019_beyond_csos_tafes_institutional_logics_and_public_value.pdf

Biographical notes

Dr Gavin Moodie is an adjunct professor in the Department of Leadership, Higher, and Adult Education, of the Ontario Institute for Studies in Education at the University of Toronto.

Dr Leesa Wheelahan is a Professor, is the William G Davis Chair of Community College Leadership in the Department of Leadership, Higher, and Adult Education, of the Ontario Institute for Studies in Education at the University of Toronto.

Moreno-Morilla, C., Romero-Rodríguez, S., & Rivodó-Muñoz, G. (2023). Career development qualitative tools: An analysis of its potential with youth at risk (OCEAN PROGRAM). In C. Nägele, N. Kersh, & B. E. Stalder (Eds.), *Trends in vocational education and training research, Vol. VI. Proceedings of the European Conference on Educational Research (ECER), Vocational Education and Training Network (VETNET)* (pp. 157–167). <https://doi.org/10.5281/zenodo.8209086>

Career Development Qualitative Tools: An Analysis of its Potential with Youth at Risk (OCEAN PROGRAM)

Moreno-Morilla, Celia

cmoreno8@us.es, University of Seville

Romero-Rodríguez, Soledad

sromero@us.es, University of Seville

Rivodó-Muñoz, Gladys

grivodo@us.es, University of Seville

Abstract

Context: This contribution is part of the Orienta-20 project, developed in Spain specifically in the Andalusia region, and aims to bring the reader closer to a range of successful tools used in professional guidance processes with young people at risk (sociocultural vulnerable). This set of tools have led to the creation of the OCEAN Program.

Approach: The design of these tools has been inspired by aspects of the PAR and Qualitative Career Assessment approaches. The tools incorporated address the principle of investigating/intervening „with“ and not „about“, and seek to further develop equity, social justice, individual and collective activism, and sustainability. The OCEAN Program offers person-centred tools that adjust to the competencies and abilities of the individual (artistic, musical, corporal, etc.), generating added value to the career guidance process.

Findings: The OCEAN Program achieves in the participants a better mental and emotional well-being, as well as the development of a more critical and community way of thinking. In addition, there is an empowerment of the person, which translates into a greater will to improve as well as a greater capacity for adaptability.

Conclusion: This proposal for guidance intervention is considered open and flexible, allowing the different guidance agents to select and adapt those actions that best respond to the type of competencies to be developed, according to the needs of the target group or person. In short, the authors of this program consider that it could be applied in any context, subject to minor adjustments.

Keywords: participatory action research, qualitative career assessment, second chance schools, Ocean Program, youth at risk.

1 Introduction

With this contribution, we intend to offer a set of validated career education and guidance actions that will facilitate the development of skills for the development of sustainable careers. That is, for the construction of vital and professional projects (career projects) that allow personal growth and community development in a context of sustainability. This implies the adoption of a critical and transformative framework, with the consequent development of the



commitment to social justice. These actions respond to some of the challenges posed in the project entitled Career Guidance in Andalusia: Situation and proposals for action in Vocational Education and Training (VET) (Romero-Rodríguez et al., 2020), promoted by the Ministry of Sports Education of the Junta de Andalucía and coordinated by the Bankia Foundation for Dual Training (currently Caixa-Dualiza). On the other hand, and as a result of the collaborative work carried out in the aforementioned project, we start from a concrete demand from two third sector entities responsible for Second Chance Schools (E2O) in Andalusia–Arrabal AID Association and Don Bosco Foundation- and the manifest interest of the Ministry of Educational Development and Vocational Education and Training of the Junta de Andalucía (The government of Andalusia), in order to be able to design integrated career guidance plans aimed at young people in situations of early school leaving (AET for its Spanish acronym) and/or in difficulties of access to employment due to their situation of social vulnerability. This new project (Orienta-2O) has been funded with FEDER funds by the government of Andalusia, Spain (Project PAIDI 2020_01131). The research will continue as a part of the Project TEMPO (PID2020-115711RB-I00 / AEI / 10.13039/501100011033) funded by the Spanish government (MCIN/AEI).

The proposed actions acquire an approach to guidance as a process of learning skills for the management of sustainable careers, considering that these are lifelong learning processes. Therefore, the framework for selecting the competences (knowledge, skills and attitudes) to be developed has been the European Council Recommendation of 22 May 2018 on key competences for lifelong learning¹. Specifically, the Scaffold tool (Deck for the design of competency-based programs, in its pilot version (Joint Research Center-JRC and European Training Foundation- ETF, 2023) has been taken as a reference. It should be noted that the actions presented here are part of a broader program called *OCEAN Program: Guidance for the Development of Sustainable Careers* (Romero-Rodríguez et al., 2023a).

We consider that the proposed actions are flexible enough to be adapted to different contexts and profiles so that the different guidance agents will be able to select and/or adapt those actions that best respond to the type of competences to be developed, depending on the needs of the possible recipients. These actions pursue the development of personal and social skills and career management, ergo, it pursues the acquisition of knowledge, skills and attitudes that favour the construction of young people's career trajectories (career projects). In addition, it seeks to promote a critical, constructive and proactive look in relation to the systems that influence the construction of the life and professional trajectories of young people. All this, with the purpose of promoting individual and collective action (*agency*), as true actors of their own lives and protagonists of community development. It is, thus, to contribute to the promotion of the development of sustainable careers in a framework of critical consciousness and a sense of life as both individual and as part of the community (Romero-Rodríguez et al., 2023b). These tools also claim an inclusive character, rejecting the exclusive use of verbal and code that occupies an almost hegemonic value in Western society of medium sociocultural level. In this sense, other forms of expression are incorporated that involve the use of one's body and abilities (e.g., music, painting, sports, etc.).

1.1 „A DAY IN MY LIFE”

Purpose

Know the routine and habits that young people have in their day to day. This tool/action is inspired by the art-based methodology and collaborative ethnography. This action will provide us with knowledge about the direction that the life of the participants takes in the

¹ EU Recommendation (2018/C 189/01)

realization of their daily work. Mapping in detail, and from their own voices, the day to day of the participants is vital to understand „their world“ from an empathic listening and above all of a generative nature. The development of this action will provide us with a more accurate vision of their realities, their needs and interests, which will also allow a more adequate adjustment of our intervention/research model in each of the schools in general, and for each of the participants, in particular. Accordance with the principle of investigating „with“ and not „about“, and from the ethical sense of sustainable research, the technique „A Day in the life“ will allow us to develop a greater critical awareness on the part of the participants regarding the way and desire to transform or maintain that habitual day. We will walk towards the development of „*A Day in my ideal life*“ accompanying them in the realization of their action plan. The young person's production will be interpreted through a process of joint or individual co-analysis according to the participant's availability to share in the context of the group or if it requires more private/individualized attention. If the typical day of the participant is complex (complexity understood as entanglement or lattice of multiple intra-actions), it can be divided into different time frames and these frames can be observed and described in more detail during the co-analysis session to obtain a more focused understanding of the day.

Transcription:

Hello, my name is Deneb, and I am from Morocco. I am 22 years old, and I have been in Spain for a year and a half. Here's a day in my life:

In the morning, I get up at 6 thirty and the first thing I do is pray. Then I make a sandwich, tidy up my whole room. Anyway, I leave the house to wait for the bus. I come to the Don Bosco Foundation to study Spanish, I also go to pre-work school where we also practice carpentry work, cut wood, create furniture.

In the afternoon, I cook to eat and pray again after sleeping for a while. When I get up, I go to Spanish class next to my house for two hours.

In the evening, I first pray then prepare dinner. I like to cook all kinds of cuisine, such as Italian, Spanish, and Moroccan. After dinner I go to sleep. And always, I miss my family and I feel sad.

Competences

Personal, Social, and learning to Learn Competences (LifeComp)

- Managing learning
- Wellbeing
- Growth mind-set
- Critical thinking
- Communication
- Collaboration
- Empathy

Sustainability Competence Framework (GreenComp)

- Systems thinking
- Critical thinking
- Exploratory thinking

Digital Competence Framework for Citizens (Digcomp)

- Development digital content
- Creatively using digital technologies
- Sharing through digital technologies

Description of the activity

The objective of this action is to approach the day to day of the participants, as well as to know their spaces of interaction and map of references. This action also allows us to

discover their most routine and typical habits, as well as the awareness on the part of the participant of those actions that he develops more unconsciously (not being satisfied with his development). The creation of the „*mapping or cartography*“ of a day in their lives allows us to co-analyse with the participants the level of balance between their habits and from the different levels (e.g., personal, social, professional, educational), the contribution / report of those actions that make up their day to day, as well as the identification of feelings and emotions associated with the different actions. This action seeks to make participants aware of the actions they perform, the level of satisfaction with them, as well as accompany them in the initial design of a „life plan“ improved according to the dissatisfactions identified by them. This action plan takes shape through the letter „A Day in my ideal life“ and will be followed up throughout the temporality of the research project.

This action consists of four steps:

Step 1: Elaboration of the letter „A Day in my life“

In this letter they will describe all the actions they perform from the time they open their eyes and get out of bed (or wake up, or are still in bed), to the moment they go to sleep or stop being aware of being awake. The participants must tell every detail, incorporating in that story the description of the spaces, the people who accompany them, the conversations they address, how they feel, what thoughts haunt their heads, what discomforts coexist with them, among other aspects. This phase will necessarily take place at home, prior to the development of the action. The participants must be informed in a session prior to the development of the action about the different phases in its creation.

Step 2. Composition of the multimodal production „A Day of my life“. (60 minutes: 30 to make the production and 30 to present it)

The story constructed through the letter must take a different form from that mediated by the written verbal code, which means that this story will be transformed into a multimodal production that will incorporate visual and / or audiovisual modes. The constructed artifact can be abstract, it does not have to represent each of the habits narrated in the letter, we give them total freedom to create and think with their hands and their own body. Some examples of these productions could be: construction of a sculpture with one's own body, a Tik-Tok, a montage of a video with photos, a collage, the creation of a verse of a song, etc. This production will be shared with colleagues (only if they are available for it). This phase will take place in the classroom.

Step 3. Re-writing of the story, towards „A Day of my ideal life“ (15-20 minutes)

The letter „A Day in My Life“ will be edited. The technicians and / or counsellors will take printed all the letters (which previously had to upload the students to a cloud on the Internet) and with a red marker they will cross out what they would like to change. And then they will rewrite that letter eliminating what they do not like or do not find desirable, even if they are part of their current life, and incorporate the elements that would generate greater satisfaction with their life. This production will be shared with colleagues (only if they are available for it).

Step 4. Composition of the multimodal production „A Day of my ideal life“ (60 minutes: 30 to make the production and 30 to present it).

The story constructed through *re-writing* must take a different form from that mediated by the written verbal code, meaning that this story will be transformed into a multimodal production that will incorporate visual and audiovisual modes. The constructed artifact can Being abstract, does not have to represent each of the habits narrated in the letter, we give

them total freedom to create and think with their hands and their own body. Some examples of these productions could be: construction of a sculpture with one's own body, a Tik-Tok, a montage of a video with photos, a collage, the creation of a verse of a song, etc. This phase will take place in the classroom.

Duration: 140 minutes (can be divided into two sessions) + 60 minutes (approx.) of independent work (Phase 1).

Resources: Technological devices with connection to the Internet (mobile, computer, tablet), Kraft paper, glue, colored markers, scissors, recycled material, etc.

1.2 WHAT'S EATING YOUR JAR?

Purpose

To deepen the knowledge, we have of the people who makes up the group-class. The action will allow us to get to know the group and the people who are part of it and initiate a reflection on what „concerns“, „occupies“ and „worries“ them, what is „*eats their jar*“, meaning what is bothering them in relation to their immediate future and in the medium-long term. To respond to this last purpose, we will work with the creation of „jars“² of what „worries me“. This action will allow us (as well as themselves) to connect with their main concerns in relation to their future and, above all, so that they become aware that the project is THEIR project, and we are going to co-build it based on what is important for them, with critical awareness. It will also allow us to show the dynamics of work that we will follow. The idea is that they feel „touched“ and „touch“, which at the same time should „touch“ us and intertwine with what happens.



Competences

Skills that are not specifically related to a particular area of knowledge and that can be development in a wide variety of situations (Transversal Competences)

- Critical thinking
- Creativity
- Analytical skills

Personal, Social, and learning to Learn Competences (LifeComp)

² Inspired by Renold, Edwards and Huuki (2020). „Jar“ in English means „jar“ as a noun and „shake“ as a verb. They make the play on words in their proposal of action that they call: „What jars you?“. We can play with „eating the jar“ (thinking about something that worries you).

<ul style="list-style-type: none"> • Critical thinking • Communication <p><i>Sustainability Competence Framework (GreenComp)</i></p> <ul style="list-style-type: none"> • Systems thinking • Critical thinking • Exploratory thinking
<p>Description of the activity</p> <p>Step 1. Preparing the jars: „What worries me?“ (In relation to my future) (40 minutes: 20 minutes to write the notes and 20 minutes to decorate the jars). To begin the process that we will carry out with young people, we will begin with a „thematic provocation“ that will³ place them in relation to the realities and spaces they already occupy. Through this „provocation“ we invite debate and aesthetic practice in relation to the public and the private, the governed and the self-managed. They will be asked to write on sticky notes all those things that worry them, that give them „anger“, that „hump“ them in relation to their career insertion, to be able to build their lives. They may be asked: What stirs you inside what is happening around you? What worries you about your immediate future? And in relation to your more distant future? How does what happen around you, what happens in your neighbourhood, in your city, in your country, affect you? How do you live being young in today's society? How do you feel young people are heard? These notes will be folded and put in a jar that will have been previously provided. They will be allowed 20 minutes to write them. They can also include drawings or write them in the form of a poem., Like a song, they can choose phrases from songs, etc. They should write an idea on each note, and it should be written as a meaningful sentence (not just words).</p> <p>Step 2. Co-analysis (5-10 min per person). The educator or counsellor will co-analyse individually or collectively the content that has appeared in the jars. A debate will be created that can shed some „light“ on these concerns, and the commitment will be made to look for ways/strategies to do something along these lines.</p> <p>Step 3. Commitment to share. The jars will be collected and stored in boxes with the inscription „What worries me“ and „FRAGILE“, participants will be informed of the commitment on the part of the school / institution to get that information to the competent people and / or bodies, showing a commitment to change and social transformation.</p> <p>Finally, it should be noted that the jars symbolize and facilitate the „materialization“ of their concerns, it has proven to be a good strategy / tool to enhance critical awareness and active thinking.</p>
<p>Duration: 50-60 minutes</p>
<p>Resources: Recycled glass jars, colored markers, adhesive sheets, material for the decoration of the jar (e.g. paint or markers for glass, stickers, etc.).</p>

1.3 ;OUR BODIES COUNT!

Purpose

³ Thayne and West (2019).

On the one hand, to become collectively aware of their concerns, as well as the factors and elements that affect the development of their life project from a community perspective and situated from their own life experiences. On the other hand, to become aware of the body's ability to perceive/importance of listening to the body, as well as its possibility of expressing.



Competences

Personal, Social, and learning to Learn Competences (LifeComp)

- Critical thinking
- Communication
- Collaboration
- Empathy

Description of the activity

Step 1. Co-creation of a collective „dartafacto“⁴ (35 minutes: 10 to create the sculpture and 25 minutes to share them). Small groups (of 3-4 people) will be organized, and they will be asked to build with their bodies a sculpture that shows their main concerns, how they live them, how they feel them. They will be allowed some time to prepare them and, subsequently, the sculpture will be executed. The rest of the group will express what it transmits (it is not necessary for the group that executes the sculpture to explain the meaning they wanted to give to it). They might suggest a title for each sculpture. We work only with what „gets to you“, what „moves you“, as when we observe a painting in a museum. Each of the sculptures will be photographed from different angles.

Step 2. Co-creation of a collective „dartafacto“ (20 minutes). Finally, they will be proposed to integrate all the sculptures into a single design (group-class). A final joint reflection will be made on the new construction.

Duration: 55-60 minutes

Resources: Handkerchiefs, fabrics, hats, wigs, masks, as well as other elements available in the centre that help the characterization and representation of the scene.

⁴ Dartafacto: Artistic object that conveys the effects and feelings of previously elaborated experience (jars) once they have been shared, communicating in new places and spaces „what matters“ (Renold et al., 2020).

1.4 IS IT „NORMAL“ TO BE SEEN LIKE THIS?

Purpose

Explore, in a critical way, the image that is projected from the Internet and digital social networks about youth and how these ideas influence the construction of their personal identity and the way in which adults relate to them.

Develop critical awareness about the vision that society has regarding young people, questioning what it considers „normal“ in this age group.

Reflect on how they feel about these stereotypes and how they manage the emotions they generate.

El número de jóvenes que ni estudia ni trabaja sigue creciendo sin parar

Consumo de tabaco, alcohol y drogas en la adolescencia

Los jóvenes reclaman respuestas novedosas a la UE para tener un horizonte esperanzador

La guía (casi) definitiva para entender el lenguaje de los jóvenes

¿Están preparados los jóvenes de 16 años para votar?

Veinte millones son muchos millones

Alvaro de la Rica (Deusto): “Los jóvenes ya no están dispuestos a aceptar cualquier trabajo”

Competences

Skills that are not specifically related to a particular area of knowledge and that can be developed in a wide variety of situations (Transversal Competences):

- Critical thinking
- Creativity
- Analytical skills
- Communication and negotiation skills
- Teamwork
- Intercultural skills

Personal, Social, and learning to Learn Competences (LifeComp)

- Managing learning
- Critical thinking
- Communication
- Collaboration

Digital Competence Framework for Citizens (Digcomp)

- Searching information and digital content
- Evaluating digital content
- Development digital content
- Creatively using digital technologies
- Sharing through digital technologies

Sustainability Competence Framework (GreenComp)

- Systems thinking
- Critical thinking

Description of the activity**Part One:**

Step 1. This is how they see us on the Internet (30 minutes: 15 minutes to search and select the news; 15 to prepare the statements on the posters). They will be asked, in pairs, to search the Internet for news in which young people are protagonists. Each pair must select at least 5 news. Once the news has been selected, each couple must write a statement that reflects the content of the news (for example: „Young people do too much street drinking“). Each statement shall be recorded on an A3 as a poster.

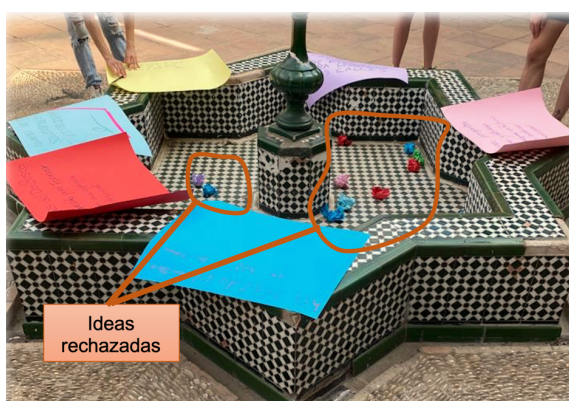
Step 2. We share our posters (20 minutes). Posters will be shared, and a joint virtual mural (including links to news) will be built.

Part Two:

Step 1. Do we identify with what is said about us on the Internet? (15 minutes). A scale of 1 to 3 points, from 1: Barely identified to 3: Very identified, will be placed on the floor so that the participants can physically locate themselves at each point to respond regarding their degree of identification with each of the statements elaborated in the first part. The counsellor will read each of the statements (you can show the poster) and ask that the participants physically place themselves in the value that represents their degree of identification with each statement. The counsellor may add other statements that are considered stereotypes in relation to young people (they avoid responsibilities, they are lazy, they have no values, they are emotionally unstable, they are conflictive ...).

Step 2. Do you think like me? (20 minutes). They will be asked to talk first to someone who has been answering the same as him/her and then the opposite (who have answered differently). They will be proposed to make several rounds.

Step 3. Exercise to „let go“ (5 minutes). Participants will be asked to make paper balls by crumpling the A3s on which they wrote the statements. They will be able to play at throwing them, doing an exercise of „letting go of stereotypes“.



Step 4. We share our reflections (20 minutes). How far do you agree with the statements about young people? Why do you think society has a certain image of your generation? What intention can there be behind this image? How does it affect them?

A reflection will be made on the importance of the social „narrative“ in the construction of our personality and in our own behavior. Likewise, a reflection will be proposed on the importance of critically analyzing the narratives that others make about us with the intention of improving and adjusting them from within ourselves.

Duration: 60 minutes.

Resources: Devices with Internet access for each group (computers, tablets, mobiles). A3 paper, pens, markers, cardboard

2 Conclusions

These actions reflect the importance of developing a collaborative action-research „research with“, situated, and community-based intervention approach in career guidance processes. Moreover, it shows how narrative (oral, written, digital, artistic, corporal, etc.) is a tool that allows the person to play a more proactive role in the process of building their life and professional (career) project. In the same way, shared tools have been shown to be a suitable means to improve professional development and the development of personal, social and „learning to learn“ competences inherent to this process. We consider that they are also an opportunity for expression and reflection on emotions, which is key in any process of diagnosis, intervention, and research. The results of this work also show how the use of these tools has contributed to the construction of a collective and community projection of the career. Our experience in their implementation shows that participants reported an improvement of mental and emotional well-being, as well as the development of more critical thinking. The repeated use of these tools also makes it easier for the person to recognize themselves as a unique being (under construction) who has a unique potential to share with society, which also improves their self-esteem. In addition, empowerment is observed in the person, which translates into a greater desire for improvement and activism (individual and collective, as well as a greater capacity for adaptability).

References

- Romero-Rodríguez, S., Moreno-Morilla, C., & Mateos-Blanco, T. (2023). *OCEAN Program: Guidance for Sustainable Career Development* (in press).
- Inclusive AGENDAs Conference (2018). <https://vimeo.com/300026336>
- Sources to construct the scenarios**
- Cameron, C., Pinto, G., Stella, C., & Hunt, A.K. (2020). A day in the life of young children drawing at home and at school. *International Journal of Early Years Education*, 28(1), 97-113. <https://doi.org/10.1080/09669760.2019.1605887>
- Cameron, C., & Hunt, A. (2018). „*A Day in the Life*“: *A Visual, Multimedia Approach to Research*. Sage Publications Ltd.
- Cameron, E., Kennedy, K., & Cameron, C. 2008. „Let me Show you a Trick!“: A toddler’s use of humor to explore, interpret, and negotiate her familial environment during a day in the life. *Journal of Research in Childhood Education*, 23, 5-18. <https://doi.org/10.1080/02568540809594642>
- Gillen, J., Cameron, C. A., Tapanya, S., Pinto, G., Hancock, R., Young, S., & Gamannossi, B. A. (2007). ‘A day in the life’: Advancing a methodology for the cultural study of development and learning in early childhood. *Early Child Development and Care*, 177, 207–218. <https://doi.org/10.1080/03004430500393763>
- Hooley, T., Sultana, R., & Thomsen, R. (2021). ‘Five signposts to a socially just approach to career guidance. *Journal of the National Institute of Career Education and Counselling*, 47, 59-66. <https://derby.openrepository.com/handle/10545/626166>
- Renold, EJ, Edwards, V. & Huuki, T. (2020) Becoming eventful: making the ‘more-than’ of a youth activist conference matter. *Research in Drama Education: The Journal of Applied Theatre and Performance*, 25 (3), 441-464. <http://doi.org/10.1080/13569783.2020.1767562>

- Robertson, L.H, Drury, R., & Cable, C. (2014) Silencing bilingualism: a day in a life of a bilingual practitioner. *International Journal of Bilingual Education and Bilingualism*, 17(5), 610-623. <https://doi.org/10.1080/13670050.2013.864252>
- Thayne, M. & West, A. (2019). 'Doing' media studies: The media lab as entangled media praxis. *The International Journal of Research into New Media Technologies*, 25(2), 186–208. <https://doi.org/10.1177/1354856519834960>

Biographical notes

Dr Celia Moreno-Morilla is a professor (postdoctoral contract) in the Department of Research Methods and Diagnosis in Education of the University of Seville. Her field of specialization is the research of literacy practices and career building with children and young people in Areas in Need of Social Transformation (ZNTS), in addition to the application of various quantitative and qualitative research methods. ORCID Profile: 0000-0003-0566-4319.

Dr Soledad Romero-Rodríguez is a professor at the University of Seville of the specialty in Professional Guidance in the Department of Research Methods and Diagnosis in Education of the University of Seville. Her research activity has been linked to the design and development of career guidance interventions, training in career management skills, innovative research and guidance methodologies. ORCID Profile: 0000-0002-7105-2700.

Gladys Rivodó-Muñoz is a PhD student (predoctoral contract of the VII „Research and Transfer” Plan of the University of Seville) adjunct to the Department of Research Methods and Diagnosis in Education of the University of Seville. Her field of specialization is research in career guidance and the development of skills for career management with vulnerable groups and at risk of social exclusion.

Moser, D., Kimmelmann, N., Miesera, S., & Pool Maag, S. (2023). Diversity-oriented teachers for vocational education. analysis and modelling of competence requirements for teacher education and training. In C. Nägele, N. Kersh, & B. E. Stalder (Eds.), *Trends in vocational education and training research, Vol. VI. Proceedings of the European Conference on Educational Research (ECER), Vocational Education and Training Network (VETNET)* (pp. 168–179). <https://doi.org/10.5281/zenodo.8209088>

Diversity-Oriented Teachers for Vocational Education. Analysis and Modelling of Competence Requirements for Teacher Education and Training

Moser, Daniela

daniela.moser@phst.at, University College of Teacher Education Styria

Kimmelmann, Nicole

nicole.kimmelmann@fau.de, Friedrich-Alexander-University Erlangen-Nürnberg

Miesera, Susanne

susanne.miesera@tum.de, Technical University Munich

Pool Maag, Silvia

silvia.poolmaag@phzh.ch, Zurich University of Teacher Education

Abstract

Context: Changes in the context of a diverse labour market pose major challenges for European VET. VET research can make an important contribution by sharing proven approaches. Dealing with diversity is addressed by different concepts that focus on individual factors or diversity as a whole. The perspective on diversity and the distribution of roles in educational institutions vary depending on the concept. Inclusion and exclusion are interrelated, and inclusive competences help to reduce exclusion. Sensitisation and professionalisation of VET staff are therefore necessary. The article examines the competence requirements for an inclusive approach to diversity in teacher education for vocational schools.

Approach: The aim of the paper is to formulate dimensions for a framework for teacher education at VET schools in the context of diversity orientation in order to contribute to inclusive, equitable and quality vocational education/training. In a qualitative literature analysis, a theoretical classification of the concepts of competence, the structure of competence models and their conceptualisation in teacher education in general and those focused on diversity-orientation took place. In an analysis of teacher education models, competences related to managing diversity and inclusion were derived. The categories „attitudes”, „knowledge”, and „skills” were found to be target-orientated for the assignment of competence requirements.

Findings: The results can be classified well along the defined main categories. Attitudes and internalised values (1) influence motivation, while readiness to act, self-efficacy and self-regulation are crucial for the implementation of appropriate strategies in the classroom. Teachers' knowledge (2) can be divided into basic knowledge areas, such as inclusive education and diversity-oriented didactics, and specialised knowledge. The latter is relevant in specific situations or for specific learners. Skills and abilities (3) can be divided into the fields of organisational development, cooperation with partners and diversity-oriented methodology and didactics.

Conclusion: The presented framework for competence dimensioning and structuring can help in curriculum development in teacher education. Inclusion-oriented dealing with diversity requires a combination of competences that have to be developed situationally. It is recommended



to consider inclusion and diversity as a cross-cutting competence for all teachers. Future research projects should focus on the acquisition of sub-competences in different phases of teacher education and their impact on teaching. Intersectional knowledge should be considered in the reflection and further development of teaching concepts. For this, evidence-based research and international exchange can contribute to an inclusion-oriented approach to diversity.

Keywords: vocational teacher education, diversity, inclusion, competences

1 Initial situation and problem definition

Changes in the European labour market, such as the number of vacant positions, new findings concerning the interdependence between social background and educational success, as well as new target groups resulting from the influx of refugees in recent years and the programmatic claim of inclusion of people with disabilities (Euler et al., 2020) pose societal challenges connected to diversity for European VET. International comparative VET research can make a decisive contribution here by sharing proven approaches and learning from each other (Pilz, 2017). At this point, ambiguous conceptual understandings in the context of diversity as well as a multitude of different approaches in dealing with diversity prove to be difficult.

Neither on diversity nor on inclusion can a theory deficit be stated (Boger, 2019; Kuhlmann et al., 2018; Schimek et al., 2022; Sturm, 2023). Dealing with diversity is taken up by different concepts that either address individual diversity factors (e.g. disability, ethnic-cultural background) or diversity as a whole (e.g. broad understanding of inclusion, diversity management). The perspective on diversity, the distribution of roles in dealing with diversity as well as the associated changes in VET institutions and structures are also seen differently, depending on the underlying concept and understanding (Kimmelman et al., 2022). An interdisciplinary analysis by the team of authors points to opportunity-based professional action as a common point of reference for both concepts in reducing educational discrimination processes. Inclusion and exclusion have a mutually dependent relationship. Inclusion-oriented professional competencies enable to deal with structural contradictions as well as exclusionary tendencies and thus to reduce risks of exclusion. An inclusion-oriented approach to diversity is therefore of importance for participation in educational processes (Pool Maag et al., submitted).

The authors (Miesera et al., 2023; Pool Maag et al., submitted) suggest international comparative analysis focusing the wider interpretation of inclusion in dealing with diversity. Common to all concepts is the goal of achieving equal opportunities for all learners, regardless of diversity factors. This presupposes the use of the learners' potential (potential orientation instead of deficit orientation) and requires a fundamental sensitisation and professionalisation of VET staff (Zoyke, 2016; Bach, 2018), with a view to the challenges and opportunities of diversity as a cutting-cross category. However, this requires more research on diversity-oriented professionalisation of VET staff. This is where the present study comes in and investigates the following research question:

How to model competence requirements for an inclusive approach to diversity in teacher education for vocational schools? Based on this question, the aim of the paper is to formulate dimensions for a framework for VET teacher education in the context of diversity orientation in order to contribute to inclusive, equitable and high-quality education/training.

2 Methodology

Qualitative research is oriented towards social reality and provides methods to better understand complex processes and structures (Flick et al., 2019). This article deals with the constructs of diversity, competence models and teacher training in VET, the complexity of which can be found in different conceptual understandings on the one hand and appears even more complex

in their relational contexts on the other. A qualitative literature analysis was chosen as the research method, the systematics of which were mapped in four steps.

In a first step, (1) a literature search was conducted on the keywords competence, competence models, teacher education in general, and for VET, diversity, focusing on current literature from the year 2000 onwards.

In addition, (2) the quality of the sources was checked in collaborative online sessions of the research team. For this purpose, the criteria system proposed by Döring and Bortz (2016) was adapted to the objectives of the article and the intersubjective comprehensibility, relevance, consistency and limitations of the studies were used as review criteria. The data obtained in this way were summarised in a table.

Subsequently, (3) content analysis (Mayring, 2010) was applied by deriving categories inductively from the existing material. This step was carried out by paraphrasing, generalisation to a previously defined level of abstraction and a multi-level reduction of the text passages. From the analysis of the teacher competence models, the categories „attitudes“, „knowledge“ and „skills“ proved to be target-oriented for the assignment of competence requirements.

In a parallel analytical step, (4) competences connected to dealing with diversity and inclusion were derived in a comparable analysis from models in teacher education and training. In order to pick up the described approach of an inclusive dealing with diversity, both perspectives were included by integrating competence models in the context of diversity (factors) and inclusion at the same time. Also, both general education and vocational training models derived within the DACH¹ countries as main research context of the contributing researchers were included to broaden the base of analysis. Identified competences were paraphrased and summarized into units within the three-categorical structure.

Comparisons in the sense of interpersonal validation are recommended as a quality criterion of qualitative research (Döring & Bortz, 2016). Here, the communicative validation of the document analysis forms the process to check the validity of the analysis (Flick et al., 2019; Lamnek, 2010). This process took place with the involvement of the researchers and thus represents a form of expert validation. The results of the document analysis were evaluated with regard to their suitability, value and validity within the research group.

3 Theoretical contextualisation of competences in teacher education

It is assumed that the professional competences of teachers have a decisive influence on the learning performance of students against the background of the dynamics of a diversity-oriented field of action. In the understanding of this paper, professional competence is not exclusively oriented towards cognitive aspects, but also includes the social dimension of learning as well as the development of attitudes towards inclusion and participation. In the following, the understanding of competence underlying teacher education is first elaborated. Based on this, the models are discussed in the context of diversity and inclusion and characteristics are differentiated that can be derived from this as dimensions for the curricular anchoring of competences for teacher training in the context of the requirements of an inclusion-oriented approach to diversity in vocational education and training.

3.1 Competence and competence modelling in initial teacher education

Historically, the term competence can be found in its origins as early as the 1970s in Chomsky (1973), who understands it as the implicit knowledge that a speaker possesses and that enables him to form and understand grammatically correct sentences. Chomsky sees this as a connection between inner resources and acting, the „performance“, which depends on the situation for

¹ DACH Germany (D), Austria (A), Switzerland (CH)

its success. Theoretical concepts of competence (Roth, 1971; Reetz, 1990) define the concept of competence as basic personal-character skills, task-oriented and socially-oriented skills and include the importance of „learning arrangements that combine situational complexity with action orientation, at the same time promote motivation and encourage independent learning“ (Reetz, 1990, p. 20). This view includes a characteristic of holism that is sufficient for today's understanding of the term.

The development of teachers' professionalism and competences has been researched inter-disciplinarily in educational science since the beginning of the 1990s (Bromme, 1992). Based on Shulman (1986), the central competences of teachers in the area of professional knowledge include the application of subject knowledge as well as content knowledge, pedagogical knowledge and curricular knowledge in the teaching context.

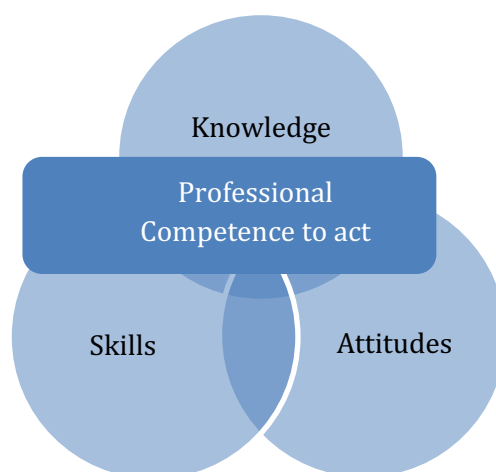
These path-breaking concepts triggered a series of different definitions of terms that are significant for the context of educational science, respectively for competence modelling. In the sense of an understanding of competences that is relevant for teacher training, competences are not only knowledge and skills, but comprehensive abilities that have a relation to concrete task or requirement contexts (Hacker, 2006; Moser, 2014). They describe both cognitive and non-cognitive dispositions (Weinert, 2001a; Weinert, 2001b) and thus correspond to an understanding of human holism (Erpenbeck & Heyse, 1996; Arnold & Schübler, 2008). Competences are context-dependent, which implies that they can also be acquired in corresponding contexts. In most definitions, self-organisation disposition emerges as an essential characteristic, which includes the self-organised acquisition of knowledge in order to be successful in new open and complex situations (Erpenbeck & von Rosenstiel, 2007). A common element of competence definitions is the ability to act. Acting competently means mobilising individual resources and orchestrating them in a complex situation (Rychen & Salganik, 2003). These characteristics clearly distinguish themselves from theoretical models and teaching/learning arrangements that aim at pure knowledge transfer. Diverse teaching/learning environments are often complex, situations are often unpredictable and therefore require situational skills using cognitive and non-cognitive resources. Future teachers, respectively those of vocational schools, the relevant group for the topic in this article, must acquire competences in their training. The concept of competence discussed here fulfils these requirements and is therefore used for the further discussion, in which the question arises as to how competences can be modelled in order to achieve the training goals of a diversity-oriented teacher education.

In their function, competence models in teacher education are the basis for curriculum development, didactic-methodical design of training courses, can be used in assessment procedures and are relevant as accreditation and evaluation measures. Schaper (2009) categorises competency models of teacher education with regard to the scope of the range of impact and the construction methodology and provides a framework for classifying models in relation to tasks or requirements of educational programmes. For example, models cover the entire scope of teachers' activities (Oser & Blömeke, 2012; Blömeke et al., 2008; Krauss & Blum, 2012) or refer to different sub-areas such as diagnostic competence (Aufschnaiter et al., 2015). A broad spectrum of competence dimensions, including e.g. both cognitive and non-cognitive ones, can also be found in Blömeke et al. (2012), whereas other authors base their modelling on partial facets, such as behavioural competences (Heinzer et al., 2009). Many models refer to Weinert's (2001b) concept of competence, which includes cognitive skills as well as motivational-volitional and social skills, although some models focus on different directions of this triad. Klieme and Leutner (2006) define competencies as „context-specific cognitive performance dispositions that functionally relate to situations and demands in specific domains“ (Klieme & Leutner 2006, p. 879). Baumert and Kunter's (2006, 2011) model is widely used in the German-speaking area and describes the competencies of future teachers in terms of multiple aspects that include motivational, self-regulatory orientations and beliefs as well as knowledge areas such as subject

knowledge, subject didactic knowledge, pedagogical knowledge, organisational and advisory knowledge. The findings of Baumert and Kunter are based on empirical studies of a teaching subject. This is where criticism comes in, since the model already depicts correlations in a very differentiated way. This raises the question of a generally valid application possibility for competence models of teacher training that can be applied to very complex situations, as is the case in diverse teaching/learning environments. Nevertheless, the distinctive differentiations for basic considerations, which can be further developed by means of inclusion and exclusion procedures, can be useful for a competence model for a diversity-oriented teacher education. Baumert and Kunter pay little attention to the aspect of action orientation, which develops generically and is therefore also important for teachers beginning their careers. Neuweg (2015) accentuates action orientation as a component of competence, which is expressed independently of the inclusion of motivational aspects in the situational mastering of challenges, is context-dependent and both learnable and transferable to new situations.

Figure 1

Categories of competences



With respect to the construction methodology, models can be normative, for example derived from educational theories or curricula, or empirically based on requirement analyses (Klieme et al., 2003; Terhart, 2002). In order to do justice to the specificity of diversity-oriented didactics, this study focused on diversity-oriented competences with regard to the area of its impact. However, these include both cognitive and non-cognitive aspects. In terms of the construction methodology, a normative approach was taken by deductively deriving diversity-oriented competences of teachers from existing models and theories.

Competency level models contain different degrees of proficiency of a skill, indicate its levels or degrees of difficulty and refer to measurement or assessment, such as the MT21 competency model by Blömeke et al. (2008). These models are more likely to be found in school performance tests (PISA,² TIMMS³) than in teacher training. Competence structure models are used to describe the required competences for certain domains of a task area, which can also be mapped in a further dimension. For teacher training in VET, Frey (2004) gives an example that initially maps subject, methodological, social and personal competence on one level (horizontally) and vertically divides individual skills, bundled skills, abilities and overall competence into a hierarchy.

² Programme for International Student Assessment

³ Trends in International Mathematics and Science Study

3.2 The understanding of competence for an inclusive approach to diversity

In order to formulate a framework concept for anchoring competencies with a view to an inclusion-oriented approach to diversity, the research team first conducted an analytical examination of existing competency models that take up this perspective as part of the professionalism of teachers. The following table shows the examined models structured according to their focus.

Table 1
Structure in the context of diversity and inclusion

Model focus	Sources
Broad inclusion	Bach, 2018 Buchmann, 2020 Filipiak, 2020
Narrow inclusion	Bach et. al., 2018 Zoyke, 2016 European Agency for Development in Special Needs Education, 2012
Diversity/Heterogeneity	Buchmann, 2020 Holzinger et al., 2019 Vock and Gronostaj, 2017
Specific diversity characteristics	Kimmelman, 2010 (Cultural Diversity)

The model focus of the broad understanding of inclusion outlines the variety of diversity dimensions. Representatives of this view are Bach, Buchmann and Filipiak. Further on the societal level and thus with additional competence dimensions, Buchmann sees a diversity-sensitive inclusive VET as the implementation of a „real utopia“ as a societal transformation process (Buchmann, 2020). In her opinion, it is not enough to „re-evaluate and relate the partial logics that have been relevant in the vocational school context and the professional body of knowledge in terms of educational theory“ (Buchmann, 2020, p. 147 f). For societal transformation, subject knowledge and curricular knowledge are necessary in addition to professional knowledge of transformational knowledge. In contrast, Bach (2018) sees it as problematic that education policy has established social transformations with the corresponding reforms towards an inclusive vocational education and training system as a normative claim without having planned concrete measures for implementation. Against this background, she urges research that shows how inclusion-related professional competence development can be designed within the framework of teacher education so that this claim does not remain just an ideal. She criticises that „without investing correspondingly wide-ranging resources in mainstream vocational schools, [inclusion] can hardly succeed (Bach, 2018, p. 163). Filipiak (2020) extends Baumert and Kunter's (2011) model by adding „performance“, which locates pedagogical action in the components of readiness and planning, and thereby places the engagement with action and problem-solving situations in the context of a broad understanding of inclusion. This concept of an inclusion-oriented teacher education is similar in its essential features to the current competence models of teacher education and is suitable as a model that relates in its function to the competence acquisition of teachers. At the same time, efforts are needed to promote the competence development of teachers.

The narrow understanding of inclusion focuses on the dimension of disability or „special needs“. This is specified in the transnational model of the European Agency for Development in Special Needs Education (2012), which was developed within the framework of the

international project „Teacher Education for Inclusion (TE41)“. The areas of competence refer to (1) attitudes and beliefs (2) knowledge and understanding (3) skills and abilities, explicitly mentioning the appreciation of diversity, support for all learners, the ability to cooperate and the readiness for personal development in the sense of lifelong learning. This model is very differentiated with 124 descriptions of competences. Following this model, Bach and colleagues confirm that inclusion-related attitudes and beliefs are attributed an action-guiding dimension. Knowledge, beliefs as well as motivational and self-regulatory characteristics and skills are seen as crucial for professional action of teachers in diversity and inclusion contexts (Bach et al., 2018; Zoyke, 2016). Specific tasks such as learning process analyses or initial diagnoses also require specialised knowledge and cooperation in multi-professional teams. According to Bach et al. (2018), competent professional action requires the successful mastering of three levels, whereby the first level focuses on general inclusion-related requirements for all teachers in the education system, the second level describes specific inclusion-related requirements for all teachers in VET (e.g. learning location cooperation) and the third level contextualises domain-specific inclusion-related requirements for and attitudes of teachers of certain vocational disciplines.

Holzinger et al. (2019) take up a model focus on diversity with an appreciation of the diversity of learners in their competence development concept, it includes the support of all learners, cooperation with others as well as personal professional development and is characterised in the dimensions of „knowledge“, „acting“ and „attitudes“. With characteristics of an action-oriented educational context, it explicitly presents professional development as a generic element that is important for sustainable teacher education. Also corresponding to a diversity-oriented understanding are the competence requirements for teachers by Vock and Gronostaj (2017), in which they address the differences found in heterogeneous learning environments with regard to socio-economic background, migration background, educational language, flight experiences, disabilities and special educational needs, illness as well as gender differences, intelligence and prior knowledge. From this, the necessity of diagnostic and didactic competences, subject didactic knowledge as well as corresponding beliefs and values is derived. Weaknesses of this model can be seen in both the low theoretical grounding and the lack of empirical evidence. Nevertheless, it seems to be useful for the practical implementation of a quality diversity-oriented teaching.

The following competence-theoretical professional understanding of an inclusive approach to diversity is based on the assumption that the competences of professionally active teachers are formed by their attitudes, experiences, convictions, values and motivation. Particularly important are: Knowledge, attitudes and action (Bach, 2018; Buchmann & Bylinski, 2013). This approach is based on the premise that „pedagogical professionalism takes place in the three phases of teacher education (studies, preparatory service, in-service teacher training)“ (Bach 2018, p. 164).

3.3 Competence requirements for teachers for an inclusive approach to diversity

As outlined, the models structure the requirements of diversity-sensitive inclusive vocational education and training. The competence dimensions derived from them for teacher training in different ways with reference to normative framework conditions and empirical results. Nevertheless, the competence requirements can be assigned to the presented tripartite division in the sense of a holistic competence to act (see Fig. 1).

Table 2

Competence requirements for VET teachers in context of an inclusive approach towards diversity

Model focus	General competence models	Competence models with focus on inclusive diversity
Attitudes	Subject-relatedness Holism Self-organisation e.g. Erpenbeck & v. Rosenstiel 2003; Moser, 2014	<ul style="list-style-type: none"> • Positive Attitudes towards diversity and inclusion • Positive internalised values/convictions towards diversity and inclusion • Readiness to act inclusively in own teaching settings • Self-efficacy in implementing inclusive educational strategies also in critical situations • Self-regulation for a critical reflection and readjustment of own strategies or decisions
Knowledge	Performance dispositions that functionally relate to requirements in specific domains e.g. Klieme & Leutner 2006; Baumert & Kunter, 2006, 2011	<ul style="list-style-type: none"> • Basic elements of an inclusive education • Inclusive didactic approaches and learning settings • Pedagogical-psychological knowledge about individual learning, learning in inclusive groups and learners needs • Inclusive organizational structures, processes and cultures • Tools and procedures for diagnosis of learners' special needs • Coaching strategies • Special needs education
Multidimensional skills	Multi-dimensional property that is requirement-related and subjected to acting or performing. e.g. Neuweg, 2015; Oser & Blömeke, 2012	<ul style="list-style-type: none"> • Organisational: e.g. sensitive perception of diversity, development of inclusive structures and processes • Social: e.g. diversity related networking, multi-professional team work, team teaching • Pedagogical: e.g. diversity-sensitive teaching (individual and group promotion), diagnosis, individual learning assistance

The authors of the analysed models all emphasise the prominent role of corresponding attitudes by teachers. Attitudes are a broad category of different personality traits, some of which influence each other. While attitudes and internalised values/convictions influence the basic motivation to participate in an inclusive oriented diversity-based education, readiness to act, self-efficacy and self-regulation are decisive for a sustainable implementation of corresponding strategies in one's own actions as a teacher.

Relevant knowledge categories can be classified according to the broadness of the areas of activity affected (pedagogical key activities versus special tasks/positions) and differentiated

by whether it is knowledge of general value for the activities of all teachers or special knowledge or expert knowledge that teachers only need for certain learners, positions or situations. The basis of the knowledge acquisition of teachers are fundamental areas of knowledge about inclusive education in connection with a diversity-oriented implementation of individual didactic approaches. More complex knowledge areas, on the other hand, pick up complementary knowledge that is crucial in key positions, such as diagnosis competences or psychological knowledge about learning and learners needs. The share of special educational knowledge (in the sense of knowledge about certain diversity characteristics, areas of support or concepts for dealing with it) can be seen as the top in the competence models, counted among the expert knowledge of few teachers.

Necessary skills and abilities of teachers can be located along three areas of action in connection with the implementation of an inclusion-oriented approach to diversity in vocational schools: (1) diversity-oriented organisational development and anchoring of structures, (2) cooperation with internal and external partners in the sense of an inclusion-oriented approach to diversity and (3) diversity-oriented methodology and didactics (comp. Pool Maag et al. submitted).

4 Discussion, limitations and outlook

Aiming for inclusive, equal opportunities and high-quality vocational education and training is an important starting point for tackling the challenges ahead in European countries. The framework presented in this article for the dimensioning and structuring of corresponding competences of teachers can be an aid for further curriculum development in teacher education.

The competence requirements can be integrated into existing competence models of teacher education by assigning them to the three basic areas of action competence (attitude, knowledge and skills). At the same time, their complex character becomes apparent in the numerous interrelationships of the competences with regard to their application in concrete situations of action. According to the understanding of the existing competency models, an inclusion-oriented approach to diversity usually requires a combination of competencies that consciously perceives the situation. This requires an equally situationally designed didactic approach in the competence development of teachers.

Furthermore, the specific competences - as has already been shown - are connected with basic pedagogical competences, which means that it is less appropriate to speak of a narrow specific „competence for dealing with diversity in an inclusive way“, but rather of a not clearly delimited, broadly conceived cross-sectional competence. The article shows how inclusion and diversity can be combined in a theoretical, conceptual and action-oriented way with regard to competence requirements for teachers at vocational schools. This interconnected perspective could unite these two traditions in teacher education, which have been separate up to now, and contribute to an anchoring of corresponding competence requirements as a real cross-cutting issue for all teachers.

As the outlined models do not yet allow for empirical differentiation of the competence requirements with regard to competence levels, their generative character must be assumed when integrating the competences into curricula. This means that the competence development process must fundamentally be applied to all phases of teacher training. In the future, however, the concrete successive teaching will require an intensive scientific, data-based examination of the gradual possibility of acquiring partial competences throughout the various phases of teacher training as well as the mode of action of competence acquisition with regard to the teaching process and its changes.

Building on this, there is the opportunity - through corresponding research projects in the sense of action research by teachers - to reflect on and further develop teaching concepts based on intersectional knowledge (interaction of multiple lines of discrimination). Thereby, forms of

intersectionality could be explored that are particularly relevant for vocational education. Teacher education institutions should therefore continue their evidence-based research focusing on the dimensions of diversity in VET in its breadth and depth and in connection with inclusion in this sense.

Comparative efforts at the European level and an associated international exchange (also of best practice models) could make a valuable contribution here towards an inclusion-oriented approach to diversity in all its breadth and diversity.

References

- Arnold, R., & Schübler, I. (2008). Entwicklung des Kompetenzbegriffs und seine Bedeutung für die Berufsbildung und für die Berufsbildungsforschung. In G. Franke (Hrsg.), *Komplexität und Kompetenz* (pp. 52–74). wbv.
- Aufschnaiter, C., Cappell, J., Dübbelde, G., Ennemoser, M., Mayer, J., Stiensmeier-Pelster, J., Sträßer, R., & Wolgast, A. (2015). Diagnostische Kompetenz. Theoretische Überlegungen zu einem zentralen Konstrukt der Lehrerbildung. *Zeitschrift für Pädagogik*, 61(5), 738–758. <https://doi.org/10.25656/01:15424>
- Bach, A. (2018). Inklusive Didaktik und inklusionsbezogene Professionalisierung von Lehrkräften in der gewerblich-technischen Berufsbildung. In T. Tramm, M. Casper, & T. Schlömer (Hrsg.), *Berichte zur beruflichen Bildung. Didaktik der beruflichen Bildung: Selbstverständnis, Zukunftsperspektiven und Innovationsschwerpunkte* (pp. 155–173). W. Bertelsmann.
- Bach, A., Burda-Zoyke, A., & Zinn, B. (2018). Inklusionsbezogene Handlungsfelder und Kompetenzen von (angehenden) Lehrkräften an beruflichen Schulen. *Perspektiven für eine gelingende Inklusion: Beiträge der „Qualitätsoffensive Lehrerbildung“ für Forschung und Praxis*, 120–131. <https://doi.org/10.25656/01:18229>
- Baumert, J., & Kunter, M. (2006). Stichwort: Professionelle Kompetenz von Lehrkräften. *Zeitschrift für Erziehungswissenschaft*, 9(4), 469–520.
- Baumert, J., & Kunter, M. (2011). Das Kompetenzmodell von COACTIV. In J. Kunter & W. Blum (Hrsg.), *Professionelle Kompetenz von Lehrkräften* (pp. 29–53). Waxmann.
- Blömeke, S., Kaiser, G., & Lehmann, R. (Hrsg.). (2008). *Professionelle Kompetenz angehender Lehrerinnen und Lehrer. Wissen, Überzeugungen und Lerngelegenheiten deutscher Mathematikstudierender und -referendare. Erste Ergebnisse zur Wirksamkeit der Lehrerausbildung*. Waxmann.
- Blömeke, S., Suhl, U., & Döhrmann, M. (2012). Zusammenfügen was zusammengehört. Kompetenzprofile am Ende der Lehrerausbildung im internationalen Vergleich. *Zeitschrift für Pädagogik*, 58, 422–440. <https://doi.org/10.25656/01:10387>
- Boger, M.-A. (2019). Theorien der Inklusion. *Die Theorie der trilemmatischen Inklusion zum Mitdenken*. Edition assemblage.
- Bromme, R. (1992). *Der Lehrer als Experte: Zur Psychologie des professionellen Wissens*. Huber.
- Buchmann, U. (2020). Zum Verhältnis von Diversität, Migration und Inklusion in der Berufsbildung. In R. Arnold, A. Lipsmeier, & M. Rohs (Hrsg.), *ProQuest Ebook Central. Handbuch Berufsbildung: Mit 53 Abbildungen und 19 Tabellen* (pp. 137–149). Springer VS.
- Buchmann, U., & Bylinski, U. (2013). Ausbildung und Professionalität von Fachkräften für eine inklusive Berufsbildung. In H. Döbert & H. Weishaupt (Hrsg.), *Inklusive Bildung professionell gestalten: Situationsanalyse und Handlungsempfehlungen* (pp. 147–202). Waxmann.
- Chomsky, N. (1973). *Aspekte der Syntax-Theorie*. Suhrkamp.
- Döring, N., & Bortz, J. (2016). *Forschungsmethoden und Evaluation in den Sozial- und Humanwissenschaften* (5. Aufl.). Springer Berlin Heidelberg. <https://doi.org/10.1007/978-3-642-41089-5>
- Erpenbeck, J., & Heyse, V. (1996). Berufliche Weiterbildung und berufliche Kompetenzentwicklung. In B. Bergmann (Hrsg.), *Kompetenzentwicklung '96: Strukturwandel und Trends in der betrieblichen Weiterbildung* (pp. 15–152). Waxmann.
- Erpenbeck, J., & von Rosenstiel, L. (2007). *Handbuch Kompetenzmessung. Erkennen, verstehen und bewerten von Kompetenzen in der betrieblichen, pädagogischen und psychologischen Praxis*. Schäffer-Poeschel.
- Euler, D., Severing, E., & Bertelsmann Stiftung. (2020). *Heterogenität in der Berufsbildung – Vielfalt gestalten*. <https://doi.org/10.11586/2020016>
- European Agency for Development in Special Needs Education (Hrsg.). (2012). *Inklusionsorientierte Lehrerbildung. Ein Profil für inklusive Lehrerinnen und Lehrer*. https://www.european-agency.org/sites/default/files/profile_of_inclusive_teachers_de.pdf
- Filipiak, A. (2020). Kompetenzmodellierung in inklusionsorientierter LehrerInnenbildung. *QfI - Qualifizierung für Inklusion*, 2(1), 1–20. <https://www.qfi-oz.de/index.php/inklusion/article/view/21>
- Flick, U., Kardorff, E., & Steinke, I. (2019). Was ist qualitative Forschung? Einleitung und Überblick. In *Qualitative Forschung* (13. Aufl.). Rowohlt.

- Frey, Andreas. (2004). Die Kompetenzstruktur von Studierenden des Lehrerberufs. Eine internationale Studie. *Zeitschrift für Pädagogik*, 903–925. <https://doi.org/10.25656/01:4847>
- Hacker, W. (2006). *Allgemeine Arbeitspsychologie. Psychische Regulation von Arbeitstätigkeiten*. Huber.
- Heinzer, S., Oser, F., & Salzmann, P. (2009). Zur Genese von Kompetenzprofilen. *Lehrerbildung auf dem Prüfstand*, 2, 28–56. <https://doi.org/10.25656/01:14698>
- Holzinger, A., Feyerer, E., Grabner, R., Hecht, P., & Peterlini, H. K. (2019). Kompetenzen für Inklusive Bildung – Konsequenzen für die Lehrerbildung. *Nationaler Bildungsbericht Österreich 2018, Band 2: Fokussierte Analysen und Zukunftsperspektiven für das Bildungswesen*, 63–98. <https://doi.org/10.17888/NBB2018-2-2>
- Kimmelman, N. (2010). Cultural Diversity als Herausforderung der beruflichen Bildung. Standards für die Aus- und Weiterbildung von pädagogischen Professionals als Bestandteil von Diversity Management. Dissertation. Shaker Verlag: Aachen.
- Kimmelman, N., Miesera, S., Moser, D., & Pool Maag, S. (2022). Inclusion for all in VET? A comparative overview of policies and state of research about migration, integration and inclusion in Germany, Austria and Switzerland. In L. Moreno Herrera, M. Teräs, P. Gougoulakis, & J. Kontio (Hrsg.), *Migration and Inclusion in Work Life – The Role of VET. Emerging Issues in Research on Vocational Education & Training* (Bd. 7, pp. 117–165).
- Klieme, E., Avenarius, H., Blum, W., Döbrich, P., Gruber, H., Prenzel, M., Reiss, K., Riquarts, K., Rost, J., Tenorth, H.-E., & Vollmer, H. J. (2003). *Zur Entwicklung nationaler Bildungsstandards. Eine Expertise*. <https://doi.org/10.25656/01:20901>
- Klieme, E., & Leutner, D. (2006). Kompetenzmodelle zur Erfassung individueller Lernergebnisse und zur Bilanzierung von Bildungsprozessen. Beschreibung eines neu eingerichteten Schwerpunktprogramms der DFG. *Zeitschrift für Pädagogik*, 52, 876–903.
- Kögler, K., Weyland, U., & Kremer, H.-H. (Hrsg.). (2023). *Jahrbuch der berufs- und wirtschaftspädagogischen Forschung 2022* (1. Aufl.). Verlag Barbara Budrich. <https://doi.org/10.3224/84742628>
- Kuhlmann, C., Mogge-Grotjahn, H., & Balz, H.-J. (2018). *Soziale Inklusion. Theorien, Methoden, Kontroversen*. Kohlhammer Verlag.
- Krauss, S., & Blum, W. (2012). The conceptualisation and measurement of pedagogical content knowledge and content knowledge in the COACTIV study and their impact on student learning. *Journal of Education*, 56, 45–66.
- Lamnek, S. (2010). *Qualitative Sozialforschung* (5. Aufl.). Beltz Verlag.
- Mayring, P. (2010). *Qualitative Inhaltsanalyse* (11. Aufl.). Beltz & Gelberg Verlag.
- Miesera, S., Kimmelman, N., Pool Maag, S., & Moser, D. (2023). Integration und Inklusion in der Beruflichen Bildung in Deutschland, Österreich und der Schweiz. In K. Kögler, U. Weyland, & H.-H. Kremer (Hrsg.), *Jahrbuch der berufs- und wirtschaftspädagogischen Forschung 2022* (1. Aufl., pp. 53–73). Verlag Barbara Budrich. <https://doi.org/10.3224/84742628>
- Moser, D. (2014). Kompetenz und Kompetenzverständnis im Kontext des Lernens. Versuch der Klärung eines vielstrapazierten Begriffes. In D. Moser & E. Pichler (Hrsg.), *Kompetenzen in der Berufspädagogik* (pp. 13–30). Leykam.
- Neuweg, G. H. (2015). Kontextualisierte Kompetenzmessung. Eine Bilanz zu aktuellen Konzeptionen und forschungsmethodischen Zugängen. *Zeitschrift für Pädagogik*, 61(3), 377–383. <https://doi.org/10.25656/01:15368>
- Oser, F., & Blömeke, S. (2012). Überzeugungen von Lehrpersonen. Einführung in den Thementeil. *Zeitschrift für Pädagogik*, 58, 415–421. <https://doi.org/10.25656/01:10405>
- Pilz, M. (2017). Typologien in der international-vergleichenden Berufsbildungsforschung. Funktionen und ein neuer Ansatz. *Zeitschrift für Pädagogik*, 63(6), 761–782.
- Pool Maag, S., Kimmelman, N., Miesera, S., & Moser, D. (submitted). Inklusionsorientierter Umgang mit Diversität. Analyse von Kompetenzanforderungen an Lehrkräfte für berufliche Schulen. *Tagungsband der 7. Österreichischen Berufsbildungsforschungskonferenz*. Bertelsmann.
- Reetz, L. (1990). Zur Bedeutung der Schlüsselqualifikationen in der Berufsbildung. In *Schlüsselqualifikationen. Dokumentation des Symposiums in Hamburg „Schlüsselqualifikationen – Fachwissen in der Krise* (pp. 16–35). Feldhaus; New Edition.
- Roth, H. (1971). *Pädagogische Anthropologie*. Hermann Schroedel Verlag.
- Rychen, D. S., & Salganik, L. H. (2003). A holistic model of competence. In D. S. Rychen & L. H. Salganik (Hrsg.), *Key Competencies for a successful life and a well-functioning society* (pp. 41–62). Hogrefe & Huber.
- Schaper, N. (2009). Aufgabenfelder und Perspektiven bei der Kompetenzmodellierung und -messung in der Lehrerbildung. *Lehrerbildung auf dem Prüfstand*, 166–199. <https://doi.org/10.25656/01:14697>
- Schimke, B., Kremsner, G., Proyer, M., Grubich, R., Paudel, F., & Grubich-Müller, R. (2022). *Grenzen.Gänge.Zwischen.Welten. Kontroversen – Entwicklungen – Perspektiven der Inklusionsforschung*. Verlag Julius Klinkhardt.

- Shulman, L. S. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher*, 67, 4–14.
- Sturm, T. (2023). *Inklusion und Exklusion in Schule und Unterricht. Leistung – Differenz – Behinderung*. Kohlhammer Verlag.
- Terhart, E. (2002). *Standards für die Lehrerbildung. Eine Expertise für die Kultusministerkonferenz*.
- Vock, M., & Gronostaj, A. (2017). *Umgang mit Heterogenität in Schule und Unterricht*. (Bd. 40/2). <https://library.fes.de/pdf-files/studienfoerderung/13277.pdf>
- Weinert, F. E. (Hrsg.). (2001a). *Leistungsmessungen in Schulen*. Beltz.
- Weinert, F. E. (2001b). Concept of competence: A conceptual clarification. In D. Rychen & L. H. Salganik (Hrsg.), *Defining and Selecting Key Competencies* (pp. 45–65).
- Zoyke, A. (2016). Inklusive Berufsbildung in der Lehrerbildung für berufliche Schulen. Impressionen und Denkanstöße zur inhaltlichen und strukturellen Verankerung. In A. Zoyke & K. Vollmer (Hrsg.), *Befunde – Konzepte – Diskussionen* (Bd. 18, pp. 207–237). https://www.agbfm.de/de/agbfm_152646_149780.php

Biographical notes

Dr Nicole Kimmelman holds a professorship for Business Education at the Department for Business Education and Human Resource Management at FAU Erlangen-Nuremberg, Germany. Her main areas of research are: migration, diversity and inclusion in VET, (second) language learning/learners in VET, resilience and professional competence development connected to Work 4.0.

Dr Daniela Moser is a professor for Educational Sciences and Vocational Research at the University College of Teacher Education Styria, Institute for Educational Sciences. Her research interests are psychological aspects of teaching and learning, initial vocational teacher education and diversity in VET.

Dr Susanne Miesera coordinates the inclusive teacher training at the Technical University of Munich, School of Social Sciences and Technology. Her research focus is on inclusive teacher education and successful conditions for inclusion in schools with a focus on vocational schools.

Dr Silvia Pool Maag holds a professorship for Special Education with a focus on inclusion and diversity at the Department for Education, Research and Development at the PHZH Zürich, Switzerland. Her main areas of research are: inclusion and diversity in VET, transition from school to work of disadvantaged groups, supported education and research on inclusive classroom.

Nägele, C. Stalder, B., & Hänni, N. (2023). Finding the way into VET – career education. In C. Nägele, N. Kersh, & B. E. Stalder (Eds.), *Trends in vocational education and training research, Vol. VI. Proceedings of the European Conference on Educational Research (ECER), Vocational Education and Training Network (VETNET)* (pp. 180–187). <https://doi.org/10.5281/zenodo.8209167>

Finding the Way into VET – Career Education

Nägele, Christof

Christof.naegel@fhnw.ch, University of Applied Sciences and Arts Northwestern Switzerland, School of Education

Stalder, Barbara E.

barbara.stalder@phbern.ch, University of Teacher Education Bern

Hänni, Nicole

nicole.haenni@fhnw.ch, University of Applied Sciences and Arts Northwestern Switzerland

Abstract

Context: The standing of VET depends on a multitude of factors and differs significantly between countries and regions. This also impacts access to VET and whether students see VET as an option to continue their education and training or to start their careers. Students typically transition into VET either after the lower secondary or the upper secondary level. It is a transition from school to VET, and from an individual perspective, it is a transformation. There is a sound body of scientific work looking at the transition from school to work from different perspectives (e.g., policy, economy, and sociological perspectives). An often-neglected focus is on the challenges students face, the transformations they undergo in the transition, and the support they receive from parents and teachers in this situation.

Approach: We use data from two studies, a cross-sectional study with students heading towards a specialized school on the upper secondary level, www.infosetting-bl.ch. And a longitudinal study at www.digibe.ch, where we follow students at the lower secondary level over three years. The study started in autumn 2022, so the students are now in autumn 2023 at the beginning of their third year. The project focuses on reflection and transformation in and through career planning. In this paper, we report the first results on how parents and teachers were involved when irritating situations occurred in career planning.

Findings: We find that the role of teachers and parents is multifaceted, including guidance, support, and counselling. Both studies show, however, that teachers and parent rarely focus on future-oriented interventions; at least from the perspective of the students.

Conclusion: Career education is a concept that fits better to frame the work a teacher does in supporting their students in career planning. Two aims in career education are of high relevance: fighting the stereotypes many students have about iVET and VET and their ability to cope with irritating situations in career planning and career choice processes.

Keywords: transition, transformation, career education

The project digibe is supported by the State Secretariat for Education, Research and Innovation SERI (2021 – 2025).



1 Pathways into VET

The standing of iVET and VET differs substantially between countries and regions, taking into account common indicators such as the prestige of vocational education and training (VET) or the involvement of private partners (Stalder & Lüthi, 2020). This also impacts the enrolment in iVET and pathways to VET. Teachers, parents, and training companies are important gatekeepers young people need to rely on in their career planning, as they have no work experience. Formally, getting into iVET/VET is a transition from school to work, and it is, at the same time, a transformation of one's career-related knowledge and skills and vocational identity and personality (Stalder & Nägele, 2015). It is the first important step in designing a sustainable and self-determined career.

VET is, in many countries, seen as the optimal way to integrate young people with low skills that are hard to educate and train or who have physical or mental handicaps. In other countries, VET offers sustainable educational and career pathways also to very talented young people. Often, iVET and VET are seen as an opportunity to support the local economy, fight youth unemployment, or give all young people access to work and is therefore also a policy issue (Bonoli & Vorpe, 2022). However, we see more reports from different countries that VET becomes less attractive – or less chosen by young people – compared to academic educational pathways (e.g., BIBB, 2023; Billett et al., 2022).

Education systems and policies shape pathways into iVET/VET. It is a trivial statement that education systems differ, as they are always embedded in and shaped by regional and country-specific contexts. Regardless of these particularities, there are some commonalities in career planning in young people. First, teachers and parents play an important role in shaping a student's educational pathway (Stalder et al., 2023, in this volume). Second, from an individual's perspective, moving from school to work is a development and learning process that leads not only to the acquisition of career-related knowledge and skills but also changes the individual and her or his personality.

Career planning of young people relies on the support of others, mainly parents, teachers, career counsellors or training companies (Von Wyl et al., 2018). The parents' social origin can alter career options significantly, besides other factors such as school marks (Ohlemann, 2021). Without support from career counsellors or teachers, young people, e.g. tend to make career decisions that are heavily biased by their social origin or the socio-economic status of their family (Hirschi, 2009). Supporting young people in their career planning is also a way to fight inequality in educational pathways and career planning.

This is the background against which young people start planning their careers, typically at the lower or upper secondary school level. From an individual perspective, it is ideally a question of becoming and shaping the vocational career in accordance with life planning. Students should reflect on and make sense of their career planning. But reflection is not a self-running process (Hell, 2009). And as all these changes can touch the core identity of a person, it is transformative learning. This is complicated as a person has to deal with „the most significant and decisive linking between the individual and society and at the same time of crucial importance for the understanding of learning in general and of transformative learning in particular” (Illeris, 2014, p. 155).

It is, therefore, important to address questions on how young people find their way into iVET/VET whilst they are still in school. This paper reports on two studies that look at how young people see their pathway into iVET. Study one focuses on how young people heading towards an academic track distance themselves from the option iVET, and study two looks at the interaction and exchange they have with their parents.

1.1 From career counselling to career education

In many countries, a lot of effort is invested in guiding young people into iVET/VET. Often, career counsellors and teachers play a crucial role in this process (Stalder et al., 2023). Generally, career counselling aims at establishing „a professional relationship that empowers diverse individuals, families, and groups to accomplish mental health, wellness, education, and career goals” (Kaplan et al., 2014, p. 368). If it comes to the transition from school to work, either on the lower or upper secondary school level, we see that career counselling is mainly directed at getting young people into education and work, as was already the case years ago (Heinz et al., 1985). This makes sense, as the pathway to VET is in many countries regulated, aiming at integrating young people into work (Bonoli & Vorpe, 2022).

There is often less emphasis on developing an individual’s perspective, identity and career outlook. The focus is on getting employable. As Guichard (2022) puts it, this kind of counselling aims at the „sole final purpose of helping people enter the job market and manage their employability and careers” (p. 133). One reason for that is that employability, for good reasons, is given high attention. Consequently, tools that help to narrow down career decisions quickly are in high demand. These can be, e.g., tools of the family of self-guided career exploration techniques (Spokane & Holland, 1995), based on Holland’s theory of vocational choice (Holland, 1959). Again, these are perfect tools if we aim to help young people develop their employability and to help them to integrate into jobs (Guichard, 2022) or, in the case of iVET, into job-related educational programmes.

But, one aspect is often missing (Nägele et al., 2022), as career interventions should not only aim at „(a) finding relevant information to direct paths ..., (b) constructing adaptable self-constructs for employability” but also (c) „to clarifying what gives long-term meaning and reflecting on the role and place of work in their lives” (Young & Mundy, 2023, p. 86). This idea also goes back to Super and the life span and life space career development (Super, 1980). During life, in time and space, an individual has different roles and activities. Giving meaning to a career, making a career narratable (Savickas et al., 2009) consequently needs to be positioned within the frame of the personal life. If we aim at empowering young people to shape their careers actively, career education should aim at fostering individual reflection in a world with an unpredictable future and a fast-changing economy (Guichard, 2022). The discussion on the impact of AI on the economy and jobs and the high demands imposed on an individual’s competencies makes it even more relevant.

It, therefore, becomes highly relevant for VET how young people are supported in finding access to iVET/VET. We often find interventions aiming at (a) finding information or (b) becoming employable, at least in the Swiss-German context (Nägele & Schneitter, 2016). A picture that, according to Guichard (2022), can be found in many countries. To work on the (c) long-term meaning is often harder. A student’s question, „What do I want to become?” needs to shift to the question, „How do I learn to think and build a sustainable career?”. It is about sense-making and reflection and designing a career (Savickas et al., 2009).

If it comes to education, teachers often slip into the role of coordinators or career counsellors and often also into the role of parents at the same time. But can they or should they be kind of counsellors? The core competencies of teachers are education and training. So, the more appropriate term would be career education. Career education aims at providing „students with opportunities to gain diverse insights into the multiple ways in which social, political and economic discourses shape and position concepts of self, career, opportunity and justice” (Irving, 2010, p. 15). Career education is about building future-oriented competencies that allow people to adapt to changes in their educational pathway and work. The focus is on preparing individuals to design their careers (Marciniak et al., 2020). If it comes to education, teachers often slip into the role of coordinators, career counsellors and often also into the role of parents at the same time. But can they or should they be kind of counsellors? The core competencies of

teachers are education and training. So, the more appropriate term would be career education. Career education aims at providing „students with opportunities to gain diverse insights into the multiple ways in which social, political and economic discourses shape and position concepts of self, career, opportunity and justice” (Irving, 2010, p. 15). Career education is about building future-oriented competencies that allow people to adapt to changes in their educational pathway and work. The focus is on preparing individuals to design their careers (Marciniak et al., 2020).

In the transition from school to work, there is often a high pressure – imposed by the individual, parents, society, or economy – to find further education or employment. It is, therefore, for many teachers important to support and consult students based on their individual needs with the aim of helping them cope with the current situation and to lead them to a connecting solution in education and training (Nägele et al., 2022). This is, however, not career education, but career counselling, as individuals are enabled in a given moment „to cope with a problem that is specific for them” (Guichard, 2001, p. 157). Career guidance aims to unleash the vocational potential of an individual for the person itself and the world at large (Perera & Athanasou, 2019, p. 1).

At first sight, it is compelling to ask teachers to guide and coach their students on their pathway through education and training and into VET. But coaches typically act on the request of a client. It is the client who searches for support from a counsellor if something significant changes and if he feels the need to be supported (Lang-von Wins & Triebel, 2012). This kind of freely chosen relationship is not given between students and teachers. Furthermore, coaching asks for a profound education and training that is not part of teacher education.

Career planning, learning and development are embedded in different ecological contexts (school, family, society, culture (environments in the sense of Bronfenbrenner, 1986 as developmental contexts). There are many forces wanting young people to continue their education and training and pushing them into work. Education is the way to achieve that.

1.2 Relevance to VET

Career management requires more and more self-management skills with the ability to be self-directed, value-driven, and flexible (Hirschi & Koen, 2021). Furthermore, we see that pathways from school to work are diverse and not always linear (Nägele & Stalder, 2017). In Switzerland, for example, this is reflected in statistics and studies on educational pathways (Laganà & Babel, 2018), on drop-out from apprenticeship (Deppierraz, 2021; Schmid & Stalder, 2012; Stalder & Schmid, 2016), or statistical numbers showing a lot of changes and movement not only in iVET on the lower secondary but also in transition from academic education on the lower secondary to the tertiary level and within the first years on the tertiary level (Wolter et al., 2023).

Topical conceptions of curricula in iVET and VET are competence-oriented and demand a high degree of self-directed learning, not only in developing vocational competencies, but also in planning continuing or higher education (Nägele et al., 2018).

We miss a chance if career guidance at schools focuses mainly – and often only – on getting young people into a specific job. Reflection, critical thinking and also, learning how to handle one’s career should be as present in the career choice process. In the Swiss context, the need to develop these career competencies was expressed by many cantons in a nationwide survey (Nägele & Schneitter, 2016). Interestingly, in the French part of Switzerland, it was more stressed that young people need to develop citizenship behaviour and the need to reflect critically on how to become a member of society. In the Swiss-German part of Switzerland, the focus was clearly on getting a job. These differences may be subtle but represent the two ways of thinking that Guichard (2022) positions as developing skills to start and maintain a career versus supporting young people in getting a job. The latter has a narrower focus on doing a transition but

underestimates the transformative processes of an individual that are needed to develop from a student to a self-reflective and self-directed learner with respect to professional and career-related competencies.

2 Case studies

In the following part, we will present the voices of students at the lower secondary school level that show how they see the standing of iVET compared to the academic track and how they interact with parents and teachers in case of irritating experiences during the vocational choice process. It is a first glance at the data. These are examples of challenges that should be addressed in career education when working with students.

2.1 The standing of VET

In a prior presentation on young people's reasoning and career decisions in favour of a school-based education instead of apprenticeship training (iVET) in a Swiss-German canton (Nägele & Rodcharoen, 2018), we showed, based on a sample of 615 students in grade 11, aged 15 to 16, that many young people wanting to access an upper secondary specialized school (academic track), have often very negative and stereotypical views on iVET and VET. Although vocational orientation is a school subject in the lower secondary, students tell us that they have no idea about options to continue their education and training in iVET. Two-thirds of these students have only very vague educational and vocational goals. Asked about their career decisions, many students simply told us that they like going to school and do not see iVET as a desirable alternative. They see iVET as mostly oriented towards developing practical skills, not allowing them to develop competencies on which they can build their career. One student put it like that: „The daily work makes it less attractive; I couldn't go on with 'normal' school and experience everyday school life". Some say that trainers and teachers in iVET are not competent, as they would have no training to educate young people. Teachers at schools in the academic track, on the other side, would be trained to support their student's educational advancement. Of course, iVET trainers and teachers are educated and trained, but this seems not to be known to many students. Asked whether they could imagine attending iVET instead of attending the academic, school-based track, most of these students deny it, as they see mainly negative aspects like the need to work for an employer, the need to work for long hours, with less free time and holidays, or also the risk to get dirty hands when working manually. One student told us that he hopes he will never be in that situation, as he would be extremely disappointed in himself.

This shows that even in a country with a long-standing tradition and generally a high reputation of VET, VET has only little support from talented young people. For these young people, it is not self-evident that they could also head towards apprenticeship training to start their careers. They have grades allowing them to continue their education on the academic track. So, they do it.

2.2 Parents and Teacher

In the ongoing project www.digibe.ch, students were asked to report on irritating situations in the career choice process (Nägele et al., 2022). There is a total of 2'290 irritating situations reported by the participating students within a two-year observation period. Out of these situations, 50% triggered reflection about career planning and own emotions. 33% were linked to curricular activities such as attending work experience days or writing applications. 17%, N = 349 of the reported irritating situations were on interaction issues with parents 26%, N = 104, teachers, 4%, N = 16, peers, 6%, N = 23 and significant others 64%, N = 251. Overall, we see that if it comes to an irritating situation making young people think about that situation for a

longer time or discuss it with other people, it seldom comes from within the family or from within the school. We cannot conclude that children and parents do not speak about career planning. But it is seldom something that leads to a longer-lasting irritation that's worth to be reported. Situations reported can be neutral, e.g. „I had to decide what occupations are of interest to me; I had to ask my parents to sort it out” (HLDAE), negative from the perspective of the young person, e.g. „My father only talks to me when it is about my future jobs” (VADHV), „My parents looked at me strangely when I told them that I wanted to attend a school on the upper secondary level. They told me that I had to do an apprenticeship training and then later attend courses in continuing education” (ODCSR), or positive, e.g. „I was confused after an appointment with a career counsellor, as he mentioned many more educational options than I expected. I discussed it with parents and relatives, which was very helpful” (TFHJV). The important point here is that we see the mechanism of how parents influence their children's decisions. In most situations reported by students, they are engaged in a „neutral” discussion with their parents (74%, N = 77). „Neutral” means that children and parents openly discuss issues without parents pushing their child in a specific direction. The advantages and disadvantages of certain occupations are discussed. Positive situations are when a solution pops up in the interaction with parents when the next step becomes possible, 17%, N = 18. And there are only very few reports about quarrels with parents, 9%, N = 9.

If it comes to irritating situations with teachers that were reported, they were even fewer than with parents. Situations are, e.g., when a teacher tries to convince a student not to attend an apprenticeship training (iVET) but to go to a gymnasium (academic track), or teachers that first tell students trying to realize the dream job and later tell them, that they need to take whatever is available to them. Situations with teachers are reported when they make a harsh intervention or if they make statements that are seen as contradictory by students. It is interesting to note that this is in line with the view students have about their teachers if we ask them explicitly about the role their teacher has. We present the first results on that in the paper of Stalder, Gaupp and Nägele (2023, in this volume).

3 Conclusion

In a school context, the concept of career education seems to be compelling. It can serve as an umbrella term integrating career guidance, coaching and similar adapted to the core competencies of a teacher. There is a tendency, exemplified with reference to Guichard (2022) career support tends to solve current problems, which is the transition from school to work. Investing in the ability of young people to design their careers and develop future-oriented competencies often comes off too short. Developing these competencies relies on students' reflection and on their career planning and transformative learning processes. Career planning is a biographical long-term project (Ertl, 2023), and reflection helps to sustainably promote other career interventions (Kunert & Sommer, 2023; Stalder et al., 2022).

Career education has, amongst others, the aim, at least in Switzerland, to reduce the stereotypical view of vocational education and training. This is especially the case for students with academic achievements that allow them to either attend the vocational or academic track. Otherwise, iVET/VET will become less and less attractive for this group of young people. Second, career education should address handling critical situations in career planning. It cannot be the task of a teacher to solve these problems, but it must be the task of a teacher to educate and train their students to cope with these situations themselves.

References

- BIBB. (2023). *Bundesinstitut für Berufsbildung. Jahresbericht 2022*. Bundesinstitut für Berufsbildung (BIBB). <https://www.bibb.de/dienst/publikationen/de/download/19071>
- Billett, S., Stalder, B. E., Aarkrog, V., Choy, S., Hodge, S., & Le, A. H. (Eds.). (2022). *The standing of vocational*

- education and the occupations it serves. *Current concerns and strategies for enhancing that standing*. Springer Natur. <https://doi.org/https://doi.org/10.1007/978-3-030-96237-1>.
- Bonoli, L., & Vorpe, J. (2022). Staatliche Regulierung und Autonomie der Akteure im Schweizer Berufsbildungssystem aus historischer Perspektive. In H. Bremer, R. Dobischat, & G. Molzberger (Eds.), *Bildungspolitik: Spielräume für Gesellschaftsformation in der globalisierten Ökonomie?* (pp. 127–147). Springer Fachmedien. https://doi.org/10.1007/978-3-658-36909-5_7
- Bronfenbrenner, U. (1986). Ecology of the family as a context for human development: Research perspectives. *Developmental Psychology*, 22(6), 743–748.
- Deppierraz, R. (2021). *Lehrvertragsauflösung, Wiedereinstieg, Zertifikationsstatus. Resultate zur dualen beruflichen Grundbildung (EBA und EFZ)*. Bundesamt für Statistik (BFS).
- Ertl, H. (2023). *Berufliche Orientierung als biografisches Langzeitprojekt*.
- Guichard, J. (2001). A century of career education: Review and perspectives. *International Journal for Educational and Vocational Guidance*, 1, 155–176.
- Guichard, J. (2022). Support for the design of active life at a turning point. *Studia Poradnawcze/Journal of Counselling*, 11, 133–146. <https://doi.org/10.34862/sp.2022.1>
- Heinz, W. R., Krüger, H., Rettke, U., Wachtveitl, E., & Witzel, A. (1985). »Hauptsache eine Lehrstelle«. Jugendliche vor den Hürden des Arbeitsmarkts. *Heinz, 1985*.
- Hell, B. (2009). Selbsttests zur Studienorientierung: Nützliche Vielfalt oder unnützer Wildwuchs. In G. Rudinger & K. Hörsch (Eds.), *Self-Assessment an Hochschulen: Von der Studienfachwahl zur Profilbildung* (pp. 9–20). V&R Unipress, Bonn University Press.
- Hirschi, A. (2009). Was macht Jugendliche fit für die Berufswahl. *Panorama*, 4, 13–14.
- Hirschi, A., & Koen, J. (2021). Contemporary career orientations and career self-management: A review and integration. *Journal of Vocational Behavior*, 126, 103505. <https://doi.org/10.1016/j.jvb.2020.103505>
- Holland, J. L. (1959). A theory of vocational choice. *Journal of Counseling Psychology*, 6(1), 35–45.
- Illeris, K. (2014). Transformative learning and identity. *Journal of Transformative Education*, 12(2), 148–163. <https://doi.org/10.1177/1541344614548423>
- Irving, B. A. (2010). Making a difference? Developing career education as a socially just practice. *Australian Journal of Career Development*, 19(3), 15–23. <https://doi.org/10.1177/103841621001900304>
- Kaplan, D. M., Tarvydas, V. M., & Gladding, S. T. (2014). 20/20: A Vision for the Future of Counseling: The New Consensus Definition of Counseling. *Journal of Counseling & Development*, 92(3), 366–372. <https://doi.org/10.1002/j.1556-6676.2014.00164.x>
- Kunert, C., & Sommer, J. (2023). Reflexion stärkt Wirksamkeit von Potenzialanalysen. *BWP*, 2, 32–34.
- Laganà, F., & Babel, J. (2018). *Bildungsverläufe auf Sekundarstufe III Längsschnittdatenanalysen im Bildungsbereich*. Bundesamt für Statistik (BFS).
- Lang-von Wins, T., & Triebel, C. (2012). *Karriereberatung: Coachingmethoden für eine kompetenzorientierte Laufbahnberatung; mit 7 Tabellen* (2., aktualisierte und erw. Aufl.). Springer.
- Marciniak, J., Johnston, C. S., Steiner, R. S., & Hirschi, A. (2020). Career preparedness among adolescents: A review of key components and directions for future research. *Journal of Career Development*, 1–23. <https://doi.org/10.1177/0894845320943951>
- Nägele, C., Neuenschwander, M. P., & Rodcharoen, P. (2018). Higher education in Switzerland: Predictors of becoming engaged in higher vocational or higher academic education – the role of workplace factors. *International Journal for Research in Vocational Education and Training*, 5(4), 264–284. <https://doi.org/10.13152/IJRVET.5.4.2>
- Nägele, C., & Rodcharoen, P. (2018). *Young people's reasoning and career decisions in favour of a school-based education instead of an apprenticeship*. European Conference on Educational Research (ECER), Bolzano, IT.
- Nägele, C., & Schneitter, J. (2016). *Schul- und Berufsorientierung in den Kantonen. Schlussbericht zuhanden der Schweizerischen Konferenz der kantonalen Erziehungsdirektoren EDK*. Pädagogische Hochschule FHNW, Institut Forschung und Entwicklung.
- Nägele, C., & Stalder, B. E. (2017). Übergänge in die Berufsbildung – ein Arbeitsmodell. In M. P. Neuenschwander & C. Nägele (Eds.), *Bildungsverläufe von der Einschulung bis in den ersten Arbeitsmarkt* (pp. 21–36). Springer Fachmedien. <https://doi.org/10.1007/978-3-658-16981-7>
- Nägele, C., Stalder, B. E., Hoffelner, C., & Düggeli, A. (2022). Irritations in the career choice process and transformative learning. In C. Nägele, N. Kersh, & B. E. Stalder (Eds.), *Trends in vocational education and training research, Vol. V. Proceedings of the European Conference on Educational Research (ECER), Vocational Education and Training Network (VETNET)* (pp. 142–149). <https://zenodo.org/record/6977532>
- Ohlemann, S. (2021). *Berufliche Orientierung zwischen Heterogenität und Individualisierung: Beschreibung, Messung und Konsequenzen zur individuellen Förderung in Schule*. Springer Fachmedien Wiesbaden. <https://doi.org/10.1007/978-3-658-33039-2>
- Perera, H. N., & Athanasou, J. A. (2019). Introduction: An international handbook of career guidance. In J. A.

- Athanasou & H. N. Perera (Eds.), *International Handbook of Career Guidance* (pp. 1–22). Springer International Publishing. https://doi.org/10.1007/978-3-030-25153-6_1
- Savickas, M. L., Nota, L., Rossier, J., Dauwalder, J.-P., Duarte, M. E., Guichard, J., Soresi, S., Van Esbroeck, R., & van Vianen, A. E. M. (2009). Life designing: A paradigm for career construction in the 21st century. *Journal of Vocational Behavior*, 75(3), 239–250. <https://doi.org/10.1016/j.jvb.2009.04.004>
- Schmid, E., & Stalder, B. E. (2012). Dropping out from apprenticeship training as an opportunity for change. In P. Tynjälä, M.-L. Stenström, & Saarnivaara (Eds.), *Transitions and Transformations in Learning and Education* (pp. 117–130). Springer. <https://doi.org/10.1007/978-94-007-2312-2>
- Spokane, A. R., & Holland, J. L. (1995). The self-directed search: A family of self-guided career interventions. *Journal of Career Assessment*, 3(4), 373–390. <https://doi.org/10.1177/106907279500300409>
- Stalder, B. E., & Lüthi, F. (2020). Job resources and career success of iVET graduates in Switzerland: A different approach to exploring the standing of VET. *Journal of Vocational Education & Training*, 72(2), 189–208. <https://doi.org/10.1080/13636820.2020.1721735>
- Stalder, B. E., & Nägele, C. (2015). Berufliche Identität, Commitment und Engagement [Occupational identity, commitment and engagement]. In M. Fischer, F. Rauner, & Z. Zhao (Eds.), *Kompetenzdiagnostik in der beruflichen Bildung—Methoden zum Erfassen und Entwickeln beruflicher Kompetenzen* (pp. 259–273). LIT Verlag.
- Stalder, B. E., & Nägele, C. (2023). Teachers and their role in the career choice process. In C. Nägele, N. Kersh, & B. E. Stalder (Eds.), *Trends in vocational education and training research, Vol. VI. Proceedings of the European Conference on Educational Research (ECER), Vocational Education and Training Network (VET-NET)*. VETNET. <https://doi.org/10.5281/zenodo.8209176>
- Stalder, B. E., Nägele, C., Marciniak, J., Schmid, S., Hell, B., & Pässler, K. (2022). *Reflexion im Berufswahlprozess—Notwendig und doch so schwierig. Dokumentation der Tagung*. PHBern, PH FHNW, APS FHNW. <https://zenodo.org/record/7413844>
- Stalder, B. E., & Schmid, E. (2016). Lehrvertragsauflösung und Ausbildungserfolg - kein Widerspruch. Wege und Umwege zum Berufsabschluss. hep.
- Super, D. E. (1980). A life-span, life-space approach to career development. *Journal of Vocational Behavior*, 16, 282–298. [https://doi.org/10.1016/0001-8791\(80\)90056-1](https://doi.org/10.1016/0001-8791(80)90056-1)
- Von Wyl, A., Sabatella, F., Zollinger, D., & Berweger, B. (2018). Reif für den Beruf? Schwierigkeiten und Ressourcen von Jugendlichen im Berufswahlprozess. In F. Sabatella & A. Von Wyl (Eds.), *Jugendliche im Übergang zwischen Schule und Beruf* (pp. 1–21). Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-662-55733-4_1
- Wolter, S. C., Denzler, S., Wolter, S. C., Albiez, J., Cattaneo, M. A., Denzler, S., Diem, A., Lüthi, S., Oggenfuss, C., Schnorf, R., Weibel, L. A., & Schüpbach, A. (2023). *Bildungsbericht Schweiz 2023*. SKBF | CSRE Schweizerische Koordinationsstelle für Bildungsforschung.
- Young, R. A., & Mundy, A. K. S. (2023). Action and the active life: The contribution of contextual action theory to current career development challenges. *Australian Journal of Career Development*, 32(2), 85–93. <https://doi.org/10.1177/10384162231172514>

Biographical notes

Dr Christof Nägele is a senior lecturer and researcher at the University of Applied Sciences and Arts Northwestern Switzerland, School of Education. He is co-chair of the European researchers VETNET. His research interests focus on VET, vocational choice, adjustment processes, social and group processes in VET, and transferable skills.

Dr Barbara E. Stalder is a full professor in educational and social science at the Institute of Upper Secondary Education at the Bern University of Teacher Education, Switzerland. She is co-chair of the European researchers VETNET. Her research interests focus on learning in the workplace and school, student engagement, and career development in and after vocational education.

Nicole Hänni is a research assistant in the project www.digibe.ch.

Navas Saurin, A. A., Abiétar López, M., Bernad i Garcia, J. C., Cordoba Iñesta, A. I., Giménez Urraco, E., & Meri Crespo, E. (2023). Analysis of student engagement in VET in the region of Valencia (Spain). In C. Nägele, N. Kersh, & B. E. Stalder (Eds.), *Trends in vocational education and training research, Vol. VI. Proceedings of the European Conference on Educational Research (ECER), Vocational Education and Training Network (VETNET)* (pp. 188–195). <https://doi.org/10.5281/zenodo.8209093>

Analysis of Student Engagement in VET in the Region of Valencia (Spain)

Navas Saurin, Almudena A.

almudena.navas@uv.es, Universitat de València

Abiétar López, Míriam

miriam.abietar@uv.es, Universitat de València

Bernad i Garcia, Joan Carles

joan.c.bernad@uv.es, Universitat de València

Cordoba Iñesta, Ana I.

ana.cordoba@uv.es, Universitat de València

Giménez Urraco, Elena

elena.gimenez@uv.es, Universitat de València

Meri Crespo, Esperanza

esperanza.meri@uv.es, Universitat de València

Abstract

Context: Given the high rate of Early School Leaving in Spain, the analysis of student engagement acquired special relevance in the educational field, since it allows the analysis of educational pathways by delving into the processes that can lead to school dropout. Although this analysis has been mainly focused on Primary and Secondary Education, we focus on Vocational Education and Training as an educational context that allows the beginning of a professional career.

Approach: The study has been developed in the province of Valencia within the framework of a stateresearch project with continuity at an autonomous level. The main objective of this research is the analysis of the itineraries of the Vocational Training students in level 1 (Basic Vocational Education and Training, hereinafter, BVET) and 2 (Intermediate Vocational Education and Training, hereinafter, IVET). The research follows a longitudinal methodology that has been prolonged for three years and that includes analysis of official data, passing of questionnaires and conducting discussion groups. The data presented in this presentation correspond to the first round of questionnaires, obtained in the 2016-2017 academic year.

Findings: We carried out a differential analysis in relation to the student engagement between both levels of Vocational Education and Training starting from the general hypothesis that there will be a greater school engagement among the students of Intermediate Level Vocational Training.

Conclusion: The results obtained have allowed us to confirm our initial hypothesis; however, we will highlight nuances in each of the dimensions of student engagement.

Keywords: Vocational Education, Prevocational education, Student engagement, Differential analysis.



1 Introduction

One of the most critical indicators of our education system is the Early School Leaving (hereinafter, ESL) rate, which refers to the percentage of the population aged 18-24 who have not completed any post-compulsory secondary education and are not involved in any kind of training. Spain has the highest rate among European countries: 17.3% in 2019 (Ministry of Education and Vocational Training [in Spanish, MEFP], 2020). This indicator is still well above the European average, which stood at 10.3% in 2019, although it has gradually fallen in recent years. In 2008, it reached 31.7% and in the years covered by this study, it has fallen from 19% in 2016 to 18.3% in 2017 and 17.9% in 2018.

Faced with this situation, the fight against ESL is now one of the strategic objectives of the current European framework for Education and Training ET2020. More specifically, this objective states that it is necessary to „strengthen preventive approaches, establish closer cooperation between the general education and vocational training sectors and remove barriers that prevent early school leavers from returning to education and training“. It aims to reduce dropout rates to below 10%, while in Spain the target figure is 15%. This interest shows the EU's concern for post-compulsory education as a key factor in the transition between training and employment, since compulsory schooling is a necessary but insufficient condition for guaranteeing success in society and employment.

In this context, significant attention has been paid in recent years to the study of student engagement, understood here as involvement (bonding, engagement, commitment) in the educational process from different levels and structures (Reschly & Christenson, 2012; Fredricks et al., 2019) owing to its relevance for understanding the diversity of pathways students follow. In particular, research on engagement makes it possible to study the phenomena of absenteeism, failure and ESL in greater detail.

Although school disengagement starts to develop in primary school, it is in secondary school where it becomes more visible and starts to generate difficulties in classroom management (González & Cutanda, 2015; Salvà-Mut et al., 2014). It is a gradual process of disengagement from learning and school life. It involves different factors and gradually distances students from a positive educational experience (Rumberger, 2011). Students in this situation are not a homogeneous group even though they share socio-economic, family, cultural and academic factors considered 'risk factors'. In a review of the state of the art, González (2017) points out that the heterogeneity of these students is evident and leads to different measures and support.

On the other hand, Ramos-Díaz et al., (2016, p. 349) conclude that, „Family support and peer support activate general self-concept as a mediating variable which, together with the influence of teacher and family support, directly affects school engagement“. The results of this study reveal the important mediating role of general self-concept in the indirect influence social support has on school engagement. Thus, it is worth emphasising the importance of the teaching role (proximity, support given to students and confidence in their abilities) in motivating students —especially those with previous negative educational experiences- and increasing their engagement (Truta et al., 2018; Van Houtte & Demanet, 2015). Similarly, in a recent study, Gil et al., (2021) first of all highlight the existence of a direct relationship between students' socialisation skills and their commitment to the education system and, secondly, the mediating role played by family support in the link between students' skills and their behavioural commitment.

Thirdly, they emphasise that the analysis of school engagement is sometimes reduced to measuring good school behaviour, and less observable cognitive, affective or emotional aspects are neglected. The work of Aina Tarabini and her team (Curran, 2017; Tarabini et al., 2019) suggests focusing on these three dimensions and studying them together to gain an overall view that might offer relevant information. Their work points out that the 'centre effect' acts on (dis)engagement and it follows that both the social composition and the mechanisms of

attention to diversity influence the process. It is important to remember, therefore, that the type of working dynamics followed at school can be a determining factor for engagement.

Finally, bearing in mind that the lack of student engagement cannot be attributed to one single cause, it is also worth noting the importance of one of these causes, which „has to do with a school curriculum compartmentalised into subjects, with a very academic imprint, disconnected from the student's life outside school and often developed in classrooms with 'traditional' methodologies“ (González & Cutanda, 2015, p. 15). It seems logical to deduce that if these teaching-learning dynamics do not work in primary education, a different approach should be considered for secondary and vocational education and training (VET) to extend students' permanence in the education system and improve their academic achievements.

Based on the relevance of engagement as a concept that allows us to address learning pathways and the specific processes that can lead to ESL, absenteeism and/or school failure, in this paper we address the concept in different FP contexts. Accordingly, we consider the relevance of this training as a strategic area, as a safety net (Cedefop, 2016, 2020) capable of reducing high ESL and school failure rates, thus favouring permanence in or a return to the education system. In turn, this would lead to an increase in the level of qualification of the population and the inclusion of young people at risk of educational exclusion in society and employment.

Despite the role of VET as a context for reducing ESL in Spain and Europe, students' pathways are not monitored to determine completion or drop-out rates at this level. The lack of a specific indicator for ESL in VET and/or of more information in the indicators already available (Cedefop, 2016), together with the scarcity of research on educational practices that can prevent drop-out at this level in Spain (Pinya et al., 2017), makes it difficult to obtain detailed knowledge of the pathways students follow. On the one hand, this hinders the proposal of specific policies to help reduce ESL in these contexts. On the other, it makes it difficult to study VET in our education system. Thus, we believe this level of education should be valued not only as a preventive policy to remedy what happens in Compulsory Secondary Education and tackle a structural problem that affects our education system, but also as a level per se that offers training for a professional career. Therefore, our main aim is to analyse the learning pathways of BVET and IVET and compare student engagement between the two levels in all three areas: cognitive, affective and behavioural. We start with the hypothesis whereby the level of school engagement in all three areas will be higher in IVET.

2 Method

This presentation presents the main results obtained in the first phases of the state research project titled „Pathways that lead to success and drop-out in level-1 and level-2 Vocational Training of the education system“ (EDU2013-42854- R), led by the research group Educació i Ciutadania of the University of the Balearic Islands. The objectives of the project were to obtain new knowledge on the phenomenon of school drop-out in FP and develop action proposals to prevent, control and correct the phenomenon. In Valencia, the research was continued through the regional project titled „Pathways that lead to success and drop-out in level-1 and level-2 Vocational Training of the education system of the province of Valencia“, funded by the Regional Department of Education, Research, Culture and Sport of Valencia (GV/2018/038). Based on the state research project, this study consists of two phases:

- Statistical data analysis and mapping of student registrations for VET levels 1 and 2. In the province of Valencia, the available data with which we started the project is for the 2016-17 academic year.
- Three-year longitudinal questionnaire survey. In the province of Valencia, the Q1 questionnaire was carried out during the 2016-17 academic year, Q2 was carried out during the 2017-18 academic year and Q3 during 2018-19.

The data presented in this contribution corresponds specifically to the Q1 results obtained in the 2016-17 academic year. As for the relevance and topicality of the results presented here, it should be noted that the research continued until the 2018-19 academic year, when we completed the third round of questionnaires. It was from this academic year onwards that we had all the data, which allowed us to start the analysis strategy and study the pathways of FP students in greater detail. Here, we aim to show the differences in student engagement between students studying IVET and those studying BVET, based on the general hypothesis of disengagement among the latter being higher. Likewise, we must understand this work as a descriptive and exploratory approach to both groups that allows an initial approach to the study of FP pathways from the possibilities offered by student engagement. Given the multifaceted nature of the concept referred to above, we have looked at some of its influences, understanding it as adaptation to the school context or the degree to which students are engaged with the school and their own learning process. Following Reschly & Christenson (2012), we can differentiate three dimensions of student engagement (emotional; behavioural and academic; and cognitive).

2.1 Sample

When designing the project, we stratified the sample according to three criteria: professional family; geographical distribution (inside or outside the metropolitan area of Valencia); and ownership of the school. In order to have as representative a sample as possible, we also included Secondary Education Schools (in Spanish, IES) and Integrated Public Vocational Training Centres (in Spanish, CIPFP). With these stratification criteria, we started with the student registration data provided by the Directorate General for Vocational Training and Special Regime Education (in Spanish, DGFPERE) at both level 1 (BVET) and level 2 (IVET) to choose the centres at which to collect data for Q1.

According to official data, the population of our study in BVET was 5,288 students registered in the first year of BVET in the province of Valencia for the academic year 2016- 2017. The optimal sample design, with a confidence level of 95% and a sampling error of 3%, indicated that we needed to obtain a total of 894 questionnaires. However, a total of 737 questionnaires were obtained, which gives an actual sampling error of 3.35%. The planned sampling points were distributed among 43 schools and 73 classes, but since two private schools chose not to participate in the project, the questionnaires were finally collected at 41 schools and 71 classes.

According to official data, the population of our study in IVET was 21,246 students registered in the first year of IVET in the province of Valencia for the academic year 2016- 2017. The optimal sample design, with a confidence level of 95% and a sampling error of 3%, indicated that we needed to obtain a total of 1,028 questionnaires. We actually obtained 1,240 questionnaires, which gives an actual sampling error of 2.27%. The planned sampling points were distributed among 43 schools and 85 classes. At this level, all the centres contacted agreed to take part.

2.2 Instrument

The questionnaire (Q1) covers three dimensions of engagement (behavioural and academic, emotional and cognitive) through 13 sub-dimensions. The items are answered on a Likert-type scale with four responses possible: strongly disagree, disagree, agree and strongly agree.

- Behavioural and academic dimension, in reference to the level of commitment and involvement the student thinks he/she shows at behavioural and academic level. This dimension is broken down into:
 - Academic effort: which refers to the level of effort each student puts into the tasks to be performed.

- Indiscipline: refers to disruptive behaviour in the classroom (misbehaviour in class, cheating in exams or unjustified absences).
- Academic adherence: which measures the predilection to attend school or not.
- Participation in leisure and free time activities outside school: in reference to whether they spend several hours a week (or not) on activities (sport, music, gymnasium, etc.).
- Participation in extracurricular activities at school.
- Emotional dimension, in reference to the emotional involvement the student feels he/she has in their studies. This dimension is broken down into:
 - Teacher relations: focusing on how they treat, communicate with and approach their teachers.
 - Peer relations: in reference to their proximity and communication with the class-group.
 - Family support: focusing on how the family cares for and supports the students when they encounter difficulties and how they take an interest in their progress.
 - Perception of parental engagement: this refers to the extent to which families support the student in trying to succeed at school.
- Cognitive dimension, in reference to the commitment the student thinks he/she has with his/her studies at a cognitive level. This dimension is broken down into:
 - Monitoring and relevance of academic work: this concerns the completion of tasks and the effort put into them.
 - Future aspirations and achievements and expectations of professional results: perception of their studies as a good option at a professional level and for the future.
 - Intrinsic motivation: motivation for what they are doing as a purpose in itself.
 - Professional identity: perception of how well-suited their studies are to their personal characteristics, as well as how attractive their studies are.

There are also four other dimensions:

- Personal and family characteristics, which refers to variables traditionally related to the risk of early school leaving: sex, age and family situation, specified in the level of education and the employment situation of the mother and father.
- Studies, focusing on the educational pathway prior to FP studies when the questionnaire was taken.
- Employment and training pathway, related to the students' situation in employment and/or training, distributed monthly throughout the year before the questionnaire was taken
- Life events, which take the form of relevant events in the subject's pathway.

2.3 Procedure

The questionnaire was handed out on paper and completed by the students in the presence of at least one person from the research team and a person of reference from the school, usually the tutor of each group. In the 2016-2017 academic year, to which the data presented here refers, the questionnaire was handed out between the first and second quarters of the academic year, more specifically between 28 November 2016 and 17 February 2017.

In order to identify significant differences between BVET and IVET students in each of the three dimensions —behavioural and academic; emotional; and cognitive— and for each of the sub-dimensions, different Analyses of Variance (ANOVAs) were carried out.

3 Results

In this section we will look at the differential analysis of the sample based on the above-mentioned dimensions and sub-dimensions that define student engagement according to the reference authors (Reschly & Christenson, 2012).

We do so by presenting the results for each of the three dimensions of engagement separately for the sake of clarity. We also include an overall score for each of the three dimensions, showing the average scores in the different sub-dimensions of each dimension.

- Behavioural and academic dimension:

There are significant differences worthy of mention: on the one hand, IVET students show greater academic effort ($F(1) = 6.318, p = .012$) and feel more attached to the school ($F(1) = 63.515, p < 0.001$). In contrast, BVET students are perceived as significantly more undisciplined ($F(1) = 54.913, p < 0.001$) and participate more actively in extracurricular activities at school ($F(1) = 18.485, p < 0.001$). Finally, with regard to their participation in leisure and free time activities outside school, there are no significant differences between IVET and BVET students.

The overall score is significantly higher in IVET ($F(1) = 11.109, p = 0.001$), which implies that IVET students have higher behavioural and academic engagement than BVET students.

- Emotional dimension

On an emotional level, there are also significant differences (Table V): IVET students see themselves as having higher levels in both teacher ($F(1) = 17.864, p < 0.001$), and peer ($F(1) = 15.364, p < 0.001$) relations. However, in relation to perceived parental commitment, significantly higher scores were found among BVET students ($F(1) = 14.248, p < 0.001$). Finally, neither group shows significant differences in perceived family support ($F(1) = 0.386, p = 0.535$). In this dimension, the overall score also shows no significant differences between the two samples ($F(1) = 0.125, p = 0.724$).

- Cognitive dimension

Finally, at cognitive level, we see how IVET students have significantly higher scores in all the sub-dimensions, as well as in the overall score of this dimension (Table VI). Thus, IVET students perceive themselves as having greater control and relevance of academic work ($F(1) = 11.951, p = 0.001$), as well as greater future aspirations and achievements and expectations of professional results ($F(1) = 4.195, p = 0.041$). They also see themselves as more motivated in their studies ($F(1) = 46.981, p < 0.001$) and more identified with the profession they are learning ($F(1) = 41.799, p < 0.001$). They also score significantly higher overall in the cognitive dimension, i.e., they are clearer about the profession they would like to do than BVET students ($F(1) = 11.936, p < 0.001$).

4 Discussion

Summarising the results obtained in relation to our general hypothesis, we see that it holds in several of the dimensions and sub-dimensions of student engagement, but not in all of them. The hypothesis is confirmed in the cognitive dimension, both at a general level and in each component. However, it is only partially confirmed in relation to the academic and behavioural dimension. It is confirmed in relation to the overall score of this dimension and in two of its sub-dimensions. In contrast, BVET students show higher scores for indiscipline and participation in extracurricular activities at school; and there are no significant differences in relation to activities outside school. However, as it is an inverse relationship between indiscipline and academic and behavioural engagement, the result does not refute the general hypothesis, but rather confirms it, albeit indirectly.

The results are different when it comes to student participation in extracurricular activities at school, as significantly more active participation is observed among BVET students. Future research would need to investigate this further and improve its measurement. It is very likely that the fact of using only one item to query these issues does not make room for the necessary nuances for the results to be understood.

Finally, in relation to the emotional dimension of student engagement, the hypothesis is only partially confirmed, since differences appear in two of the sub-dimensions: teacher and peer relations. However, the hypothesis does not hold for perceived parental engagement, since it is seen to be significantly higher in BVET students and the overall score reveals no differences between the two sample groups. For future research, we would need to look more closely at these results to try to identify the elements that make their understanding possible.

When students no longer feel like a number, but are recognised by teachers (Savelsberg et al., 2017), programmes become successful. This is why, as these authors remind us, second opportunity or equity programmes need to be comprehensive, structural and adapted to vocational pathways. Whether or not programmes are flexible and adapted does not depend on teachers, as education policies have been subjected to the strong neoliberal current sweeping through education systems (Apple, 2006). As Baroutsis et al., (2016) insist, it is important to remember the contextual constraints that limit teachers' performance and thus restrict students' democratic participation at school.

Although when we began our research we encountered a scarcity of empirical research on student engagement in FP, we can now consider the possibility of carrying out a meta-analysis based on research in this field —such as that presented in this text— so as to go beyond local geographical contexts. Further research should also include teachers' perceptions and reflections on teaching styles and pedagogical practice and their relationship with student engagement.

References

- Cedefop (2020). *On the way to 2020: data for vocational education and training policies. Indicator overviews: 2019 update*. Luxembourg: Publications Office of the European Union. <http://data.europa.eu/doi/10.2801/62708>
- Fredricks, J. A., Reschly, A. L., & Christenson, S. L. (Eds.). (2019). *Handbook of student engagement interventions: Working with disengaged students*. Academic Press.
- Gil, A.J., Antelm-Lanzat, A.M., Cacheiro-González, M.L., & Pérez-Navío, E. (2021) The effect of family support on student engagement: Towards the prevention of dropouts. *Psychology in the Schools*, 58(6), 1082-1095.
- González, M. T. (2017). Desenganche y abandono escolar, y medidas de re-enganche: algunas consideraciones. *Profesorado, revista de currículum y formación del profesorado*, 21(4).
- González, M. T., & Cutanda, M^a T. (2015). La formación del profesorado y la implicación (engagement) de los alumnos en su aprendizaje. Teacher training and engagement of the students in their learning. *Revista Iberoamericana de Educación / Revista Ibero-americana de Educação*, 69(2), 9-24.
- Pinya Medina, C., Pomar Fiol, M. I., & Salvà-Mut, F. (2017). Prevenir el abandono educativo en la Educación Secundaria Profesional: aportaciones del alumnado y del profesorado. *Profesorado: revista de currículum y formación del profesorado*, 21(4), 95-117.
- Ramos-Díaz, E., Rodríguez-Fernández, A., Fernández-Zabala, A., Revuelta, L. & Zuazagoitia, A. (2016). Apoyo social percibido, autoconcepto e implicación escolar de estudiantes adolescentes. *Revista de psicodidáctica*, 21(2), 339-356.
- Reschly, A. L., & Christenson, S. L. (2012). Jingle, Jangle, and Conceptual Haze: Evolution and Future Directions of the Engagement Construct. In S. L. Christenson, A. L. Reschly & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 3-20). Springer.

- Rumberger, R.W. (2011). *Dropping out. Why students drop out of high school and what can be done about it*. Harvard University Press.
- Salvà-Mut, F., Oliver-Trobat, M., & Comas-Forgas, R. (2014). Abandono escolar y desvinculación de la escuela: perspectiva del alumnado. *magis, Revista Internacional de Investigación en Educación*, 6(13), 129-142.
- Tarabini, A., Curran, M., Montes, A., & Parcerisa, Ll. (2019). Can educational engagement prevent Early School Leaving? Unpacking the school's effect on educational success. *Educational Studies*, 45(2), 226-241.
- Truta, C., Parv L., & Topala, I. (2018). Academic Engagement and Intention to Drop Out: Levers for Sustainability in Higher Education. *Sustainability*, 10(12), 4637.
- Van Houtte, M., & Demanet, J. (2015). Vocational students' intention to drop out in Flanders: the role of teacher beliefs. *Profesorado, Revista de Currículum y Formación del Profesorado*, 19(3), 178-194.

Biographical notes

Dr Almudena A. Navas holds a PhD in Education and works as Associate Professor in the Department of Didactics and Scholar Organization at the University of Valencia. Her work is focused on the study of Basil Bernstein's theory and its application to the analysis of educational programs.

Dr Míriam Abiétar López holds a PhD in Education and works as Assistant Professor in the Department of Didactics and Scholar Organization at the University of Valencia. Her work is focused on the study of social justice and its application to the analysis of educational programs.

Dr Joan Carles Bernad holds a PhD in Social Psychology and Organizational Psychology and works as Assistant Professor in the Department of Social Psychology at the University of Valencia. His focuses on the relationship between social vulnerability, training polices and labor market.

Dr Ana I. Cordoba is an Associate Professor in the Developmental and Educational Psychology at University of Valencia (Spain). Her main research includes transition to work in vulnerable groups; resilience in adolescence; and identity development in emergent adulthood.

Dr Elena Giménez holds a PhD in Education and works as Assistant Professor in the Department of Didactics and Scholar Organization at the University of Valencia. Her work is focused on the study of social justice, social vulnerability and pedagogical relationships.

Esperanza Meri is PhD candidate in Education at the University of Valencia. Her focus is on gender and Vocational Education and Training.

Paolone, A. R. (2023). „The ‘Work Grammar’ educational documentary film format in the Italian VET context (1958-1978): Some considerations on the evolution of film content and language”. In C. Nägele, N. Kersh, & B. E. Stalder (Eds.), *Trends in vocational education and training research, Vol. VI. Proceedings of the European Conference on Educational Research (ECER), Vocational Education and Training Network (VETNET)* (pp. 196–203). <https://doi.org/10.5281/zenodo.8209101>

„The ‘Work Grammar’ Educational Documentary Film Format in the Italian VET Context (1958-1978): Some Considerations on the Evolution of Film Content and Language”

Paolone, Anselmo R.

anselmo.paolone@uniud.it, University of Udine

Abstract

Context: This paper is part of my research on the birth and evolution of the „work grammar” VET audiovisual format in the second half of the XX century, aiming at clarifying how historical, cultural, and political circumstances have contributed to shaping a new educational discourse in the Italian audiovisuals for vocational training.

Approach: The research is based on multiple approaches: A) the study of VET audiovisual production and policies (and their relationship to the general VET policy in Italy and the general background of Italian society), since the days when the „work grammars” were first issued in the 1950s. It is also based: B) on the attempt to analyse the cinematic discourse of these films through the study of their content and structure and the interpretation of the cinematic language they use and its evolution.

Findings: Crossing these two approaches, some original research themes have emerged. One is being developed in this paper: some important developments in the content and style of the „work grammars” were not only consequences of intentional educational or VET policy. They were rather caused by the evolution of Italian society into a modern free market.

Conclusion: The work grammars evolved (in form and content) not only under the pressure of Italian VET policy and of parallel didactic evolutions in other forms (e.g. traditional non-audiovisual courses) of VET, but also under the influence of the laws on cinematographic production and fruition and eventually, thanks to the advent of commercial television and the changes that ensued in the Italian audiovisual scenario.

Keywords: Industrial documentary film, audiovisual for VET, post-World War II Italy, ”work grammar” film format, audiovisual language analysis.

1 A documentary film format conceived for VET

In this paper I will discuss an Italian serial film format (the „work grammar”) which consists of series of documentary films, conceived for training or re-training workers, in jobs or unemployed. I will not mention the films produced for schools, which in Italy had and still have a distinct and specific nature and function.

The „work grammars”, which were developed since the second half of the 1950s, constituted a formula that had no precedents in the panorama of documentary film in Italy. They consisted of thematic series of films which dealt systematically and exhaustively with the know-how and techniques relating to various traditional trades: the construction worker, the tailor, the (mechanized) peasant, etc.; and to new trades: the telephone technician, the metal press



fitter, the motorcycle mechanic, etc., with the aim of training workers by the means of filmed lessons (A. Paolone, 2018a, pp. 45 -46).

In this paper, I will focus on the analysis of three of such thematic series of documentaries for vocational training. They are: the „Grammatica dell'operaio edile“ (The Grammar of the Construction Worker), the „Grammatica della massaia“ (The Grammar of the Housewife) (both produced in 1961), and the „Corso per soccorritori“ (Course for Ambulance Rescuers) (1978)¹. These documentaries are emblematic, in terms of cinematic language, of the transition from an old form of training film (designed for specialists), to a more modern one which is somehow „dual-purpose“ (for specialists, but also for the general public. Today we would say: for VET but also for lifelong learning).

When the first two „work grammars“ were made, most VET documentaries in Italy were produced by and for the private sector. Private companies financed the production or co-production of films for purposes ranging from workforce training, to educating citizens, to promoting corporate image and advertising. Sometimes the films were also sponsored by philanthropic institutions (e.g., Centro per il Progresso Educativo) and think tanks (e.g., CEPES: Comité Européen Pour le Progrès Economic et Social) (Paolone, 2018a, p. 34). Since productions depended above all on funding from industry, in this period VET documentaries in Italy fell under the broader title of „industrial films“ or „work films“ (Verdone, 1961). From a filmological point of view, at the time of the „Grammatica della Massaia“, few film and pedagogy scholars had tried to systematize the analysis of this sector.

In Italy there were studies on films for schools (e.g., Laporta, 1957), but almost nothing on films for lifelong learning. Mario Verdone stands out, with his studies on what he calls „Cinema del Lavoro“ (1961). In Verdone's technical nomenclature, the industrial documentary for VET and lifelong learning is defined as „tecno-film“; he indicates Filippo Paolone² as the main Italian representative of the genre (Verdone, 1993, p.47). In this sense, Paolone is credited by Verdone for inventing the „work grammar” film format.

The „work grammars” were invented under the pressure of the needs related to industrial and economic reconstruction (such films are among the „consequences” of the Italian law on work and training n. 264 of 1949, meant to ease the economic crisis which followed the Second World War) (Ghergo, 2009, pp. 35-44). The type of VET implied by law 264, helped to shape the form of the „work grammars”, which were created to meet the educational and professional needs linked to that law and to the economic, social and productive scenario which stood in its background.

In the following years, the „work grammars” evolved (in form and content), not only under the pressure of Italian VET policy and of parallel didactic evolutions of other forms (e.g. traditional, non-audiovisual courses) of VET, but also under the influence of the Italian laws on cinematographic production and fruition and ultimately, under the influence of the advent of commercial television and the changes that ensued in the Italian audiovisual scenario.

Therefore, in Italy the evolution of the form and contents of VET films did not only strictly depend on general VET pedagogical achievements, and developments in actual teaching, as regulated in the laws on training and work, but also depended on the dynamics of the market (e.g. the advent of commercial television) and their transformative impact on the consumption of audiovisuals products.

In this paper I will shortly analyse this phenomenon by looking in particular at the way in which, under the pressure of the laws on film industry and of the end of State TV (RAI)

¹ These films can be viewed on Youtube at the following addresses: <https://youtu.be/ZrRubxzdNqE> ; <https://youtu.be/izbEkZiV10g>

² Filippo Paolone (1917-1993) was a screenwriter and film director, especially active in the field of documentary film. He has directed over 200 documentaries and hundreds of television broadcasts. He also elaborated a filmological theory which he exhibited in three books (1958, 1959, 1983) and in a series of academic articles.

monopoly, the screenplays of the „work grammars” changed in the period between 1961 and 1978, passing from very schematic, and focused on the teaching of work practices (in which cinematic elements such as dramaturgical storytelling and actors were rare), to new forms which progressively incorporated more and more of such elements.

2 The legislative background of VET in Italy, in the days of the early „work grammars“

The „work grammars” were born in the second half of the 50s, when in Italy a system of vocational training, initiated through various legislative interventions since the end of the 1940s, was developing. Legally speaking, in Italy the vocational training system following the Second World War was based on two articles of the 1947 Constitution: art. 35 declares the commitment of the State to create and have vocational training carried out, while article 117 gives to the autonomous regions (which were implemented after 1970) the task of providing for the concrete establishment and functioning of this particular type of training process, albeit within the ambit of the general principles indicated by the laws of the State (the actual relocation to the regions has been thoroughly implemented only in 1978).

According to some scholars (Bertagna, 2006, p. 38) the fact that the art. 35 is inserted in part I, title III of the Constitution (entitled to economic relations) means that the vocational training referred to in the Constitutional Charter is that which takes place in the companies. Therefore, when the article speaks of that training, it intends it not so much at the service of the integral maturation of the person, but at the service of work, which has as its aim the improvement of the company work processes, involving the entrepreneur and the improvement of the professional position and salary of the worker. It is with this same intention that in the „work grammars”, introduced since the end of the 50s, the educational element is less important, while the structure is mainly didactic and aimed at teaching work techniques.

It is in the wake of the Constitution that, in order to alleviate the dramatic unemployment emergency of the post-war period, Law n. 264, which deals with the qualification of the unemployed and the requalification of the employed, was introduced in 1949 (Colletta, p. 599 and following; Pergolesi, 1974, p. 277 and following). All in all, a valid law, which subsequent scholars have often judged negatively. It would be more constructive to criticize its inappropriate use in irrelevant contexts. In fact, until the framework law of 1978 (which has revolutionized the system, transferring vocational training to the regions), law 264 has remained the main legislation on the subject, and the reference standard for the start-up, structuring and consolidation of the out-of-school vocational training system.

3 The Law 264 and its influence on the „work grammars“

In the articles 53-56, Law 264 also regulates the retraining of the workforce. Law 264, in fact, provides for industrial companies which employ at least 1,000 employees, the possibility of organising training courses for workers younger than 45 years of age.

Similarly, industrial companies with less than 1,000 employees, can request to organise intra-company courses, provided that 2/3 of the workers wish to attend them (art. 53). The purpose of these courses is especially to avoid the dismissal of workers by trying to adapt their professional skills to the changed production needs.

The authorization process for the courses followed this path: the companies addressed a „documented request“ to the Ministry of Labor through the Labor Inspectorates, which expressed an opinion on the appropriateness of the course and on the rationality of its organisation. The Ministry granted the authorization in agreement with the Minister for the Treasury and for Industry.

The management responsibility of the courses fell on the companies that implemented them; the students who obtained the qualification were employed by the companies within the limits of their possibilities (art. 55). While the sponsoring companies were left with the burden

of expenses for the provision, the equipment (including any audiovisual supports, such as the „work grammars“) and the functioning of the courses.

It is precisely in this context that some Italian entrepreneurs active in the think tank of the ECSC (European Community for Steel and Coal): the CEPES (European Committee for Educational and Social Progress) and led by the then president of the institution, the CEO of FIAT Vittorio Valletta, appointed documentary film maker Filippo Paolone to study a new audiovisual format for vocational training (De Dominicis & Pinto, 1986, p.97). The documentaries would have been sponsored, in principle, by the same companies that intended to train their employees. This was the stimulus to produce: the Grammar of the Tractor Driver (1958, sponsored by Esso Italia), the Grammar of the Motorcycle Mechanic (1959, sponsored by Guzzi) the Grammar of Industrial Tailoring (1962, sponsored by Necchi), and many more. This format conceived by Paolone would have been taken up by other authors on behalf of other companies and would have spread in the 60s, before being transformed by the influence of television, which in the meantime had become one of the main channels for showing them.

RAI TV broadcasts had begun in 1954 in a monopoly regime, justified among other things by the fact that the state broadcaster performed public service functions, aimed at supporting the national educational system in the work of broadcasting educational content on the whole national territory (Anania, 2021). For this reason, on November 25, 1958, the RAI sector known as „Telescuola“ (tele-school) was inaugurated. The early courses had a „replacement“ nature: that is, they were aimed at allowing children residing in localities without secondary schools to complete the compulsory education cycle. On November 15, 1960, the famous „Telescuola“ course for illiterate adults „It's never too late“ taught by Alberto Manzi began. On 16 October 1961 in Rome, in the new building of the Telescuola Center, two television studios went into operation. The Unified Middle School television courses had begun. Educational programming would be strengthened in February 1967 with the beginning of the adult education television broadcasts of the „Sapere“ (knowledge) series and the launch, a few months later, of new broadcasts which performed an „integrative“ rather than a substitutive function of the normal school education. It is in this context that RAI began, as a public service, to broadcast the first televised „work grammars“. They were made available to all citizens, and anyone could use them individually, or they could act as a support for institutional courses organized for example by the autonomous regions, as in the case of the „Course for Ambulance Rescuers“ which we will discuss shortly.

After the RAI reform of 1975, Telescuola was discontinued and the DSE, School Education Department, was created in its place, being active until 1995.

4 The new „work grammars“ for television

The DSE was the cradle of many „television grammars“ which were co-produced by the public service (RAI-DSE) and by other stakeholders in the field of VET. In this new guise, grammars lost their original name of „work grammars“ and became thematic series of training documentaries, aimed at several different users at the same time: no longer aimed only at specialists (e.g. skilled workers) but also at the general public, to whom the introductory sections of the documentaries were dedicated, with the intention of explaining the subject matter to everyone, in order to open up new cognitive and operational possibilities for them (F. Paolone, 1983, p. 89).

Examples of this are the series for the professional training of paramedics co-produced by RAI DSE and various Italian hospitals, and broadcast in the evening by the state television channels between the end of the 70s and the 80s. In such series, on the one hand, paramedics were trained in new therapies and medical protocols; on the other hand, the general public was being informed about the existence of these new therapeutic possibilities, with a view to the permanent health education of citizens.

Among these TV series, the aforementioned Course for Ambulance Rescuers from 1978, and many other „medical“ grammars, including the „Update themes for paediatric nurses“ in 11 instalments, 1982 - RAI 1; the „Update topics for professional nurses“ in 14 instalments 1984 - RAI 3 ; the „Update topics for paediatric nurses 2nd series“ in 12 instalments - 1983 broadcast on RAI 1; and finally „Cancer as a social disease“ in 5 instalments -1985, RAI 1, all of them directed by Filippo Paolone.

The new „twofold“ educational target (specialists and general public) could be reached because these television documentaries had lost the strictly specialistic approach of the early work grammars, which had been based on screenplays devoid of any element extraneous to the simple teaching of work skills.

This early form of „work grammars“ had in fact progressively become more complex and enriched with elements from other types of documentaries, such as dramaturgical storytelling, the presence of actors - the possibility of such upgrades had been theoretically devised by Paul Rotha- (Rotha, 1939) and some spectacular scenes, used to connect the didactic parts of the film.

In the context of Italian VET history, such changes were not planned by policymakers but, as I have already mentioned, they were the result of the evolutionary history of the „work grammars“, under the pressure of factors that are not restricted and limited to the needs of teaching vocational training, but which derive, as we will see in the following pages, from the Italian national legislation on cinema and from the dynamics of the audiovisual market, which in Italy has become much more complex and lively with the advent of commercial television, starting from the end of the 1970s (Piazzoni, 2014).

In such new context, the state television broadcaster RAI (former monopolist) found itself for the first time competing on the free market with commercial televisions, and in order not to lose its audience and advertising revenues (Livolsi, 2005), was forced to transform its schedule in the sense of approaching the contents of its commercial competitors.

For this reason, the televised „work grammars“ had to incorporate some elements of dramatic and spectacular storytelling, so as not to be too „boring“ for viewers and not induce them to change the channel in search of more interesting programmes. This is evident in the TV series „Corso per soccorritori“ (1978), in which, for example, action scenes are inserted, with road accidents and ambulances whizzing by with sirens blaring, mimicking the analogous scenes in Italian-style detective films, at the time in full blooming.

However, this process of „spectacularizing“ had already begun since the 50s, long before the arrival of commercial TV, and rather under the impulse of the law on cinema known as the „Andreotti law“³ which provided for the screening in cinemas of documentaries produced in Italy, in combination with a feature film, of which they would have shared the revenues. This had progressively encouraged documentary authors to change their style in pursuit of a wider audience, in order not to lose the economic opportunities offered by this new law (Beltrame 2016).

Thus, the evolution of „work grammars“ towards spectacularization had already begun by the 50s, and the elements they later absorbed from television, in this sense were not a complete novelty.

³ The Andreotti Law (Law 29 December 1949, n. 958) established the essential requirements that every short film must have: a duration of no less than 250 meters (about 9 minutes of projection, at 24 fps) and no more than 2000 meters in length (73 minutes of projection). From the point of view of revenues, each feature film distributed in theaters was combined with a „short film produced in Italy“ (which could also be an industrial documentary) to be screened before the feature film, and which would share the profits with the latter. In this sense, the law provided for the concession (subject to the opinion of a Technical Committee) of a contribution equal to 3% of the gross earnings of the shows in which the documentary.

5 The stages of development towards „spectacularization“: some emblematic examples

In the first „work grammar” examined here: the „Grammar of the construction worker“ of 1961, which had been intended simply as a support for VET courses and aimed only at skilled workers, the use of actors was limited. Those who were framed, were in fact only „film extras“ to show the technical movements necessary for the lesson to be done. The thematic backbone of such early films was not constituted by a story, but by the sequence of the technical activities which were taught.

Instead in the following series, the „Grammar of the housewife“, intended for screening in VET courses and in cinemas, in combination with feature films, the actors, in addition to carrying out technical activities (e.g. use and maintenance of modern household appliances), were included in a more articulated narrative, aimed at involving all spectators. This is because the film was also shown to the general public thanks to the aforementioned „Andreotti“ law.

The actress who plays the role of the housewife shows viewers how to use modern household appliances. But the type of involvement she must create for the „generalist“ public found in theatres is different from that necessary for an audience of specialists, found in the more „technical“ grammars.

To involve a housewife in watching the film, the logic of mere technical actions presented on the screen was not sufficient: it was also necessary to present a story and characters with which the „spectator“ housewife could identify. Therefore, in the series we can glimpse a timid „dramaturgical“ storytelling as well as the presentation of the technical actions to be learned. Such actions were now embedded in a narrative discourse, in which „real“ characters created interest for the viewers.

Once the main authors of VET documentaries (Besides Filippo Paolone, we cite by way of example Giuliano Tomei) learned this type of approach, they continued to use it in various forms also in subsequent „work grammars”.

If „The Grammar of the Housewife“ shows the changes that have occurred in the content and form of the „grammars“ due to their diffusion to a wider cinematographic audience, the „Course for Ambulance Rescuers“ (1978, prototype of the numerous RAI DSE grammars with medical content which followed), shows the changes that took place when such films were intended for television, at a time when RAI was no longer a TV monopolist in Italy.

In this series of documentaries for training paramedics, each different pathology to be taught is presented through a form of narration, which often draws on the language of the feature film. Furthermore, as already mentioned, there are action scenes that act as a glue between the various didactic moments present in each episode. The series, co-produced by RAI DSE and the Gaslini hospital in Genoa, was used as a basis for training courses for ambulance staff in the Liguria region. In this regard, the videotapes were shown during the lessons of those courses. But dealing with a subject of public utility (first aid skills) RAI broadcast the „Course for Rescuers“ several times in its evening programmes, while the competing commercial TVs were broadcasting entertainment programmes. In this sense, in order not to disperse its audience due to competition from other TV channels, RAI recommended that the authors of documentaries make them more interesting for the general public, adopting formal elements inspired by genre cinema (Paolone, 1983, p.85). However this „war of the audience“ between RAI DSE (which broadcast programs for training) and private commercial televisions, (based on pure entertainment shows to attract advertising), finally led to the disappearance of this type of hybrid documentary, half for the training of technicians, half for the general public. In its place, new formats of cultural dissemination broadcasts, of a more journalistic nature, emerged on the RAI programming. The „work grammars” in their original meaning have since then returned to the mainstream of specialized company training, from which they had started in the 1950s.

This „narrative turn“ of training documentaries (and in particular of „work grammars“) has had various consequences. We will focus here on the more strictly pedagogical ones. From this

point of view, there has no longer been the exclusive use of that form of display of contents that Jerome S. Bruner would have defined: paradigmatic (it communicates the „truth” through arguments and is susceptible of being verified) typical of the „no frills” didactics that these documentaries had in the first phase of their history. Another form was added to this previous, which Bruner himself would have defined „narrative“ (it uses the story not to establish the truth, but rather to establish likelihood) (Bruner, 1993, p.15). The result (to use Bruner's terminology) is that of having a text (in this case a documentary film) with a more articulate educational structure (Bruner, 2005, p.23).

So, with reference to the „work grammars”, we can conclude that their formal evolution, although influenced by the laws of the free market was, educationally speaking, fruitful. The original form based on the mere teaching of „doing“ has gradually been joined by a more complex and articulated structure, bearer of broader educational contents.

References

- Anania, F. (2021). *Breve storia della radio e della televisione italiana*. Carocci.
- Beltrame, A. (2016). *Un «cinema-comunità». L'essenza popolare del cinema italiano degli anni Cinquanta*. La Mandragora.
- Bertagna, G. (2006). Dall'istruzione tecnica e professionale al sistema educativo dell'istruzione e formazione professionale. Note storiche pedagogiche e ordinamentali. *Rassegna CNOS*, 3, 32-43.
- Bonaiuti, G., Calvani, A., Fini, & A. Landricina, F. (2007). *Principi di comunicazione visiva e multimediale*. Carocci.
- Bruner, J.S. (1964). *On knowing. Essays for the left hand*. Harvard University Press.
- Bruner, J.S. (1986). *Actual minds, possible worlds*. Harvard University Press.
- Colletta, U. (1958). voce: Addestramento professionale. In *Enciclopedia del diritto*. Vol. I. Giuffrè.
- De Agostini, M., & Paolone, A.R. (2021). La grammatica della massaia. Analisi di un modello audiovisivo per la formazione. *Pedagogia più didattica* 7(2) 74-85.
- De Dominicis, G., & Pinto, T. (1986). *Le botteghe dell'immaginario*, Edizioni Anica.
- Garofalo, D. (2018). *Storia sociale della televisione in Italia (1954-1969)*. Marsilio.
- Ghergo, F. (2009). *Storia della formazione professionale in Italia 1947-1977*. CNOSFAP.
- Gisotti, R. (2002). *La favola dell'Auditel*. Roma. Editori Riuniti.
- Laporta, R. (1957). *Cinema e età voluttiva*. La Nuova Italia.
- Livolsi, M. (2005). *Dietro il telecomando: profili dello spettatore televisivo*. Franco Angeli.
- Lussana, F. (2019). *Cinema educatore- L'Istituto Luce dal fascismo alla Liberazione (1924-1945)*. Carocci.
- Mechi, L. (2000). Il Comitato Consultativo della CECA. In A. Varsori (Ed.), *Il Comitato Economico e Sociale nella costruzione europea (155-167)*. Marsilio.
- Paolone, A. (2018a). L'opera cinematografica e teorica di Filippo Paolone. In M. De Agostini, & A. R. Paolone (Eds.), *Filmati per formare. Storytelling e tecniche audiovisive nell'opera di Filippo Paolone* (pp. 31-46). Mimesis.
- Paolone, A. R. (2018b). Verso una teoria del linguaggio cinematografico come strumento per la comunicazione formativa. In M. De Agostini, & A. R. Paolone (Eds), *Filmati per formare. Storytelling e tecniche audiovisive nell'opera di Filippo Paolone* (pp. 47-60). Mimesis.
- Paolone, F. (1958). Film e opinione. *I quaderni della Rivista del Cinematografo*. So.Gra.ro.
- Paolone, F. (1959). *Storia degli strumenti del pubblicismo*. So.Gra.Ro.
- Paolone, F. (1983). *Situazioni e problemi del cinema specializzato in Italia*. ANICA.
- Pergolesi, F. (1974). Voce: Addestramento professionale. In *Novissimo digesto italiano*. Vol. II. Utet.
- Piazzoni, I. (2014). *Storia delle televisioni in Italia. Dagli esordi alle web tv*. Carocci.
- Rotha, P. (1939). *Documentary Film*. Norton.
- Verdone, M. (1953). Il documentario. *Bianco e Nero*, 14(2) 3-31.
- Verdone M. (1961). *Il cinema del lavoro*. Biblioteca del dirigente d'azienda.
- Verdone M. (1993). Il cinema della produttività, ieri oggi e domani. *Realtà*, 6, 45-53.

Biographical notes

Dr Anselmo R. Paolone, Ph.D. (EUI), is an associate professor of Education at the Department DILL at the University of Udine, Italy. He has worked as screenwriter, specialised in educational and industrial documentary films.

Ryökkynen, S. (2023). Finnish vocational students' perceptions of the special support in their studying. In C. Nägele, N. Kersh, & B. E. Stalder (Eds.), *Trends in vocational education and training research, Vol. VI. Proceedings of the European Conference on Educational Research (ECER), Vocational Education and Training Network (VETNET)* (pp. 203–213). <https://doi.org/10.5281/zenodo.8209113>

Finnish Vocational Students' Perceptions of the Special Support in Their Studying

Ryökkynen, Sanna

sanna.ryokkynen@hamk.fi, Häme University of Applied Sciences

Abstract

Purpose: This article draws on the dissertation (Ryökkynen, 2023), which addresses the needs and expectations of the marginalisation (two per cent) of vocational students in Finland. The study participants are students who have severe learning difficulties, disabilities or serious health problems and thus need intensive special support for their studying. The dissertation aims to give them a voice to understand what elements of support would enhance their studying, sense of belonging and would be at the core of good vocational education and training (VET).

Methods: The studies summarised in the dissertation used multiple methods (content analysis, narratives positioning and actantial analysis). The multiple methods have answered different research questions. However, their primary aim has been to support the core qualitative-driven approach, the overarching research questions, and the dissertation's aim. Combining several methods, the study sought a holistic understanding of students' perceptions.

Findings: The participants' needs and expectations culminated in understanding. Understanding teachers, employers, parents, and friends created the foundation for students' success in vocational studying. It supported their sense of belonging and created the foundations for good VET. The VET system should provide enough time for students to form and re-form their perceptions of themselves as young people, as a student and as a member of the workplace and society. The findings addressed that VET is more than a qualifying, competence-based, subject-oriented and effective student system. It has a solid socialising and subjectification domain which means that the whole VET system and its teachers function as inductors into workplaces, as well as into everyday life and society.

Conclusion: The study argues that understanding students' special needs is essential though insufficient, and the concept of understanding should be elaborated and elucidated. Although different individually tailored measures and methods of special support and guidance make apparent that understanding is essential for the success of students with special needs, the study suggests that recognition is the most fundamental element in enhancing students' studying and sense of belonging. This means that the significant others depict the students in a broad-minded and positive way, not only as students with special needs but as students with valuable skills and knowledge.

Keywords: vocational education and training, special education, belonging, theory of recognition

1 Introduction

The aim of the dissertation (Ryökkynen, 2023) summarised in the article is to gain a deeper understanding of the elements of support that Finnish vocational students who receive intensive



learning support perceive as the most relevant for enhancing their studying, sense of belonging and what would create the domains for good VET. The research consisted of three studies (Ryökkynen et al., 2020, 2022a, 2022b) in which the students and their experiences, expectations and needs created the core.

Improving the social and educational position of people with learning difficulties and disabilities has been the main objective of international and national policies (Kauppila et al., 2020). The measures to improve their situation have systematically focused on education and are based on the view that improving educational opportunities will make these people more independent and employable (Kauppila et al., 2018). Even so, the employment rate and social participation of disabled people are still low (Sjöblom, 2016). Remarkably, the number of persons with some chronic disease or disability which has subjective effects on their working ability or employment is about 600 000 in Finland (Mäkinen, 2021). Thus, it is increasingly important to determine what elements enhance their studying, sense of belonging and create the premise for good VET.

The Finnish education system aims to leave no one behind. According to the Act on VET (531/2017, 61§), students in VET are entitled to receive teaching and guidance to achieve professional skills and knowledge consistent with the qualification requirements. Furthermore, they are entitled to special and intensive special support (Act on VET 531/2017, 64§; 65§) if they have learning difficulties, disabilities or serious health problems and therefore need long-term and regular special support. Intensive special support is intended for students with severe learning difficulties, disabilities, or serious health problems. It is provided in vocational institutions, called vocational special education colleges, mandated for this: five Finnish- and one Swedish-language vocational college. Six general vocational colleges have a restricted mandate to provide intensive special support for their students. Thirteen per cent of all Finnish vocational students needed special support, and two per cent intensive special support for their studying during 2018-2020 (Vipunen - Education Statistics Finland, n.d.).

First, the significance of the study (Ryökkynen, 2023) summarised in the article derives from the importance of investigating the needs and expectations of students with special educational needs. They represent the 2% minority of Finnish vocational students, and their experiences might not be heard, are marginalised or shunted off. Furthermore, the students' study paths might have been intensively supported and guided since their primary education years, maybe even earlier (Hakala et al., 2013; Niemi, 2014; Niemi & Kurki, 2014). Therefore, it is essential to listen to their voice.

Secondly, though Finnish VET is closely connected with the workforce and even though many employers lack skilled workers, students with intensive special needs have difficulties in finding their place in the labour market: Only a quarter of the students with initial vocational qualification do paid work after their VET studying (Vipunen -Education Statistics Finland, n.d.). Finland promotes justice through education for all, but it seems that the labour market is not equal. However, those in less competitive groups, like the partially disabled or with special needs, are often excluded from the labour market (Kuptsch & Charest, 2021; Mäkinen, 2021).

Thirdly, there is a lack of scholarly knowledge of the VET system providing intensive special support as national and international VET research has focused on the pedagogical practices and methods of the general vocational education system (Wheelahan, 2020). The study provides students' perspectives on the issues. The overarching research questions are:

- RQ1) Of vocational students receiving intensive special learning support, which elements do they perceive as enhancing their studying?
- RQ2) Of vocational students receiving intensive special learning support, which elements do they perceive as enhancing their sense of belonging?
- RQ3) What are the students' perceptions of what constitutes the elements of good VET?

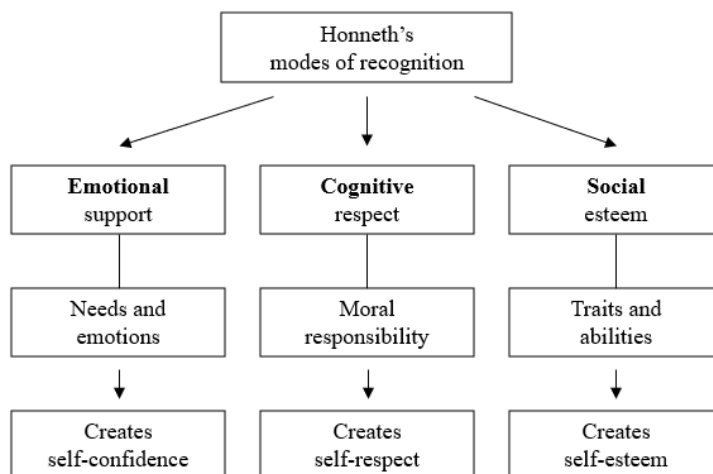
2 Theoretical background

Theory of recognition (Honneth, 1995; Taylor, 1994), sense of belonging (e.g., Baumeister & Leary, 1995; Lucas & Dyrenforth, 2006; Pirskanen et al., 2020; Sandstrom & Dunn, 2014; Stewart, 2013; Sun et al., 2020) and good education (Biesta, 2010, 2020) create the theoretical core of the dissertation. Next, these approaches are introduced in an outline.

2.1 Theory of recognition

Honneth (1995) stated that the whole human life is a struggle for recognition. Human agency is constituted in and through relationships with others. When we talk about how others see us, how others treat us, or how we should treat others and acknowledge each other in everyday life, we are talking about recognition. Honneth's theory of recognition which is the most significant theory in the study operates in three spheres: Emotional, cognitive and social (See Figure 1). One's formation as an ethical subject and agent is dependent on the responsiveness of significant others concerning care for one's needs and emotions (emotional support), respect for one's moral and legal dignity as a member of society (cognitive respect), and esteem for one's social achievements, abilities and traits (social esteem). These spheres of recognition are coupled with three aspects of practical self-relation: (1) Self-confidence; (2) Self-respect; (3) Self-esteem. Self-confidence depends on emotional support, self-respect on cognitive respect and self-esteem on social esteem. (Honneth, 1995; Laitinen, 2003; van den Brink & Owen, 2007.)

Figure 1 Honneth's (1995) modes of recognition

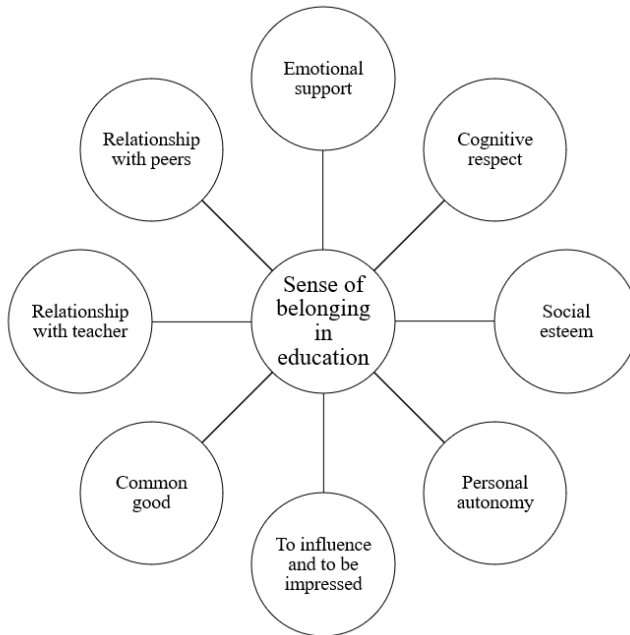


2.2 Sense of belonging

Earlier studies have demonstrated that social interactions and sense of belonging are essential parts of human life. Individuals cannot flourish nor function alone (e.g., Baumeister & Leary, 1995; Lucas & Dyrenforth, 2006; Pirskanen et al., 2020; Sandstrom & Dunn, 2014; Stewart, 2013; Sun et al., 2020). Social relations have a powerful effect on our happiness and other aspects of well-being (Ikäheimo & Laitinen, 2011; Laitinen, 2003; Taylor, 1994). Our fundamental needs are to belong and to be recognised by significant others (Honneth, 1995). As presented in Figure 2, a vocational student's sense of belonging is composed in many ways. It relates to many objects of attachment through different situations in different learning environments and everyday life (May, 2013). These complex interactions between environmental and personal factors hinder or promote a student's sense of belonging (Yuval-Davis, 2006). The feelings of external connectedness are grounded in the context or referent group to whom the student chooses, wants, and feels permission to belong (Baumeister & Leary, 1995; Honneth,

1995; Leary, 2001; Mahar et al., 2013). Shame and pride as social emotions are closely related to the student's social bonds and sense of belonging. Social emotions are both experiences and are instrumental for academic achievement and personal growth (Pekrun & Linnenbrink-Garcia, 2014). Experiencing excessive anxiety about school assignments and social relationships can hamper a student's academic performance and negatively influence his or her psychological and physical health (Pekrun & Linnenbrink-Garcia, 2014).

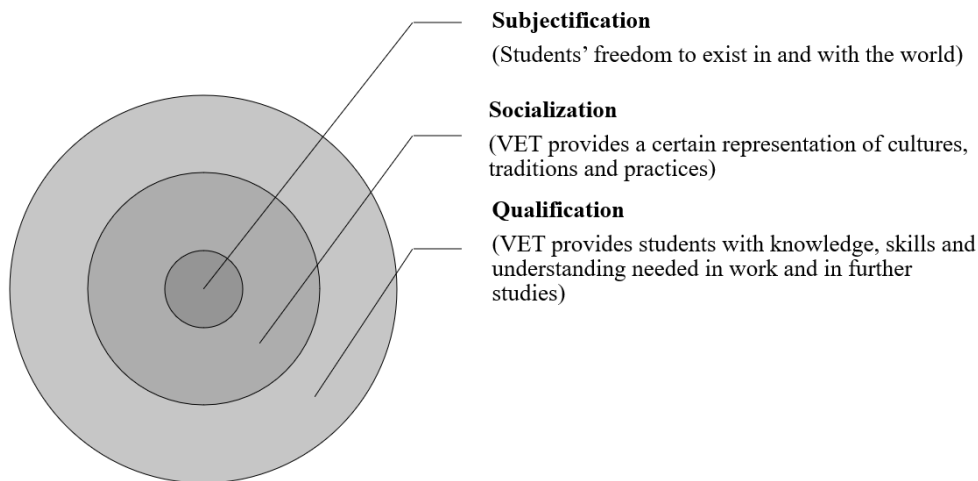
Figure 2 Elements of sense of belonging in education



2.3 Good education – qualification, socialization and subjectification

The third theoretical approach used in the dissertation to deepen the understanding of students' needs and expectations is Biesta's (2010, 2020) domains for good education. The domains are qualification, socialization and subjectification, which could be represented as concentric circles (See Figure 3). First, the aim of the Finnish VET is that students learn skills and knowledge according to the vocational qualification requirements which are implemented in curriculums. This creates the qualification domain of VET. Second, attaining a vocational qualification provides a particular way of (re)presenting the world. This forms the socialization domain of VET, which is explicitly connected with the worker citizen's identity and position in society, as the Finnish VET system emphasises labour market needs and students' employability in its discourse. Third, the subjectification domain of VET impacts students as individuals by enhancing or restricting their capacities and capabilities. Biesta (2015, 2021) states that there is a range of ways in which human beings exist, and education should instead be about opening up these options than only providing students with the position of the learner or the worker on the labour market. Defining the constitution of good VET necessitates acknowledging all these three domains of education because when we engage with one dimension, we always impact others (Biesta, 2010, 2020).

Figure 3 Domains of good VET (Ref. Biesta, 2010, 2020).



3 Methods

Because the participants in the study were students who represent the minority of Finnish vocational students and whose study paths are intensively guided and supported, this study was qualitative and interpretative by nature but also emancipatory and critical. It means that VET was considered to be much more than vocational qualifications and measurable outcomes. VET was seen as a starting point for social equality and democracy though it can also be among the leading causes of inequality (Beach & Sernhede, 2011; Kalalahti et al., 2020; Power, 2012). VET may have essential inclusive functions in providing alternative learning careers for people, supporting their study motivation and vocational identities (Larsen & Thunqvist, 2018). Nevertheless, it seems that the expansion of education does not significantly impact relative social class disadvantages (Lynch, 2019; Mattila, 2020). Disabled people, people with special needs and other less competitive groups, have challenges in both employment and social participation (Kuptsch & Charest, 2021; Mäkinen, 2021; Sjöblom, 2016).

The study paradigm is grounded on social constructionism, according to which truth is constructed through social interactions as vocational students engage with the world and each other (Berger & Luckmann, 1967). The ontological dimension of social constructionism assumes that reality is a social construct generated from multiple negotiations of interpretations people give the world (Sandu, 2016). 'Social constructionism holds that individuals seek to make meaning of their lives and that the researcher has to examine the question through multiple lenses of the individuals involved, to obtain the definition of the situation, to see how they make sense of their situation and to focus on interactions, contexts, environments and biographies' (Cohen et al., 2018, p. 23). Therefore, the study uses multiple methods to strive for a holistic understanding of students' needs and expectations.

Study 1 (Ryökkynen et al., 2020) was directed at students' experiences in interacting with their teachers and the guidance they received. It used semi-structured interviews and content analysis to investigate the students' descriptions of interacting with their teachers. Study 2 (Ryökkynen et al., 2022a) concentrated on the students' definitions of good VET by reflecting on their narratives with Biesta's (2010, 2020) domains of good education: qualification, socialization and subjectification. As an analytical tool for Study 2 (Ryökkynen et al., 2022a), narratives positioning analysis was chosen because it provided an opportunity to examine and interpret the participants' narratives as social actions in the VET context where they have been told (Bamberg, 1997; Bamberg & Georgakopoulou, 2008). The third study (Ryökkynen et al., 2022b) focused on the dynamics of social emotions and social bonds between students and teachers. A case story of each student interview was written to deepen the understanding of the

elements enhancing students studying and social belonging. Study 3 (Ryökkynen et al., 2022b) used Greimas' actantial model as an analysis tool to recognise the actors in the case stories and to scrutinise the thematics of pride and shame between these actors (Greimas, 1983; Schleifer & Harré, 1987). Table 1 introduces a summary of the focus, keywords, data and data collection, methods of the analysis and research questions in Studies 1-3.

Table 1

A summary of the focus, keywords, data and data collection, methods of the analysis and research questions in Studies 1-3

Study	Focus	Keywords	Data & data collection	Methods of the analysis	Research questions
Study 1 Interaction between students and class teachers in vocational education and training: 'Safety distance is needed'	The experiences of students with special educational needs. Interaction between a student and a class teacher. The guidance provided.	VET; interaction; critical pedagogy; guidance; power; social justice; content analysis	Semi-structured interviews (N=11) as mp3 format 11h, transcribed.	Content analysis (Krippendorff 1980; Schreier 2012)	RQ1) How do VET students receiving intensive special support describe the interaction with their class teacher? RQ2) What is the purpose and orientation of the interaction according to students? RQ3) What guidance is provided in the interaction between students and class teachers?
Study 2 Learning about special educational needs students' experiences of qualification, socialization and subjectification in Finnish vocational education and training: A narrative approach.	Students' experiences of good VET: qualification, socialization and subjectification (Biesta 2010, 2020).	VET; intensive special support; qualification; socialization; subjectification	Semi-structured interviews (N=18) as mp3 format 5.5 h, transcribed	Deductive content analysis (Elo & Kyngäs, 2008). Narratives' positioning (Bamberg, 1997, 2004a, 2004b; Bamberg and Georgakopoulou, 2008)	RQ) To what extent are Biesta's dimensions of good education - qualification, socialization, and subjectification - audible in the narratives of Finland's VET special educational needs students?
Study 3 From the shade into the sun: Exploring pride and shame in students with special needs in Finnish VET.	Social belonging and emotions of shame and pride in students' descriptions.	VET; special educational needs; social emotions; social belonging; student voices	Semi-structured interviews (N=11) as mp3 format 11h, transcribed.	Abductive content analysis (Brinkmann, 2014; Rinehart, 2021; Timmermans & Tavory, 2012); Greimas' actantial model (1983)	RQ1) What experiences related to the dynamics of pride and shame did students narrate in their social bonds with their class teachers? RQ2) What do these experiences tell us about participants and about their activity and needs?

Overall research questions	RQ1) Of vocational students receiving intensive special learning support, which elements do they perceive as enhancing their studying?; RQ2) Of vocational students receiving intensive special learning support, which elements do they perceive as enhancing their sense of belonging?; RQ3) What are the students' perceptions of what constitutes the elements of good VET?
-----------------------------------	--

4 Results

Studies 1 and 3 (Ryökkynen et al., 2020, 2022b) explored the elements enhancing students' studying and sense of belonging. All three Studies (Ryökkynen 2020, 2022a, 2022b) investigated the students' perceptions of good VET. To achieve the aim of the dissertation, the focus of Study 1 (Ryökkynen et al., 2020) was directed towards the interaction between a class teacher and a student. Study 2 (Ryökkynen et al., 2022a) reflects the students' experiences on Biesta's domains of good education, qualification, socialization and subjectification (Biesta, 2010, 2020) and contributes to the discussion about what is good VET. Study 3 (Ryökkynen et al., 2022b) investigates the dynamics of social emotions and social bonds between students and class teachers. These individual studies propose more nuanced questions to further explore the overarching research questions: RQ1) Of vocational students receiving intensive special learning support, which elements do they perceive as enhancing their studying? RQ2) Of vocational students receiving intensive special learning support, which elements do they perceive as enhancing their sense of belonging? RQ3) What are the students' perceptions of what constitutes the elements of good VET? Next, the results are summarised.

4.1 Elements enhancing studying

Two significant elements emerged in Studies 1 and 3 (Ryökkynen et al., 2020, 2022b) pertinent to enhancing students' studying: 1) Understanding, support and guidance; 2) Students' ability to see positive development. Studies 1 and 3 (Ryökkynen et al., 2020, 2022b) showed that students who received intensive learning support adapted their voices. They had very modest expectations for their career and future. The study participants spoke highly about their teachers and appreciated their opportunity to study and gain vocational competence. They respected understanding and helpful teachers, teaching staff and work-life representatives who had enough time. It seemed that students needed repeated opportunities to be accepted as themselves in different learning environments and among their peers in the school and the workforce.

It was not only teachers', teaching staff's and peers' actions and understanding which were significant for students' success in their studying and social interactions but their ability to allow themselves success and to receive respect. Many participants in the study had encountered bullying and exclusion in their earlier studying. Hence, they had difficulties accepting and believing someone would appreciate their efforts and performance. The results demonstrated that studying at a vocational special college had given students a new start, a turning point in their lives. If a student could seize this chance, then his or her story was embedded in pride; if not, shame was a powerful element of the student's story.

4.2 Elements enhancing sense of belonging

Studies 1 and 3 (Ryökkynen et al., 2020, 2022b) explored the elements enhancing students' sense of belonging intertwined with the elements enhancing their studying. Two themes emerged: 1) Understanding, support and guidance; 2) Social and subjective domains of education.

Teachers' understanding, support and guidance were needed to bolster students with special educational needs to see their opportunities and value. The question was not only about

career conversations related to students' vocational qualifications and professional careers but also about what was recognised as an acceptable form of being, doing and dreaming.

It became apparent in both studies that the VET system should provide enough time for students to form and re-form their perceptions of themselves as young people, as a student and as a member of the workplace and society. The results of Studies 1 and 3 (Ryökkyne et al., 2020, 2022b) addressed that it is essential to see the teaching profession and the whole meaning of the VET more broadly as a qualifying, competence-based, subject-orientated and effective system and as a socializing and subjectifying element in students' lives. This means an opportunity to figure out who is a student among others and what is a good life for them.

4.3 Elements of good VET

Students' definition of good VET could be compacted into four topics: 1) Understanding, 2) time and presence, 3) subjective and social empowerment, and 4) vocational qualification. The essential element that emerged in Studies 1, 2 and 3 (Ryökkyne et al., 2020, 2022a, 2022b) was teachers' and other stakeholders' understanding attitude. The study participants highlighted teachers' and other VET stakeholders' help and support to attain the qualification requirements of VET and the workforce and to strengthen their social skills and sense of belonging. The findings indicated that students need time and presence, which contradicts the Finnish VET policy, which emphasises efficacy, efficiency and agility. The results of the studies demonstrated that the students wanted to belong, to be understood, valued and respected by their teachers, employers and peers. They appreciated individual solutions and special educational support in their studying. However, they wanted to be part of the students' community and to live, learn and work like any other young person. The socialization and subjectification domains of education were emphasised in the results of the studies even though students respected the vocational qualification they received. It seemed that the vocational qualification also served the purposes of socialization and subjectification, as it bolstered the students' self-confidence and sense of belonging in the workforce and society.

5 Conclusions

The study (Ryökkyne, 2023) aims to gain a deeper understanding of the elements of support that vocational students who receive intensive learning support perceive as the most relevant to enhance their studying, sense of belonging and what would create the domains of good VET. The results of the three studies summarised in the dissertation indicate that the essential element enhancing students' studying, their sense of belonging, and what would create the foundation for good VET culminates in understanding. Students who receive intensive special support for their studying need enough time to attain both vocational, subjective and social competence needed in the workforce, which contradicts the effective working school system and labour market. The study participants expressed gratitude and took pride in their vocational qualifications. However, subjectification and socialization domains of education were emphasised in their descriptions. The students wanted to find their place in work and society. They wanted to be depicted and function as independent members of society with valuable skills and knowledge recognised and appreciated by significant others like teachers, employers and peers. The participants in the study have undoubtedly benefitted from the multidisciplinary and multi-professional support in their studying, which aims to help them attain the qualification requirements and support their well-being and rehabilitation. However, many of these students have competed with underrepresentation and negative stereotypes. They are attentive to indications that could communicate that they do not belong or are not fully included (Walton & Carr, 2012a, 2012b).

Understanding students' needs is essential to create individually tailored measures and methods of special educational support and guidance in VET. However, the study suggests that

understanding is not enough, but recognition is fundamental in enhancing students' study and sense of belonging. Honneth (1995) states that recognition is the prime mover in our lives. It is much more than understanding, which could be defined as a cognitive process or a result of such a process (Baumberger, 2014; Baumberger et al., 2017). In the context of Finnish VET, the purpose of which is to serve labour market needs, this implies that more attention should be paid to eliminating barriers to learning and participation and diversity engagement of employers. It means awareness rising that a student with special needs in one area of life can be a top expert in another. Teachers and teaching staff work as change agents or pioneers whose attitudes, activities and values are crucial. Students with special needs call for time to recognise their capabilities and strengths. They need encouragement and opportunities to practise how to express their preferences but, at the same, how to voice their support needs. They need emotional support, cognitive respect and social esteem (Honneth, 1995).

Finally, by applying Salonen and Bardy's (2015) definition of ecosocial Bildung, the study calls for responsibility, fairness and mutual recognition in VET practices and the labour market. Improving sustainable development and enhancing students with special needs studying and their sense of belonging cannot be built on egocentric freedom and individual ownership. It should be built on the principles of mutual recognition (Salonen & Bardy, 2015). VET processes can strengthen the sense of personal accountability, the tendency to see others as distinct individuals, and the willingness to raise a critical voice (Nussbaum, 2010). Vocational colleges work as pioneers in building sustainable futures through their work by noticing each student and the valuable potential they possess as they may flourish beginning from their strengths.

References

- Act on Vocational Education and Training 531/2017. Government of Finland. Retrieved June 5, 2023 from <https://www.finlex.fi/fi/laki/alkup/2017/20170531>
- Bamberg, M. (1997). Positioning between structure and performance. *Journal of Narrative and Life History*, 7(1–4), 335–342.
- Bamberg, M. (2004a). Positioning with Davie Hogan: Stories, tellings, and identities. In C. Daiute & C. Lightfoot (Eds.), *Narrative analysis* (pp. 136–157). SAGE Publications, Inc. <https://doi.org/10.4135/9781412985246.n23>
- Bamberg, M. (2004b). Form and functions of 'slut bashing' in male identity constructions in 15-year-olds. *Human Development*, 47(6), 331–353. <https://doi.org/10.1159/000081036>
- Bamberg, M., & Georgakopoulou, A. (2008). Small stories as a new perspective in narrative and identity analysis. *Text & Talk*, 28(3), 377–396. <https://doi.org/10.1515/TEXT.2008.018>
- Baumberger, C. (2014). Types of understanding: Their nature and their relation to knowledge. *Conceptus: Zeitschrift Für Philosophie*, 40(98), 67–88. <https://doi.org/10.1515/cpt-2014-0002>
- Baumberger, C., Beisbart, C., & Brun, G. (2017). What is understanding? An overview of recent debates in epistemology and philosophy of science. In S.R. Grimm, C. Baumberger, & S. Ammon (Eds.), *Explaining understanding. New perspectives from epistemology and philosophy of science* (pp. 1–34). Routledge. <https://doi.org/10.4324/9781315686110>
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117(3), 497–529. <https://doi.org/10.1037/0033-2909.117.3.497>
- Beach, D., & Sernhede, O. (2011). From learning to labour to learning for marginality: School segregation and marginalization in Swedish suburbs. *British Journal of Sociology of Education*, 32(2), 257–274. <https://doi.org/10.1080/01425692.2011.547310>
- Berger, P. L., & Luckmann, T. (1967). *The social construction of reality: A treatise in the sociology of knowledge*. Penguin Books.
- Biesta, G. (2010). *Good education in an age of measurement: Ethics, politics, democracy*. Paradigm Publishers.
- Biesta, G. (2015). Freeing teaching from learning: Opening up existential possibilities in educational relationships. *Studies in Philosophy and Education*, 34(3), 229–243. <https://doi.org/10.1007/s11217-014-9454-z>
- Biesta, G. (2020). Risking ourselves in education: Qualification, socialization, and subjectification revisited. *Educational Theory*, 70(1), 89–104. <https://doi.org/10.1111/edth.12411>
- Biesta, G. (2021). The three gifts of teaching: Towards a non-egological future for moral education. *Journal of Moral Education*, 50(1), 39–54. <https://doi.org/10.1080/03057240.2020.1763279>

- Brinkmann, S. (2014). Doing without data. *Qualitative Inquiry*, 20(6), 720–725.
<https://doi.org/10.1177/1077800414530254>
- Cohen, L., Manion, L., & Morrison, K. (2018). *Research methods in education*. 8th edition. Routledge.
- Elo, S., & Kyngäs, H. (2008). The qualitative content analysis process. *Journal of Advanced Nursing*, 62(1), 107–115. <https://doi.org/10.1111/j.1365-2648.2007.04569.x>
- Greimas, A. J. (1983). *Structural semantics: An attempt at a method*. University of Nebraska Press.
- Hakala, K., Mietola, R., & Teittinen, A. (2013). Valinta ja valikointi ammatillisessa erityisopetuksessa. In K. Brunila, K. Hakala, E. Lahelma, & A. Teittinen (Eds.), *Ammatillinen koulutus ja yhteiskunnalliset eronteot* (pp. 173–200). Gaudeamus.
- Honneth, A. (1995). *The struggle for recognition. The moral grammar of social conflicts*. Polity Press.
- Ikäheimo, H., & Laitinen, A. (2011). Recognition and social ontology: An introduction. In H. Ikäheimo & A. Laitinen (Eds.), *Social and critical theory* (pp. 1–21). A Critical Horizons Book Series (Vol. 11). BRILL.
- Kalalahti, M., Niemi, A.-M., Varjo, J., & Jahnukainen, M. (2020). Diversified transitions and educational equality? Negotiating the transitions of young people with immigrant backgrounds and/or special educational needs. *Nordic studies in education*, 40(1), 36–54. <https://doi.org/10.23865/nse.v40.2127>
- Kauppila, A., Lappalainen, S., & Mietola, R. (2020). Governing citizenship for students with learning disabilities in everyday vocational education and training. *Disability & Society*, 36(7), 1148–1168.
<https://doi.org/10.1080/09687599.2020.1788512>
- Kauppila, A., Mietola, R., & Niemi, A.-M. (2018). Koulutususkon rajoilla: Koulutuksen julma lupaus kehitys- ja vaikeavammaisille opiskelijoille. In H. Silvennoinen, M. Kalalahti, & J. Varjo (Eds.), *Koulutuksen lupaukset ja koulutususko* (pp. 209–240). Kasvatustieteiden tutkimuskeskus. Kasvatusalan tutkimuksia, No79. FERA Suomen kasvatustieteellinen seura
- Krippendorff, K. (1980). *Content analysis: An introduction to its methodology*. SAGE.
- Kuutsch, C., & Charest, É. (Eds.) (2021). *The future of diversity*. International Labour Organization. Retrieved June 21, 2023 from https://www.ilo.org/global/publications/books/WCMS_831316/lang--en/index.htm
- Laitinen, A. (2003). *Social equality, recognition and preconditions of good life*. Conference paper. Social Inequality Today, Macquarie University.
- Larsen, L., & Thunqvist D. P. (2018). Balancing the esteem of vocational education and social inclusion in four Nordic countries. In C. H. Jørgensen, O. J. Olsen, & D. P. Thunqvist (Eds.), *Vocational education in Nordic countries. Learning from diversity*. (1 st edition, pp. 74–94). Routledge.
- Leary, M. R. (Ed.) (2001). *Interpersonal rejection*. Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780195130157.001.0001>
- Lucas, R. E., & Dyrenforth, P. S. (2006). Does the existence of social relationships matter for subjective well-being? In K. D. Vohs & E. J. Finkel (Eds.), *Self and relationships: Connecting intrapersonal and interpersonal processes* (pp. 254–273). The Guilford Press.
- Lynch, K. (2019). Inequality in education: What educators can and cannot change. In M. Connolly, D. H. Eddy-Spicer, C. James, & S. D. Kruse (Eds.), *The Sage handbook of school organization* (pp. 301–317). SAGE.
- Mahar, A. L., Cobigo, V., & Stuart, H. (2013). Conceptualizing belonging. *Disability and Rehabilitation*, 35(11), 1026–1032. <https://doi.org/10.3109/09638288.2012.717584>
- Mattila, M. (Ed.). (2020). *Eriarvoisuuden tila Suomessa*. Kalevi Sorsa -Säätiö.
- May, V. (2013). *Connecting self to society: Belonging in a changing world*. Bloomsbury Publishing Plc.
- Mäkinen, H. (2021). *Selvitys osatyökykyisten Suomen mallista* [Report on the Finnish model for people with partial work ability]. Työ- ja elinkeinoministeriö. <https://julkaisut.valtioneuvosto.fi/handle/10024/162815>
- Niemi, A.-M. (2014). Tuki, tarve, leima, oikeus? *Erytisyyden muotoutuminen ammatillisen koulutuksen diskursseissa*. *Kasvatus*, 45(4), 349–363.
- Niemi, A.-M., & Kurki, T. (2014). Getting on the right track? Educational choicemaking of students with special educational needs in pre-vocational education and training. *Disability & Society*, 29(10), 1631–1644.
<https://doi.org/10.1080/09687599.2014.966188>
- Nussbaum, M. C. (2010). *Not for profit. Why democracy needs the humanities*. Princeton University Press.
- Pekrun, R., & Linnenbrink-Garcia, L. (2014). Introduction to emotions in education. In R. Pekrun & L. Linnenbrink-Garcia (Eds.), *International handbook of emotions in education* (pp. 1–10). Routledge.
<https://doi.org/10.4324/9780203148211.ch1>
- Pirkanen, H., Eerola, P., & Jokinen, K. (2020). Nuorten aikuisten käsityksiä tulevaisuuden perheistä [Young adults' perceptions of the future families]. In T. Valkendorff & E. Sihvonen (Eds.), *Nuorten perheet ja läheissuhteet* [Young people's families and close relationships] (pp. 127–142). Nuorisotutkimusverkosto/Nuorisotutkimusseura. Nuorten elinolut - vuosikirja, 2020. <http://urn.fi/URN:NBN:fi-fe2020110489259>
- Power, S. (2012). From redistribution to recognition to representation: Social injustice and the changing politics of education. *Globalisation, Societies and Education*, 10(4), 473–492.
<https://doi.org/10.1080/14767724.2012.735154>

- Rinehart, K. E. (2021). Abductive analysis in qualitative inquiry. *Qualitative Inquiry*, 27(2), 303–311. <https://doi.org/10.1177/1077800420935912>
- Ryökkönen, S. (2023). „They did not give up on me.” *Vocational students’ perceptions of the special support in their studying*. University of Helsinki, Faculty of Educational Sciences. Studies in education 151. Doctoral dissertation. <http://urn.fi/URN:ISBN:978-951-51-8741-3>
- Ryökkönen, S., Pirttimaa, R., & Kontu, E. (2020). Interaction between students and class teachers in vocational education and training: ‘Safety distance is needed’. *Nordic Journal of Vocational Education and Training*, 9(2), 156-174. <https://doi.org/10.3384/njvet.2242-458X.1992156>
- Ryökkönen, S., Maunu, A., Pirttimaa, R., & Kontu, E. (2022a). Learning about students’ receiving special educational support experiences of qualification, socialization and subjectification in Finnish vocational education and training: A narrative approach. *Education Sciences*, 12(2): 66, 1-15. <https://doi.org/10.3390/educsci12020066>
- Ryökkönen, S., Maunu, A., Pirttimaa, R., & Kontu, E. (2022b). From the shade into the sun: Exploring pride and shame in students with special needs in Finnish VET. *European Journal of Special Needs Education*, 37(4), 648-662. <https://doi.org/10.1080/08856257.2021.1940006>
- Salonen, A. O., & Bardy, M. (2015). Ekososiaalinen sivistys herättää luottamusta tulevaisuuteen. *Aikuiskasvatus*, 35(1), 4–15. <https://doi.org/10.33336/aik.94118>
- Sandstrom, G. M., & Dunn, E. W. (2014). Social interactions and well-being: The surprising power of weak ties. *Personality and Social Psychology Bulletin*, 40(7), 910–922. <https://doi.org/10.1177/0146167214529799>
- Sandu, A. (2016). *Social construction of reality as communicative action*. Cambridge Scholars Publishing.
- Schleifer, R., & Harré, R. (1987). *A.J. Greimas and the nature of meaning: Linguistics, semiotics and discourse theory*. Croom Helm.
- Schreier, M. (2012). *Qualitative content analysis in practice*. Sage.
- Sjöblom, S. (2016). *Suomen vammaispoliittisen ohjelman VAMPO 2010–2015 loppuraportti* [Finland's disability policy programme (VAMPO) 2010– 2015: Final report]. Sosiaali- ja terveystieteiden ministeriö. <https://julkaisut.valtioneuvosto.fi/handle/10024/74810>
- Stewart, F. (2013). *Capabilities and human development. Beyond the individual – the critical role of social institutions and social competencies*. Occasional paper 2013/03. UNDP Human Development Report Office.
- Sun, J., Harris, K., & Vazire, S. (2020). Is well-being associated with the quantity and quality of social interactions? *Journal of Personality and Social Psychology*, 119(6), 1478–1496. <https://doi.org/10.1037/pspp0000272>
- Taylor, C. (1994). Politics of recognition. In A. Gutmann (Ed.), *Multiculturalism: Expanded paperback edition* (pp.25-74). Princeton University Press. <https://doi.org/10.1515/9781400821402-004>
- Timmermans, S., & Tavory, I. (2012). Theory construction in qualitative research: From grounded theory to abductive analysis. *Sociological Theory*, 30(3), 167–186. <https://doi.org/10.1177/0735275112457914>
- van den Brink, B., & Owen, D. (2007). Honneth’s theory of recognition. In B. van den Brink & D. Owen (Eds.), *Recognition and power. Axel Honneth and the tradition of critical social theory* (pp. 2-20). Cambridge University Press.
- Vipunen - Education Statistics Finland (n.d.). Vocational education and training. Retrieved June 21, 2023 from <https://vipunen.fi/en-gb/vocational-education-and-training>
- Wheelahan, L. (2020). Doctoral theses in vocational education. *Journal of Vocational Education & Training*, 72(4), 597–597. <https://doi.org/10.1080/13636820.2020.1838211>
- Yuval-Davis, N. (2006). Belonging and the politics of belonging. *Patterns of Prejudice*, 40(3), 197–214. <https://doi.org/10.1080/00313220600769331>

Biographical notes

Dr Sanna Ryökkönen is a principal research scientist at Häme University of Applied Sciences, School of Professional Teacher Education & Edu Research Unit. Her research interests are equality, equity and sustainability in VET and teacher education, particularly regarding students’ experiences and needs. <https://orcid.org/0000-0003-2399-9120>

Schäfer, M., Wesselborg, B., Weyland, U., Kleinknecht, M., Koschel, W., & Klar, K. (2023). Analysis of cognitively activating tasks in vocational education and training of nursing. In C. Nägele, N. Kersh, & B. E. Stalder (Eds.), *Trends in vocational education and training research, Vol. VI. Proceedings of the European Conference on Educational Research (ECER), Vocational Education and Training Network (VETNET)* (pp. 214–223). <https://doi.org/10.5281/zenodo.8209119>

Analysis of Cognitively Activating Tasks in Vocational Education and Training of Nursing

Schäfer, Miriam

schaeferm@fliedner-fachhochschule.de, Fliedner University of Applied Sciences, Düsseldorf

Wesselborg, Bärbel

wesselborg@fliedner-fachhochschule.de, Fliedner University of Applied Sciences, Düsseldorf

Weyland, Ulrike

ulrike.weyland@uni-muenster.de, Westphalian Wilhelms-University of Münster

Kleinknecht, Marc

marc.kleinknecht@leuphana.de, Leuphana University Lüneburg

Koschel, Wilhelm

koschel@uni-muenster.de, Westphalian Wilhelms-University of Münster

Klar, Kristin

k_klar01@uni-muenster.de, Westphalian Wilhelms-University of Münster

Abstract

Context: So far, it is unclear to what extent cognitively activating tasks are used in vocational education and training in nursing.

Approach: In the mixed method study, carried out at the University of Münster, the Fliedner University of Applied Sciences Düsseldorf and the Leuphana University Lüneburg (all Germany), nursing teachers (n=20) were interviewed about their leading task design criteria. Furthermore, learning tasks (n=20) from everyday nursing lessons were analysed regarding their potential for cognitive activation. Preliminary work is used for task analysis in which a further differentiated subject-didactic category system has been developed to assess the cognitive-activating potential of tasks in the vocational training of nursing. With seven dimensions, this first instrument enables a differentiated assessment of the cognitive potential of tasks in the vocational training of nursing.

Findings: The findings so far show that only some of the nursing teachers are able to consciously construct cognitively activating tasks while observing the necessary subject-didactic requirements. Two first types are described.

Conclusion: In the future, task construction should be discussed in more detail in nursing teacher education.

Keywords: cognitive activation, tasks, quality of teaching, nursing, Germany

1 Introduction

Cognitively activating tasks, which learners deal with independently during work phases, are indicators of high teaching quality (Klieme, 2019). So far, it is unclear whether cognitively



activating tasks are used in vocational education and training (VET) of nursing (Wesselborg, Weyland & Kleinknecht, 2019). However, high-quality teaching can prepare students for the increasingly complex supply needs and new tasks in the health care system (Bartels, 2005).

The construct of cognitive activation is primarily conceptualized by using challenging tasks, which encourage students to engage in deeper learning activities and to develop an elaborate knowledge of the learning subject (Klieme, 2019). Nevertheless, the use of cognitively activating tasks is tightly linked to the specific subject matter (Praetorius et al., 2014) and needs to be conceptualized for the unique specifics of each domain.

Up to now nor the construct of cognitive activation nor the potential of cognitive activation of tasks in nursing education have been researched. However, challenging tasks can foster students' deeper thinking and domain-specific problem-solving skills to meet the increasingly complex care needs of patients (Bartels, 2005; World Health Organization (WHO), 2011).

Against this background, the project¹ „Analysis of learning tasks in the vocational education and training in nursing under the focus of cognitive activation” aims to gain insights into the quality of tasks and the pedagogical content knowledge of teachers. To reach this aim, the following research questions were outlined:

1. Which criteria are described by nurse teachers in VET of nursing to design cognitively activating tasks?
2. What potential for cognitive activation do tasks in VET of nursing contain?
3. What connection exists between the criteria described by nurse teachers in VET of nursing to design cognitively activating tasks and the actual design of tasks?

2 Cognitive activation and cognitively activating tasks

In Europe, one of the most known theoretical frameworks for high-quality teaching assumes three basic dimensions which impact student's learning: classroom management, supportive climate and cognitive activation (Praetorius et al., 2018). The framework is based on strong empirical clues, which indicate the relevance of the three dimensions in education research (Klieme, 2019). Cognitive activation is conceptualized as a multidimensional construct, which illustrates the complexity of tasks used in class and the depth of learning processes (Baumert et al., 2010).

The construct of cognitive activation is mostly operationalized through the use of challenging tasks. They should encourage students to engage in deeper learning activities and to develop an elaborate knowledge of the learning subject (Klieme, 2019). Given the empirical fact that the features of a task do not directly indicate the cognitive processes, the construct is referred to as the potential for cognitive activation. Hence, the cognitive activity of students is not measurable and has to be explored approximatively. Education research assumes that the construct of cognitive activation can be explored through the analysis of tasks (Baumert et al., 2010), video-based observations of classes (Klieme et al., 2009) and student-surveys (Rieser et al., 2016).

The construct of cognitive activation has in particular been found to predict student's achievement (Baumert et al., 2010; Decristan et al., 2015). The TIMSS Video Study (Trends in International Mathematics and Science) found a positive impact of cognitive activation on learning performance in the subject of mathematics (Klieme et al., 2001). The study also showed that tasks are often used to solely reproduce knowledge and to practice routine procedures in mathematics (Klieme et al., 2001). The project „Cognitive Activation in the Classroom” (COACTIV) showed that cognitive activation in mathematics is a significant predictor for increased learning outcomes (Baumert & Kunter, 2013a). Fauth et al. (2014) point out that

¹ The project is funded by the German Research Foundation (DFG) (funding code 497938308).

from a student's perspective, the construct of cognitive activation is associated with joy and interest in a subject. Furthermore, less motivated students can also profit from cognitively activating classes because it fosters the use of metacognitive strategies (Rieser et al., 2016)

For some time now, there has been a repeated demand for a subject-specific operationalization of cognitive activation. In fact, it was shown that cognitive activation not only varies through the course of different lessons but also depends on the specific subject taught (Praetorius et al., 2014). Furthermore, the different dimensions of teachers' professional knowledge are often associated with student learning outcomes (Baumert & Kunter, 2013b).

In connection with the construction of tasks, the pedagogical content knowledge of the teachers is of great importance and often associated with student learning outcomes. Pedagogical content knowledge involves the knowledge of subject-specific tasks, like the construction of tasks with multiple solutions, explanatory knowledge, like the capability to explain different ways to address problems and the knowledge of students' subject-specific thinking, like the typical mistakes students make (Baumert & Kunter, 2013b).

However, the domain-specific variances in cognitive activation are fundamental concerning cognitive activation. In mathematics, for instance, tasks that have multiple solutions are highly cognitively activating (Neubrand et al., 2013), while in reading classes, the imparted reading strategies refer to cognitive activation (Lotz, 2015).

Important in the context of cognitive activation is Bloom's taxonomy, that describes the complexity of thinking processes on the basis of cognitive psychology (Bloom, 1956). The revised taxonomy of educational goals by Anderson et al. (2001) is applied both in academic education and VET (Winther & Achtenhagen, 2009). In VET, the characteristics of especially challenging and, thus, potentially cognitively activating tasks include findings related to the development of specific competences and skills as well as an increase of complexity regarding the necessary steps to achieve the solution of a domain-specific problem (Walker et al., 2016).

3 Cognitively activating tasks in VET of nursing

In Germany, vocational training in nursing is regulated by national professional legislation (Pflegerberufegesetz, 2017). Nevertheless, due to the federal system, there are further laws and regulations in the federal states, e.g. on the regulations for nursing teachers and their education. Furthermore, the late academization of nursing teachers (Wesselborg & Bögemann-Großheim 2019) means that nursing teachers with different qualifications and courses teach at nursing schools. However, several theoretical didactic theories in nursing education in Germany were developed over the past 20 years. Nevertheless, these concepts require empirical recording and differentiated supplements (Darmann-Finck, 2015).

A leading approach in nursing education curricula in Germany is the use of meaningful and exemplary nursing situations that include key occupational issues (Darmann-Finck, 2010). These situations are reflected in a didactic manner and processed into case studies. These reflect central issues and contradictions in the nursing sector. The situations include multiple, often divergent perspectives, e.g. between patients and caregivers. In addition, the used situation should allow multiple interpretations of the situation itself, the needs of those involved, and the given structural requirements (Darmann-Finck, 2010). Case studies involving ethical dilemmas (Darmann-Finck, 2010) or interprofessional collaboration and decision-making processes (Wesselborg et al., 2019) are particularly challenging for nursing students.

Case studies are the basis of the learning activities in nursing education and therefore a crucial factor in the design of challenging assignments. The competent creation and application of case studies and the associated tasks are an essential part of the pedagogical content knowledge of teachers in vocational training in nursing. Didactically the use of case studies is justified by the increase of complex care situations in which nurses cannot rely on normative knowledge only but need to understand the experiences, needs, attitudes and expectations of

patients to ensure highly qualitative care (WHO, 2011) and to develop flexible problem-solving skills (Currey et al., 2018).

Wesselborg, et al. (2022) developed a subject-didactic category system to analyse the potential for cognitive activation in tasks in nursing vocational training (Table 1). This takes up general didactic features of cognitively activating tasks (Kleinknecht et al., 2011) in order to design a domain-specific elaboration. With seven dimensions, including an adapted form of the revised taxonomy of educational goals (Anderson et al., 2001). The instrument allows a differentiated assessment of the cognitive potential of tasks in nursing professional education and shows a good reliability.

Table 1

Subject-didactic category system to assess the potential for cognitive activation of tasks in VET of nursing; (Wesselborg, Kleinknecht, et al., 2022)

Dimensions	Rating			
Knowledge	Factual Knowledge	Procedural Knowledge	Conceptual Knowledge	Metacognitive Knowledge
Cognitive Process	Reproduction	Close transfer	Broad transfer	Problemsolving
Knowledge Unit	One	Up to four	More than four	
Openness	Defined/convergent	Defined/divergent	Undefined/divergent	
Relation to living and professional environment	None	Constructed	Authentic	Real
Linguistic complexity	Low	Medium	High	
Forms of representation	One	Integration	Transformation	

The category „relation to living and professional environment“ is presented as an example. Case studies with professional situations should form the basis of the learning activities in nursing education. This is an important factor when designing challenging tasks. There are four ways to evaluate tasks in the context of this dimension. It could be a task that has no relation to the living and working environment. In this case, the task does not contain a link between theoretical knowledge and nursing students' experiences in professional practice. The second dimension means that the situation described is obviously constructed and not authentic. In this case, little information is given. The third dimension is going to be evaluated when the described situation is described with more complex information and e.g. combines different perspectives (patient, caregiver, family). The fourth dimension is going to be evaluated when the tasks present an authentic situation and the nursing students have to plan a realistic challenge - like a celebration in a nursing home.

Preliminary results when analysing the potential for cognitive activation in tasks in nursing vocational training (Wesselborg et al., 2022) suggest that tasks are often reproductive or have simple cognitive activating structures. Tasks rarely invite students to engage in full engagement with the case study or engage in deep learning activities to gain a full understanding of the subject matter.

Therefore, the current study provides an important contribution to the further development of education research in VET of nursing in Germany.

4 Methods

The study is conducted in a mixed methods design. An ethics vote was obtained in preparation for the study. The sample included 20 nursing teachers who work at nursing schools in North Rhine-Westphalia and hold a master's degree in nursing education. Problem-centered interviews were conducted to examine the professional knowledge of task construction (Witzel, 2000). For this purpose, a semi-structured interview guide was created that contains questions about the construction criteria used by the teachers when creating cognitively activating tasks. Furthermore, the interviewed nursing teachers provided case studies and learning tasks (n = 20) from everyday lessons, which were assessed in relation to their potential for cognitive activation.

The interviews were analysed deductively. The dimensions of the category system for surveying the cognitive potential of tasks were used as the central categories. In addition, inductive categories were formed (Mayring, 2019) to find further subject-specific aspects of cognitive activation. To analyse the tasks, the subject-didactic category system to assess the potential for cognitive activation of tasks in VET of nursing (Wesselborg, Kleinknecht et al., 2022) was used. The results from the different research approaches were then triangulated and compared for similarities and differences (Denzin, 1989). Through this procedure, the connection between the criteria described by nurse teachers in VET of nursing to design cognitively activating tasks and the actual design of tasks was disclosed, and comprehensive case summaries for each nursing teacher arose. At the end of the evaluation, a type formation is planned.

5 Results

5.1 Criteria of nurse teachers in VET of nursing to design cognitively activating tasks

The Following are two meaningful case summaries presented to illustrate different types of teachers in nursing vocational education. In the summaries, the nursing educator's criteria for designing cognitively activating tasks are presented. In addition, the interview results are described in connection with the analysed tasks.

Teacher A provides a case study and related assignments. The situation revolves around a middle-aged man with chronic heart failure. In addition, the concerned family is described. The patient requires specific care, while the family needs support in dealing with the chronically ill family member and the challenges that this entails.

Teacher A describes several criteria that he takes into account when designing challenging assignments in nursing education. Initially, Teacher A focuses on imparting Facts knowledge about a specific topic, and as the lesson progresses, the nursing students are asked to apply that knowledge to the present case study. For example, after learning the specific symptoms of chronic heart failure, nursing students should recognize these symptoms in the case study and distinguish them from symptoms of other diseases. Teacher A explains: „[...] *how can I apply my acquired knowledge to a concrete case study? [...] Well, my point is obviously the pathology of a particular disease itself, but also the application to the case study. But first, the pathophysiology is addressed in the case study and not the care*”.

In addition, for Teacher A, the inclusion of domain-specific models and theories in the case study is important for a successful learning process. In this specific case, it's the Corbin and Strauss trajectory model for chronic illness: „*And now it's important to me that the groups assess the care needs of this particular man [...]. “ And explicitly make a plan, like the support and counselling of the family should be planned at home using the model”*”.

Teacher A finds the use of models and theories particularly challenging for nursing students and, therefore, potentially cognitively activating. Especially when a transfer is required, and the models have been introduced in a different context. Therefore, Teacher A's goal is to „*connect old and new knowledge through a task*”.

Teacher A considers some of his tasks to be solvable in a variety of ways since the nursing students can independently set priorities in their work. As a result, teacher A comes to the conclusion: „*[...] Various aspects can be worked on in the tasks. [...] With reference to the phases of the trajectory model, the students develop different support offers. Or, given the specific care needs of the patient, one student might look at a very different problem with the patient and pursue a creative solution than another student*”.

The tasks Teacher A uses are partially divided into several steps or segmented by using tables to reduce complexity. According to Teacher A, this way, students receive „*a better overview of the topic*” and are more likely to put „*a structure to elaborate the case study*” into practice. In contrast, Teacher A also designs tasks which invite nursing students to be „*creative in their work process*” by deliberately leaving out any structuring elements or guidelines.

Teacher B provides assignments related to a case study that is an emergency scenario. In this situation, a nursing student called an emergency doctor for an acutely ill patient. The emergency doctor must first diagnose the symptoms of the patient's imminent deterioration and initiate the correct treatment measures.

Teacher B states that the tasks are „*rather rudimentary*” - i.e. begin with little information. First, the trainees should explain terms and indications for medicines. „*[...] Part One is relatively simple, the language is also similar.*” Tasks, however, require the nursing students to „*think for themselves what they would do in this particular situation*”. In addition, the language becomes more medically demanding when the emergency doctor arrives. At this point, Teacher B uses subject-specific terms such as „*diuretics and 40 mg furosemide IV*”. [...] All in all, it is becoming more medical”.

Teacher B focuses in the case study on routine practice in an emergency situation, so the related tasks comprise medical techniques like palpatory blood pressure measurement and ECG monitoring. Moreover, a picture of an ECG-derivation showing a left bundle branch block is integrated for the nursing students to examine. Teacher B points out the multiple facets of present information: „*[...] all of this needs to be processed first.*”

Of utmost importance for Teacher B is the fact that there are always diverse interpretations of a situation present in nursing. Therefore, simple reproduction of knowledge is not sufficient in professional care. A deep understanding of learning matters and analytical practice have to be exercised in VET of nursing. Teacher B explains that in nursing, moments occur when a practitioner cannot explain certain actions and stresses their point of view as follows: „*That too [...] yes intuition, hermeneutic understanding. To the question: 'Why are you making this decision now?' 'I don't know, I can't tell you spontaneously. Ask me tomorrow, I can't tell.*”

5.2 Pedagogical content knowledge of nurse teachers in VET of nursing

Regarding the pedagogical content knowledge of nursing teachers, Teacher A has a profound knowledge of the current regulations for professional training in nursing (Pflegerberufegesetz, 2017). It is, therefore, of great importance for teacher A to include the current legal goals of the training in his tasks. „*For me, these tasks are about covering all areas of competence that are easy to cover in nursing training, but also in the nursing profession.*” Consequently, teacher A considers anatomy, physiology and pathophysiology to be necessary knowledge bases, but above all wants nursing knowledge and nursing activities put in the foreground. Therefore, in the case studies created by Teacher A and the associated tasks, different protagonists with sometimes different perspectives as well as different care settings with special framework conditions play a major role. In particular, according to Teacher A, „*topics that are*

underrepresented in nursing vocational training, such as outpatient care“ and advising relatives or caring relatives should be taken into account in the learning opportunities.

For Teacher A, the planning of a comprehensive and individual nursing plan, including evidence-based nursing knowledge, is a particular challenge for nursing students and, therefore, cognitively activating in nursing vocational training.

Teacher B emphasizes the importance attached to anatomical and physiological knowledge for nursing students. For Teacher B an important goal when designing case studies and challenging tasks is that the nursing students recognize the connections of diverse risk factors with multiple diseases, the interdependence between these diseases and the anticipation of presumably following pathological consequences. Regardless, classes should still be „*fun*“ and „*light*“.

Concurrently, Teacher B wants the nursing students to reflect on existing contradictions in care situations: „*Well, to balance and endure dissonances or to make decisions for me accordingly. To pull myself out of the situation that are not good for me or in which I am not good for others. I find it difficult to get someone there.*“ Therefore, Teacher B develops case studies themselves and has already declined case studies from the school curriculum when their claims are not met. Teacher B wants to create „*images in the heads of the students, to connect the case study with their reality. [...] I want to spark concern.*“ For this purpose, Teacher B uses clichés and irritating traits to characterize the protagonists of a case study. „*So these two fat old people with their sick vessels and their sick hearts, both chain-smoking here and all. So to speak, I always exaggerate here now, I stigmatize them now, I don't discriminate against them, but I stigmatize them very strongly now. And then, I open the textbook, and it's about advice and guidance in the context of nutrition. And what now?*“ When asked where the inspiration for the case studies comes from, Teacher B could not name a certain source, only intuition and feelings guide the „*spinning of case studies*“.

Teacher B finds ethical dilemmas and issues that appeal to or irritate nursing student values to be extremely challenging for nursing students. He also interprets anatomical topics such as the central nervous system as a demanding domain-specific topic and is, therefore, cognitively activating in professional nursing training.

Teacher A is able to state explicit domain-specific criteria to design cognitively activating tasks in VET of nursing, especially the use of transfer tasks are repeatedly mentioned. Through the course of the interview, it becomes clear that Teacher A uses their preferred cognitively activating criteria in a flexible way and modifies the dimensions dependent on the learning sequence and on the current year in VET of nursing: „*Well, I'll put it like that, the further we are into the topic, but also in VET itself, the more complex and the more diverse the range of the tasks get.*“ So Teacher A describes how they begin the lesson with a focus on the reproduction of factual knowledge, which over the course of the lesson, has to be transferred and transformed to conceptual knowledge on the topic at hand.

The desired learning goals are also a central component for teacher A when varying the dimensions for designing demanding tasks. For example, tasks with a higher degree of openness are often used when Teacher A wants to encourage student nurses to discuss possible solutions: „*[...] the integration of openness, because there are no concrete solutions but multiple solutions. Strictly speaking. So everyone can participate and contribute their experiences.*“

The statements of Teacher A show high agreement with the results of the interview and the tasks analysed with the didactic category system for assessing the potential for cognitive activation. The case study and the associated tasks show rather cognitively activating results in the dimensions „*knowledge*“ and „*cognitive transfer*“. The tasks become more and more complex and thus cognitively activating in the course of the lessons. Appropriately, the „*openness*“ dimension shifts from a rather low level with several defined and convergent tasks that have clear

instructions for action and only one possible solution, to more divergent tasks that can be processed in a variety of ways.

Teacher B does not report any explicit domain-specific criteria for the design of cognitively activating tasks in nursing vocational training. He explains: „*I use things that I once learned in a very traditional way. [...] I've been here for eleven years now. It's been a while since I graduated. I, well, intuition I would call it now. And fun.*” The only criterion explicitly mentioned for the design of cognitively activating tasks is the consideration of different levels of difficulty when designing several tasks for the same case study in order to maintain flexibility in the lesson: „*[...] so that those who are already further not get bored or I can then somehow push them further [...], but it doesn't necessarily have to be at this point.*”

Although not specifically mentioned by Teacher B, the case study and associated tasks provided by Teacher B demonstrate several cognitively activating criteria. According to Teacher B, the first tasks have a low potential for cognitive activation, while as the case study progresses, some tasks also have an increasing potential for cognitive activation. The last task, for example, which reads: „*What's actually going on with Rolf?*“ achieves high ratings in the didactic category system for assessing the potential for cognitive activation. The task requires conceptual knowledge, broad transfer skills, and two to three process steps and leaves room for different solutions. Therefore, the use of domain-specific cognitively activating criteria to design tasks of Teacher B is identified as implicit.

6 Conclusion

The results show that nurse teachers regularly use case studies to design tasks and adjust these to their prioritized learning goals. When asked about design criteria to design cognitively activating tasks, the included nurse teachers weren't always aware of specific dimensions that are connected to the concept of cognitive activation. When confronted with relevant dimensions based on the subject-didactic category system to assess the cognitively activating potential of tasks in VET of nursing, most teachers were able to apprehend the presented dimensions. Furthermore, most of them can categorize their tasks alongside these dimensions and therefore analyse the cognitively activating potential.

These results hint at a gap between explicit and implicit knowledge of nursing teachers in the field of relevant dimensions to foster cognitive activation of nursing students and domain-specific criteria to design cognitively activating tasks. Nevertheless, the subject-didactic category system to assess the cognitively activating potential of tasks in VET of nursing seems to contain relevant domain-specific dimensions. Prospectively, these dimensions can be utilized by nursing teachers to increase or decrease the potential for cognitive activation in learning tasks in VET of nursing. Thus, the results of this study contribute to creating an adaptive learning setting in VET of nursing.

References

- Anderson, L.W., & Krathwohl, D.R. (Eds.) (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's Taxonomy of educational objectives*. New York: Longman.
- Baumert, J., Kunter, M., Blum, W., Brunner, M., Voss, T., Jordan, A., A. Klusmann, U., Krauss, S., Neubrand, M., & Ysai, Y.-M. (2010). Teachers' mathematical knowledge, cognitive activation in the classroom, and student progress. *American Educational Research Journal*, *47*(1), 133–180.
- Baumert, J., & Kunter, M. (2013a). The effect of content knowledge and pedagogical content knowledge on instructional quality and student achievement. In M. Kunter, J. Baumert, W. Blum, U. Klusmann, S. Krauss & M. Neubrand (Eds), *Cognitive activation in the mathematics classroom and professional competence of teachers: Results from the COACTIV project* (175–205). Boston, MA: Springer US. https://doi.org/10.1007/978-1-4614-5149-5_9.
- Baumert, J., & Kunter, M. (2013b). The COACTIV model of teachers' professional competence. In M. Kunter, J. Baumert, W. Blum, U. Klusmann, S. Krauss, S. & M. Neubrand (Eds.), *Cognitive activation in the*

- mathematics classroom and professional competence of teachers: Results from the COACTIV project* (25–48). Boston, MA: Springer US. https://doi.org/10.1007/978-1-4614-5149-5_2.
- Bartels, J.E. (2005). Educating nurses for the 21st century. *Nursing & Health Sciences*, 7(4), 221–225. <https://doi.org/10.1111/j.1442-2018.2005.00249.x>.
- Bloom, B.S., Engelhart, M.D., Furst, E.J., Hill, W.H., & Krathwohl, D.R. (1956). Taxonomy of educational objectives. *Handbook I: Cognitive domain*. New York: McKay.
- Currey, J., Sprogis, S.K., Burdeu, G., Considine, J., Allen, J.A., & Oldland, E. (2018). Students perceive Team-Based Learning facilitates development of graduate learning outcomes and professional skills. *Journal of Teaching and Learning for Graduate Employability*, 9(1), 93–113. <https://doi.org/10.21153/jtlge2018vol9no1art759>.
- Darmann-Finck, I. (2010). *Interaktion im Pflegeunterricht: Begründungslinien der Interaktionistischen Pflegedidaktik*. Frankfurt a. M.: Peter Lang. <https://doi.org/10.3726/978-3-653-06811-5>.
- Darmann-Finck, I. (2015). Berufsbildungsforschung in den Gesundheitsfachberufen – auf dem Weg zu einer Agenda. *bwp@ Spezial 10 – Berufsbildungsforschung im Gesundheitsbereich*, 1–15. http://www.bwpat.de/spezial10/darmann-finck_gesundheitsbereich-2015.pdf.
- Decristan, J., Hondrich, A.L., Büttner, G., Hertel, S., Klieme, E., Kunter, M., Lühken, A., Adl-Amini, K., Djakovic, S.-K., Mannel, S., Naumann, A., & Hardy, I. (2015). Impact of additional guidance in science education on primary students' conceptual understanding. *The Journal of Educational Research*, 108(5), 358–370. <https://doi.org/10.1080/00220671.2014.899957>.
- Denzin, N. K. (1989). *The research act. A theoretical introduction to sociological methods*. New York: McGraw Hill.
- Fauth, B., Decristan, J., Rieser, S., Klieme, E., & Büttner, G. (2014). Student ratings of teaching quality in primary school. Dimensions and prediction of student outcomes. *Learning and Instruction*, 29, 1–9. <https://doi.org/10.25656/01:18135>.
- Klieme, E., & Baumert, J. (2001). Identifying national cultures of mathematics education: Analysis of cognitive demands and differential item functioning in TIMSS. *European Journal of Psychology of Education*, 16, 385–402. <https://doi.org/10.1007/BF03173189>.
- Klieme, E., Pauli, C., & Reusser, K. (2009). The Pythagoras study: Investigating effects of teaching and learning in Swiss and German mathematics classrooms. In T. Janik & T. Seidel (Eds.), *The power of video studies in investigating teaching and learning in the classroom* (137–160). Münster, New York, München, Berlin: Waxmann.
- Klieme, E. (2019). Unterrichtsqualität. In M. Harring, C. Rohlfs & M. Gläser-Zikuda (Eds.), *Handbuch Schulpädagogik* (393–408). Münster, New York: Waxmann.
- Kleinknecht, M., Maier, U., Metz, K., & Bohl, T. (2011). Analyse des kognitiven Aufgabenpotentials. Entwicklung und Erprobung eines allgemeindidaktischen Auswertungsmanuals. *Unterrichtswissenschaft*, 39(4), 328–344.
- Lotz, M. (2015). *Kognitive Aktivierung im Leseunterricht der Grundschule. Eine Videostudie zur Gestaltung und Qualität von Leseübungen im ersten Schuljahr*. Wiesbaden: Springer VS. <https://doi.org/10.1007/978-3-658-10436-8>.
- Mayring, P. (2019). Qualitative content analysis: Demarcation, varieties, developments. *Forum Qualitative Sozialforschung. Forum: Qualitative Social Research*, 20(3). <https://doi.org/10.17169/fqs-20.3.3343>.
- Neubrand, M., Jordan, A., Krauss, S., Blum, W., & Löwen, K. (2013). Task analysis in COACTIV: Examining the potential for cognitive activation in German mathematics classrooms. In M. Kunter, J. Baumert, W. Blum, U. Klusmann, S. Krauss & M. Neubrand (Eds.), *Cognitive activation in the mathematics classroom and professional competence of teachers: Results from the COACTIV project* (125–144). Boston: MA: Springer US. https://doi.org/10.1007/978-1-4614-5149-5_7.
- Praetorius, A.-K., Pauli, C., Reusser, K., Rakoczy, K., & Klieme, E. (2014). One lesson is all you need? Stability of instructional quality across lessons. *Learning and Instruction*, 31(1), 2–12. <https://doi.org/10.1016/j.learninstruc.2013.12.002>.
- Praetorius, A.-K., Klieme, E., Herbert, B., & Pinger, P. (2018). Generic dimensions of teaching quality: The German framework of the three basic dimensions. *ZDM Mathematics Education*, 50(3), 407–426. <https://doi.org/10.1007/s11858-018-0918-4>.
- Rieser, S., Naumann, A., Decristan, J., Fauth, B., Klieme, E., & Büttner, G. (2016). The connection between teaching and learning: Linking teaching quality and metacognitive strategy use in primary school. *British Journal of Educational Psychology*, 86(4), 526–545. <https://doi.org/10.1111/bjep.12121>.
- Walker, F., Link, N., & Nickolaus, R. (2016). A multidimensional structure of domain-specific problem-solving competencies of electronics technicians for automation technology. *Empirical Research in Vocational Education and Training*, 8, 1–16. <https://doi.org/10.1186/s40461-016-0034-z>.
- Wesselborg, B., & Bögemann-Grossheim, E. (2017). Bundesländerspezifische Regelungen für die hauptberufliche Lehrfähigkeit an Gesundheits- und Krankenpflegeschulen in Deutschland – eine Ist-Analyse. *PADUA*.

- Fachzeitschrift für Pflegepädagogik, Patientenedukation und -bildung*, (12)2, 109–116. <https://doi.org/10.1024/1861-6186/a000365>.
- Wesselborg, B., Kleinknecht, M., Bögemann-Grossheim, E., & Hoenen, M. (2022). Analyse des kognitiven Potenzials von Aufgaben in der beruflichen Fachrichtung Pflege. Entwicklung und Erprobung eines fachdidaktischen Kategoriensystems. In U. Weyland & K. Reiber (Eds.), *Professionalisierung der Gesundheitsberufe. Berufliche und hochschulische Bildung im Spiegel aktueller Forschung* (321–348). Stuttgart: Steiner.
- Wesselborg, B., Weyland, U., & Kleinknecht, M. (2019). Entwicklung eines fachdidaktischen Kategoriensystems zur Analyse des kognitiv-aktivierenden Potenzials von Aufgaben – ein Beitrag zur Unterrichtsqualitätsforschung in der beruflichen Fachrichtung Pflege. In E. Wittmann, D. Frommberger & U. Weyland (Eds.), *Jahrbuch der berufs- und wirtschaftspädagogischen Forschung 2019* (75–92). Opladen u.a.: Budrich.
- Winther, E., & Achtenhagen, F. (2009). Measurement of vocational competencies — a contribution to an international large-scale assessment on vocational education and training. *Empirical Research in Vocational Education and Training*, 1, 85–102. <https://doi.org/10.1007/BF03546481>.
- Witzel, A. (2000). The problem-centered interview. *Forum Qualitative Sozialforschung. Forum: Qualitative Social Research*, 1(1), <https://doi.org/10.17169/fqs-1.1.1132>.
- World Health Organization (2011). *Patient safety curriculum guide: Multi-professional edition*. https://apps.who.int/iris/bitstream/handle/10665/44641/9789241501958_eng.pdf?sequence=1&isAllowed=y.

Biographical notes

Miriam Schäfer, M.A. is a research associate at Flidner Fachhochschule Düsseldorf. Her current research interests cover pedagogical content knowledge of nursing teachers and continuous interprofessional education.

Dr Bärbel Wesselborg is a professor at Flidner Fachhochschule Düsseldorf, University of Applied Sciences, Nursing Education. Her current research interests are, e.g. teaching quality and interprofessional education of health care professionals.

Dr Ulrike Weyland is a professor at the Institute of Education, Westphalian Wilhelms-University Münster. Her current research interests are professionalisation of teachers with a focus on practice-based teacher Education and video-based teacher learning.

Dr Marc Kleinknecht is a professor at the Institute of Educational Sciences, Leuphana University Lüneburg. His current research interests are teaching quality, video-based teacher learning and practice-based teacher Education.

Dr Wilhelm Koschel is a research associate at the Institute of Education (working group: vocational education), Westphalian Wilhelms-University Münster.

Kristin Klar, M.Ed., is a research associate at the Institute of Education (working group: vocational education), Westphalian Wilhelms-University Münster. Her research interests are, e.g. infection prevention in educational institutions.

Schepers, C. (2023). The impact of work-oriented basic education from the company perspective. In C. Nägele, N. Kersh, & B. E. Stalder (Eds.), *Trends in vocational education and training research, Vol. VI. Proceedings of the European Conference on Educational Research (ECER), Vocational Education and Training Network (VETNET)* (pp. 224–233). <https://doi.org/10.5281/zenodo.8209137>

The Impact of Work-oriented Basic Education from the Company Perspective

Schepers, Claudia

claudia.schepers@ph-weingarten.de, Pädagogische Hochschule Weingarten

Koppel, Ilka

koppel@ph-weingarten.de, Pädagogische Hochschule Weingarten

Abstract

Context: The aim of work-oriented basic education is to improve the employability of people with low literacy skills and to increase their chances on the labour market. A key element of work-oriented basic education are customized vocational language trainings that are developed in cooperation between educational service providers and companies and which are implemented directly in the company.

Approach: It is generally undisputed that education has a positive impact. However, less attention is paid to the effects that result from the vocational language trainings in combination with specific service measures. Especially for companies, the focus is often primarily on the economic and directly achieved impact. Which impact (both economic and in terms of wider benefits) service measures achieve in the context of work-oriented basic education has been less empirically studied and is accordingly given less attention. In this paper, we link the question of the impact of service interventions in work-based basic education and present findings from a round-table discussion with company representatives that were collected through a social return on investment analysis.

Findings: The results are systematically presented using the output and the outcome. The output comprises the benefits that are realized through the investments in measures. Here we differentiate between a preparation phase, an implementation phase and an evaluation phase. The outcome describes the effects that have been achieved among the stakeholders. Impacts are illustrated on an individual level as well as the company level.

Conclusion: On basis of the data it becomes apparent that it depends on the implementation process how the impact of the training unfolds. In addition, the temporal integration of the training into the respective shift system is taken into account to gain concretization of the impact and the impact chains. Furthermore, the entanglement of the training with fixed-term employment contracts requires a reflection on learning theory. The findings are intended to help provide companies and policymakers with an empirically supported decision-making basis for the implementation of work-oriented basic education.

Keywords: work-oriented basic education, impact of educational measures, social return on investment, in-company training

1 Context

Across Europe an enormous shortage of skilled workers is being bemoaned. The concept of work-oriented basic education, which addresses the employability of people with low literacy



skills and is intended to improve their chances on the labour market, therefore appears promising (Koller, 2020; Klein & Reutter, 2014). The decisive element of work-oriented basic education are customized vocational language trainings that are designed in cooperation between training providers and companies and implemented directly in the company.

It is undisputed that education achieves positive outcomes (Autorengruppe Bildungsberichterstattung, 2018, 191). For the field of literacy and basic education, an international research review shows that basic education trainings have an impact both in terms of literacy gains and so-called Wider Benefits (such as health and well-being) (Aschemann, 2015). However, international comparative studies such as PISA (OECD 2020) and PIAAC (Rammstedt, 2013) also show that educational interventions fall short of expectations and the effects are less positive than expected (Wolf/Jenkins, 2014). Specifically for Germany, the LEO study shows that 6.2 million German-speaking adults have low literacy skills (Grotlüschen et al., 2020). Of these, approximately 3.9 million people with low literacy skills work in companies (Grotlüschen et al., 2020). At the same time, there are approximately 2 million people available for the labour market who are undereducated in terms of their literacy skills. Research shows that low literacy skills reveal in every fourth case by mistakes in everyday work. Therefore, low literacy skills can lead to work being done deficiently and additional costs being incurred. In conclusion, work-oriented basic education can help to qualify people for the labour market and reduce the risk of errors in the work context (Ehmig et al., 2015). Linked to work-oriented basic education is the possibility to motivate employees to learn through the perspectives shown and to qualify them according to the requirements of the labour market. This contributes to the long-term integration of skilled workers.

Theoretically, the impact of work-oriented basic education can be systematically assigned to the individual and institutional level:

At the *individual level*, the impact can be expected in form of competence acquisition or growth, for example of increased reading and writing competencies. For learners, this results in both lower risks of occupational and social exclusion and higher earned income (Rammstedt, 2013, 158; Hartley & Horne, 2006). It was also clearly demonstrated in a longitudinal study of the „ABAG2“ project that low-literate individuals benefit from work-oriented basic education, particularly regarding their social and self-competence; however, the positive effect is strongly dependent on the extent to which these competencies can actually be applied in the workplace (Klinkhammer & Schemmann, 2019, 61). In addition, there are both lower risks of occupational and social exclusion and higher earned incomes (Rammstedt, 2013, 158; Hartley & Horne, 2006).

However, further studies suggest that too short a training duration (in one study, the course duration comprised only 30 hours of instruction) leads to inconclusive results regarding literacy gains and possible labour market effects in the context of work-oriented basic education (Wolf & Jenkins, 2014, 605).

At the *institutional level*, there is impact in terms of employer image, work climate, and recruitment and retention (Rendant, 2016, 90). However, low literacy skills can also lead to poor job performance and additional costs.

While the current state of research shows that literacy and basic education interventions work in many ways, the impact of interventions that essentially target (work-oriented) literacy promotion has been the primary focus of research activities. The effects and impact generated by measures that are primarily located on a structural level (such as service measures) have hardly been considered so far.

In the Alpha-Invest project (funded by the German Federal Ministry of Education and Research, duration 2021-2024), the impact of educational service measures for work-oriented basic education is being investigated. The aim is to empirically record, analyse and - where possible - monetize the impact. For this purpose, a complex research design was developed and

implemented, which combines qualitative and quantitative methods and thus addresses the perspective of different stakeholders (learners, teachers, planners, and company representatives).

In this paper, we focus on the company perspective and explore the question of which impact company representatives assume in educational- service measures of work-oriented basic education.

The challenge in addressing this question is that the impact of an educational service or social investment - unlike many other products and services - can only be measured objectively, directly or in an economic measure to a limited extent. This challenge is addressed by education controlling.

2 Approach

Educational controlling pursues the goal of planning, monitoring and controlling educational processes in different institutional contexts (Schöni, 2018). Educational controlling supports decision-making especially where pedagogical and economic requirements intersect: in the allocation of limited resources to potential measures, in the control of educational processes with regard to a sustainable benefit from them, and in the initiation of new strategic educational goals (Iberer, 2021, 12). In this process, educational justifications and economic justifications vary.

Whether and what someone has absorbed, learned, or internalized can be inferred from the outside only through utterances or observable behaviour. Consequently, another key challenge is to find suitable measures (i.e., indicators and metrics) that can reliably depict learning and educational processes (Iberer, 2021, 11).

The so-called Social Return on Investment (SROI) approach combines both, by systematically focusing at both the economic indicators and the wider benefits of education. The SROI approach aims to measure social interventions by translating certain aspects of social values into monetary values. It should be noted, however, that monetization is not a condition that must apply across all aspects of an intervention: A distinction is made between monetizable and non-monetizable values, as well as values that are of direct importance to society rather than to the investor (Then et al., 2015; Nicholls et al., 2012). The focus of the SROI approach was originally on organizations trying to reintegrate unemployed people into the labour market (cf. Krlev et al., 2013, 16; Kehl et al., 2012, 314). Therefore, SROI is specifically suited for heterogeneous target groups and for non-experimental research.

The Alpha-Invest project is guided by the procedure of a so-called SROI light analysis (based on Rauscher et al., 2015, 103). Accordingly, the insights gained in the overall project are monetized - if possible - and offset against the investments. Finally, on the basis of realistic worst- and best-case scenarios, so-called SROI ratios are determined, which provide information on what the investments are or can be worth for the company. An essential element of this process is the development of a hypothetical impact model. This allows different impact chains to be mapped, which make it possible to differentiate individual measures based on input, output, outcome and finally impact. Figure 1 schematically illustrates the procedure of the SROI Light analysis:

Figure 1

Schematic representation of the SROI Light analysis in the Alpha-Invest project (based on Rauscher et al., 2015).



The input includes all investments made. The output comprises the benefits that are realized through the investments in measures. The outcome describes the effects that have been achieved among the stakeholders. In general, the impact describes the representation of a form of change among the relevant stakeholders based on an intervention (Schober & Then, 2015, 10), considering the investment. Specifically, impact describes the difference between the outcome for stakeholders because of organization's activities and the outcome that would have been realized without the organization's activities. Impacts can be negative and positive.

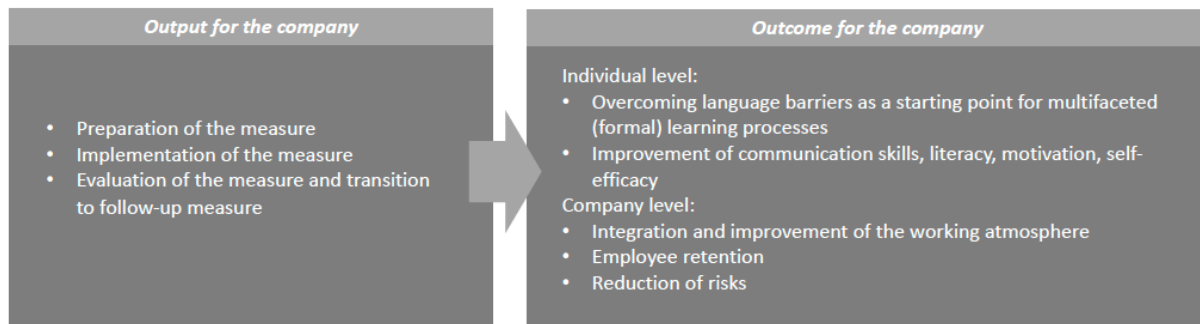
To address the question of this paper, both qualitative and quantitative methods are used. As a partial survey, a round- table discussion with seven company representatives was conducted at the end of 2022 and analysed using qualitative content analysis (Kuckartz, 2018). The following sections were represented: Construction, Medical Technology, Care, Gardening and Landscaping, and Automotive Industry. Based on these results, an online questionnaire for company representatives was developed and is currently in use. The questionnaire includes items that ask about differentiated organizational framework conditions of the vocational language trainings as well as concrete assessments of the impact of these trainings. It is expected that about 100 company representatives will participate in the online survey.

In the following, we present the results of the round- table discussion and complement them with the preliminary results from the quantitative company survey (currently 35 cases can be included in the evaluation). Derived from this are initial thoughts on monetization and possible scenarios. The concrete monetization will only take place after the data collection has been completed and is therefore not included in this article.

3 Findings

To answer the questions posed in this paper, we deductively created an analysis system that focuses on the output and the outcome from the perspective of the companies. On the one hand, this ties in with common systematization schemes of organizational learning (Schreyögg & Geiger, 2016; Senge, 1996). On the other hand, we thereby take up impulses from the concept of supply chain management and the value chain creation contained therein (Baum, 2013, 22; Scott et al., 2011, 156). Further categories were added inductively (see Fig. 2).

Figure 2
Analysis categories differentiated by output and outcome



For the output area, it was inductively worked out from the material that the service measure includes activities such as counselling, mediation, development and implementation, and the output area thus combines all those resources that are necessary to prepare, implement and evaluate the vocational language trainings or to transfer it to a subsequent training. Accordingly, the categories preparation, implementation and evaluation/transition were inductively added to the analysis category output.

For the outcome area, it was possible to work out from the material that effects can be located primarily¹ at the individual level of the employees as well as at the level of the company. Thus, the inductively obtained categories *overcoming language barriers as a starting point for multifaceted (formal) learning processes*, *improvement of communication skills, literacy, motivation and self-efficacy* were added at the individual level and the categories *integration and improvement of the working atmosphere*, *employee retention and reduction of risks* at the company level.

In the following, we present the results of the round-table discussion based on the analysis categories mentioned in Figure 2. The results are complemented in a few places with the interim results from the questionnaire survey.

Output - Preparation of the vocational language training: Vocational language Trainings in work-oriented basic education are planned in a preparatory phase with the company and the training provider and coordinated with the needs of the company. This concerns both the organizational framework conditions, such as the integration of the training into an existing shift system, and the pedagogical requirements. Pedagogical requirements address the specific literacy challenges of the respective company.

Output - Implementation of the vocational language training: For the implementation phase of the trainings, two essential prerequisites can be explicated, which appear to be necessary to have an effect: This is a) the stringent monitoring and support by the company representatives and, b) the structural coupling of the training to the contract system.

As a prerequisite for the training to have an effect, seemingly extensive activities are necessary. During the round-table discussion, the company representatives described different internal approaches that are necessary to keep the training „running“ and to support the employees. All company representatives, describe that they have to be active with a medium or even large effort to motivate and support employees so that they actually stay on course, for example, in the form of „personal support“.

In this regard, one company representative describes that she repeatedly asks about the learning progress in personal conversations. Another company representative explains that it is

¹ „Primarily“ in this context means that the effects occur either directly at the individual or at the corporate level. This does not rule out the possibility that an effect that unfolds at the individual level also has an indirect effect at the corporate level.

sometimes helpful to build up „a little pressure“. It is also important to ask in the respective work areas whether any learning progress has been made. In larger companies with a general staff capacity of 500 or more employees, coordination processes should take place between the lecturer, manager, and the company representative responsible for the training in order to keep an eye on which employees accept the offer well or less well. The questionnaire explicitly asked which measures need to be added to support the effectiveness of the trainings. Some company representatives reported that they motivate employees, are in regular contact with them, maintain close contact with the educational service provider, provide work-related teaching materials, pay the costs, or release employees from work to take part in the training. Most of the company representatives state that they would not have implemented the vocational language training without the service of the education provider. Based on these results, specific additional resources are necessary for each company to provide accompanying support for the training.

In the round- table discussion, the company representatives describe that the training is structurally linked to the contract system. Except for one company, all company representatives state that new employees with lower language skills initially receive fixed-term contracts with integrated probationary periods. The participation and commitment in the vocational language training is used as an indicator for whether a contract extension or even a determination will be implemented.

From the point of view of the company representatives, this link between the training and the contract system is a necessity: On the one hand, this tests the commitment to become integrated in the company. On the other hand, there are sector-specific safety regulations that must be understood to avoid accidents. It is true that it is described in the round- table discussion that this represents a fuse for the company and is therefore necessary. On the other hand, the company representatives also view this coupling of the training with the contract system quite positively, as they see this as an opportunity to promote the employees. It would have to be examined how this linking of the contract system with the training is perceived by the employees themselves and to what extent this affects the individual learning process.

Output - Evaluation of the vocational language training and transition to follow-up trainings: With regard to the evaluation phase and the transition to a follow-up training, it is apparent that the phases of implementation and evaluation/transition overlap: Since training providers and companies are engaged in a constant process of cooperative exchange, the question of how to implement the training permanent is repeatedly raised at different times during the training duration. The decisive factor for transferring the training to a follow-up offer seems to be whether the costs are (partially) covered. If at least 50% of the costs are not covered, the company representatives tend not to implement a follow-up training. In addition, the implementation of follow-up trainings depends on whether there are sufficient employees who would participate in future. It also became clear in the discussion that company representatives gain further insights into the range of services offered by the training provider through the cooperation and can thus be sensitized for further measures.

An important factor in the evaluation process is also the structural integration of the training into the shift system. In the round- table discussion, numerous variants are discussed, whether the training takes place during or outside of regular working hours, or whether the lessons are credited to the time account or not. If the training takes place during working hours, employees seem to be more motivated. According to the company representatives, this is also due to the appreciation that is conveyed in this way. Nevertheless, the company representatives describe that it can lead to great envy of other colleagues if they are not allowed to participate in the training. In addition, the missing work force must then be compensated, which in turn can trigger resentment. As a result, the companies have found individual solutions for the structural integration of the training, some of which they have adapted again after a trial phase.

In summary, the results regarding the output show that the investments are made in service measures, which include the preparation, implementation and evaluation and a possible transfer to follow-up offers. The providers of the educational service measures are in regular contact with the companies. The effects achieved by the service measures from the perspective of the company representatives are presented below, differentiated according to individual and company-related effects.

Outcome - Individual Level: The company representatives unanimously discussed that participation in the vocational language training can contribute to overcoming language barriers as a starting point for versatile (formal) learning processes and thus represents a kind of door opener. For an individual level, the company representatives describe that individual employees are enabled to overcome their language barriers and become more „proactive“, i.e., more open in verbal communication. In addition, the questionnaire indicates that the training makes it more likely that employees will be able to obtain further qualifications or that they will be able to complete a recognition course.

The interviewees report that the trainings have a positive influence on communicative processes in the company. This includes, for example, arrangements in the work organization, employee discussions with superiors or communication with external customers. In general, the training strengthens language skills and thus also professional understanding. Several company representatives report that they observe an increase in motivation and self-esteem among employees because of the training.

Outcome - Company Level: Furthermore, it is reported that the training supports the integration process in the team. Coming together in the training has the effect of improving social interaction, since employees get to know each other in a different way than during work. This even seems to improve the working atmosphere, as the formation of small groups, which is seen as a major challenge for companies, can be counteracted.

Regarding the structural link between the training and the contract system, the company representatives state that good work performance and, in addition, a commitment to the training have a positive effect on the extension of the contract or even the de-termination and thus contribute to employee retention. This result can be supported by responses from the questionnaire. Of the company representatives surveyed, 71% state that the training is an instrument for employee retention; 83% state that the training serves as an instrument for developing skilled workers and justify their answer in most cases by stating that language skills are a prerequisite for specialized knowledge and communicative skills (N=35). In addition, the training would convey appreciation and recognition to the participants, strengthen general basic skills and thus create the prerequisite for permanent employment; the participants can develop more trust in the company through the company's support in multi-faceted learning processes, according to the assessment of the company representatives. However, if there are frequent absences from the training or the training is not taken up at all, this can lead to the employment contract being terminated prematurely. At the same time, one person also reported that employees would work even without vocational language skills and that the training has only a minor impact on employee retention. Also, the training can lead to participants finding jobs with higher-skilled activities in another company due to better language skills.

In accordance with the state of research, it is also mentioned that the risk of errors and accidents is reduced by supporting the acquisition of written language and that the operational process is improved.

An overarching assessment of the company representatives is that avoidance in language learning ties up many resources, own resources as well as of colleagues or higher-level employees. Resources are tied up, for example, by colleagues carrying out activities themselves instead of giving language instructions. This in turn creates a barrier for colleagues with lower language skills, as they have little opportunity to get involved in the actual activity. In line with

expectations, the company representatives are consistently convinced that the trainings have a positive impact. This conviction is also reflected in the fact that they also contribute their own resources (including monetary resources) to support the training. This assessment is confirmed by the questionnaire: The company representatives rate the impact of service measures in work-oriented basic education with an average of 8 on a scale of 1 to 10 (SD 1.9).

In summary, the results show that company representatives recognize a variety of impact in the implementation of vocational language trainings, but also see isolated risks, such as the transfer of an employee to another company. It should be noted here that the survey participants tend to be a positive selection, because only those who participate in this measure were interviewed. To supplement this survey, feedback would have to be obtained from company representatives who proactively decided against implementing vocational language trainings.

4 Conclusion

On basis of the data presented here, it becomes apparent that it depends on the implementation process how the impact of the training unfolds. This becomes particularly clear regarding the times of the training and whether it takes place during or outside working hours. The way in which the training is structurally integrated into an existing shift system seems to have a direct impact on the motivation of employees and logically affects the availability of workforce. Following on from this, it should be considered to what extent the temporal placement of the training has an influence on the learning success of the participants. The data base provides indications that employees are significantly more motivated if the training takes place during working hours. From the perspective of learning theory, it should be noted that a state of exhaustion after a day's work does not support learning.

In addition, the placement of training times can have an impact on team dynamics:

On the part of the company representatives, the positioning of the training outside of working hours is not so much problematized from a monetary point of view; rather, it is concretely about the absence of workforce in the respective shift, which then must be compensated. This example shows the involvement of social and monetary factors, which must be decisively differentiated from one another in the context of further analyses.

Consequently, for the concretization of the impact and the impact chains, the temporal integration of the training into the respective shift system is considered.

In our view, it would also be relevant to reflect on the different scenarios from the perspective of learning theory discourse in order to generate impulses as to how learning can be linked to work activities and how to create good learning conditions. Furthermore, the entanglement of the training with the fixed-term employment contracts requires a reflection on learning theory. Company representatives view this point positively and see it as an instrument for retaining employees. From a subject-scientific perspective, there may be conditions at the structural level that favour defensive learning (Holzkamp, 1995, 191) and consequently mitigate individual learning successes. This aspect will be considered in a further data collection with employees.

In the further course of the data evaluation, it will be critically examined whether the concept of supply chain management with the principle of value chain creation is viable for the design of internal educational processes or whether there are profitable points of contact here. However, it should already be critically noted here that it is not a matter of increasing the profitability of educational measures for the company. Rather it is to be defined within this perspective which sector-specific workflows exist, and then to analyse consequently these conditions, which may contribute the impact of trainings to unfold as well as possible. Ideally, this would allow measures that make it possible to promote individual learning processes. In addition, it would appear to be beneficial to examine the extent to which effects occur in specific sectors and therefore trainings should be geared more customized.

Looking ahead, the data collected can form the basis for deriving success conditions for the implementation of educational- service measures and trainings in basic education. For example, the data provide evidence that iterative evaluation on how best to integrate the vocational language training into the existing shift system is significant to make the unfolding of the impact of the service intervention more likely.

In terms of practice, the findings to date indicate that recognition of basic skills as part of vocational inclusion would also enable positive career and job development with fewer job losses in the future, leading to more seamless career trajectories and better integration into the labour market in the long run. Looking ahead, this paper and the Alpha-Invest project study are intended to help provide companies and policymakers with an empirically supported decision-making basis for the implementation of work-oriented basic education.

References

- Aschemann, B. (2015). *Basisbildung wirkt. Wie wirkt Basisbildung? Eine internationale Forschungsübersicht. Materialien zur Erwachsenenbildung*. 1. Bundesministerium für Bildung und Frauen. Verfügbar unter: https://erwachsenenbildung.at/downloads/service/materialien-eb_2015_1_wiewirktbasisbildung_aschemann.pdf
- Autorengruppe Bildungsberichterstattung. (2018). *Bildung in Deutschland 2018. Ein indikatorengestützter Bericht mit einer Analyse zu Wirkungen und Erträgen von Bildung*. wbv. <https://www.bildungsbericht.de/de/bildungsberichte-seit-2006/bildungsbericht-2018/pdf-bildungsbericht-2018/bildungsbericht-2018.pdf>
- Baum, M. B. (2013). *Service Business Costing: Cost Accounting Approach for the Service Industry*. Springer Gabler.
- Ehmig, S., Heymann, L., & Seelmann, C. (2015). *Alphabetisierung und Grundbildung am Arbeitsplatz. Sichtweisen im beruflichen Umfeld und ihre Potenziale*. Stiftung Lesen. Verfügbar unter: <https://www.stiftunglesen.de/download.php?type=documentpdf&id=1523>
- Grottlüschchen, A., Buddeberg, K., Dutz, G., Heilmann, L., & Stammer, C. (2020). Hauptergebnisse und Einordnung zur LEO-Studie 2018 - Leben mit geringer Literalität. In A. Grottlüschchen & K. Buddeberg (Hrsg.), *LEO 2018. Leben mit geringer Literalität* (S. 13-64). wbv. DOI E-Book (PDF): 10.3278/6004740w
- Hartley, R., & Horne, J. (2006). *Social and economic benefits of improved adult literacy: Towards a better understanding*. NCVER.
- Holzkamp, K. (1995). *Lernen. Subjektwissenschaftliche Grundlegung*. Campus Verlag
- Iberer, U. (2021). *Bildung messbar machen: Eine Einführung in das Bildungscontrolling*. (Studententext). Ludwigsburg: Pädagogische Hochschule.
- Kehl, K., Then, V., & Münscher, R. (2012). Social Return on Investment: Auf dem Weg zu einem integrativen Ansatz der Wirkungsforschung. In H. K. Anheier, A. Schröer, & V. Then (Hrsg.), *Soziale Investitionen: Interdisziplinäre Perspektiven* (pp. 313-331). VS Verlag für Sozialwissenschaften.
- Klein, R. & Reutter, G. (2014). *Arbeitsorientierte Grundbildung – Worüber reden wir?* Verfügbar unter http://bbb-dortmund.de/jobbb2/AoG_Verstaendnis_3_14.pdf (Zugriff am: 3.7.2023).
- Klinkhammer, D., & Schemmann, M. (2019). Effects of Work-Oriented Adult Basic Education Trainings: Addressing Employee's Competencies across Sectors. *Internationales Jahrbuch der Erwachsenenbildung*, 42, 51-64.
- Krlev, G., Münscher, R., & Mülbert, K. (2013). *A Meta-Analysis of practice in Social Return on Investment (SROI) studies published 2002-2012*. Centre for Social Investment, Heidelberg University.
- Kuckartz, U. (2018). *Qualitative Inhaltsanalyse. Methoden, Praxis, Computerunterstützung* (Grundlagentexte Methoden, 4. [überarbeitete] Auflage). Beltz Juventa.
- Koller, J. (2020). Das Grundbildungsverständnis in einer doppelten empirischen Annäherung—Divergenzen, Disziplinen und betriebliche Akteure. In Koller, J, Klinkhammer, D., Schemmann, M., (Hrsg.), *Arbeitsorientierte Grundbildung und Alphabetisierung. Institutionalisierung, Professionalisierung und Effekte der Teilnahme* (pp. 19-42). wbv
- Nicholls, J., Lawlor, E., Neitzert, E., & Goodspeed, T. (2012). *A Guide to Social Return on Investment. SROI-Network*. Verfügbar unter: <http://www.socialvalueuk.org/app/uploads/2016/03/The%20Guide%20to%20Social%20Return%20on%20Investment%202015.pdf>
- OECD. (2020). *PISA 2018 Results (Volume VI): Are Students Ready to Thrive in an Interconnected World?* PISA, OECD Publishing. <https://doi.org/10.1787/d5f68679-en>
- Rammstedt, B. (Hrsg.). (2013). *Grundlegende Kompetenzen Erwachsener im internationalen Vergleich. Ergebnisse von PIAAC 2012*.

- Rauscher, O., Schober, C., & Krlev, G. (2015). Wie können Wirkungen erhoben werden? Untersuchungsdesign und empirische Durchführung. In C. Schober & V. Then (Hrsg.), *Praxishandbuch Social Return on Investment. Wirkungen sozialer Investitionen messen* (pp. 77-108). Schäffer-Poeschel Verlag.
- Rendant, M.-L. (Ed.). (2016). *Grundbildung: Bildung mit Mehrwert*. Lang.
- Schober, C., & Then, V. (2015). Was ist eine SROI-Analyse? Wie verhält sie sich zu anderen Analyseformen? Warum sind Wirkungen zentral? In C. Schober & V. Then (Hrsg.), *Praxishandbuch Social Return on Investment: Wirkung sozialer Investitionen messen* (pp. 1-22). Schäffer-Poeschel.
- Scott, C., Lundgren, H. & Thompson, P. (2011). *Guide to Supply Chain Management*. Springer.
- Senge, P. (1996). *Die fünfte Disziplin. Kunst und Praxis der lernenden Organisation*. Klett-Cotta, Stuttgart
- Schreyögg, G. & Geiger, D. (2016). Organisatorischer Wandel und Lernen. In Schreyögg, G. & Geiger, D. (Hrsg.), *Organisation. Grundlagen moderner Organisationsgestaltung. Mit Fallstudien* (pp. 357-434). Springer
- Then, V., & Kehl, K. (2015). Wie können Wirkungsdimensionen operationalisiert werden? In C. Schober & V. Then (Hrsg.), *Praxishandbuch Social Return on Investment: Wirkung sozialer Investitionen messen* (pp. 59-76). Schäffer-Poeschel.
- Schöni, W. (2018). Bildungscontrolling. In M. Gessler & A. Sebe-Opfermann (Hrsg.), *Handlungsfelder des Bildungsmanagements. Ein Handbuch* (2. Auflage, pp. 341-376). Hamburg: tredition.
- Wolf, A., & Jenkins, A. (2014). Do 'learners' always learn? The impact of workplace adult literacy courses on participants' literacy skills. *British Educational Research Journal*, 40(4), 585-609.

Biographical notes

Dr Claudia Schepers is a Professor of Educational Science, especially Vocational Education at APOLLON University of Health Management. Her work and research focus on the digitization of teaching-learning processes in nursing education, literacy and basic education, and the professionalization of teaching staff in adult education. Claudia Schepers works as a research assistant in the Alpha-Invest project.

Dr Ilka Koppel is a Professor of Educational Science with a focus on Adult Education. Her research focuses on literacy and basic education, the use of digital media in basic education, and professionalization. Methodologically, she works both quantitatively and qualitatively and has extensive expertise in the implementation of design-based research. She leads various third-party funded research and development projects.

Stalder, B. E., Gaupp, P.-M., & Nägele, C. (2023). Teachers and their role in the career choice process. In C. Nägele, N. Kersh, & B. E. Stalder (Eds.), *Trends in vocational education and training research, Vol. VI. Proceedings of the European Conference on Educational Research (ECER), Vocational Education and Training Network (VETNET)* (pp. 234–242). <https://doi.org/10.5281/zenodo.8209176>

Teachers and Their Role in the Career Choice Process

Stalder, Barbara E.

barbara.stalder@phbern.ch, University of Teacher Education Bern

Gaupp, Pia-Mara

pia-mara.gaupp@phbern.ch, Bern University of Teacher Education

Nägele, Christof

christof.naegel@fhnw.ch, School of Education, University of Applied Sciences and Arts Northwestern Switzerland

Abstract

Context: The main responsibility of the career orientation process lies with the students who transition from lower secondary level to iVET or general upper secondary level schools, together with their parents. Various actors (teachers, career counsellors, in-company trainers etc.) and institutions are involved in this process. Teachers take on several roles in this process and must deal with different, sometimes conflicting, expectations. This paper explores the roles of teachers and the challenges when fulfilling those roles.

Approach: Using data from the project digibe, www.digibe.ch, the roles of teachers are examined from the perspective of students in grades 10 ($N=348$) and 20 interviews with 10th-grade teachers who are engaged in career education.

Findings: Results from both data sets highlight that teachers fulfil many different roles, such as an instructor, a facilitator and guide, a coach, or a coordinator. Their roles change over time as students grow older and teachers gain more experience.

Conclusion: We posit that the roles of teachers and other actors involved must be clarified further. Initial and further teacher training must be intensified to strengthen the teachers' role in the career orientation process and prepare them better for their different tasks.

Keywords: three to five keywords, comma-separated, all small letters

The project digibe is supported by the State Secretariat for Education, Research and Innovation SERI (2021 – 2025).

1 Introduction

Career orientation is a demanding task – primarily for students who must plan, decide and prepare for their transition from lower to upper secondary education, which is when students enter iVET programmes or upper secondary academic schools. The competencies students should develop in vocational orientation are set in the Curriculum (Lehrplan 21, D-EDK, 2016), binding for all schools in the German part of Switzerland. They include, for example, knowing the challenges in the career choice process, exploring one's interests, strengths, and limits, dealing with frustrations, and thinking about possible educational options. In doing this, students must learn to reflect and re-evaluate their experiences and actions in the career choice process. They are asked to develop and rethink existing knowledge and insights and gain new ones. The



transition from school to work thus includes not only the transformation of one's career-related knowledge and skills but also prompts a change in students' vocational identity and personality (Stalder & Nägele, 2015; Young & Mundy, 2023; see also Nägele et al. 2023, this volume).

In acquiring the competencies in career planning and choice, students are embedded in a network of several social actors (e.g., parents, teachers, career counsellors, etc.) and institutions (e.g., schools, vocational information centres, training companies) (Von Wyl et al., 2018). The partners provide a supporting system, and act, at the same time, as gatekeepers who co-steer the pathways of students after lower secondary. While the primary responsibility for career orientation is with the students and their parents, it can thus be seen as a group task in which the different partners have different tasks and roles.

Teachers come into focus here, as they are expected to provide students with career orientation competencies through lesson planning and design (Driesel-Lange et al., 2020). In doing so, teachers are confronted with a wide range of expectations from students, parents, school principals, educators from upper secondary schools and VET companies. The role that teachers have or must take on in the career orientation process is thus not clear-cut. It is plausible, however, that it is more diverse and complex than the role of a subject teacher (for example, in mathematics or German). The complexity might be due to the network and the different expectations the actors involved bring forward (Nägele & Stalder, 2017). In addition and in contrast to teaching a subject, there are no "didactics of career orientation", and guidelines on how teachers can best prepare their career orientation lessons are rare. Sure, cantonal and institutional authorities provide guidelines that might help clarify the role of the teachers. For example, at the regional level, the responsibilities and tasks of the actors and the timing of career-related activities are outlined in so-called "career choice timetables" (Berufswahlfahrpläne). Also, schools have to develop concepts that allocate tasks and roles to teachers, parents, and other partners. While such documents might provide helpful information to teachers, they mainly portray a standardised process, which cannot consider the dynamics of the career planning process and the particular situation of single students.

Being part of the networks also means that the roles and positions of all actors must be negotiated and re-negotiated during career planning. We thus assume that the teachers' role(s) vary over time and depend on the needs of the students and their parents. What roles teachers cover or can and want to take on in the career choice process has not yet been researched much. However, it is undisputed that qualified teachers can contribute to shaping quality career orientation at school (Bylinski, 2010; Deeken, 2008) - although their commitment can vary greatly (Neuenschwander & Schaffner, 2011).

In this paper, we investigate the roles of teachers based on a survey of 10th-grade students and interviews with their teachers responsible for career orientation. The aim is to gain an overview of the various roles of teachers, the underlying expectations brought forward by students (and indirectly their parents), and the tensions that may arise in the case of partners' conflicting interests.

1.1 The role(s) of teachers

Following Dreer (2020), central dimensions that make the tension between the role expectations of teachers in career orientation visible include teaching, organisation, cooperation and being a professional actor. Elaborating on these dimensions, teachers might take on, amongst others, the (classical) role of an instructor and facilitator that guides the (career) learning process of the students, the role of a coordinator in the career choice process who manages the flow of information and the tasks of the network, and the activities of other people involved.

As an instructor, teachers work with and enable students to understand and apply knowledge, concepts, and processes. They design the lessons in career orientation and plan and structure the subject matter according to the learning objectives and the needs of the students.

By selecting appropriate teaching materials, methods, and media, they create a stimulating learning environment that caters for different learning styles and interests. They develop creative teaching strategies to stimulate students' interest and motivation to support career choices.

Teachers are also *learning facilitators* (Lernbegleiter:innen) who observe and assess students' individual progress. They support learners in developing their cognitive and problem-solving skills and social and emotional development. By providing feedback, encouragement and support to students experiencing difficulties, they promote their personal growth and self-confidence. Teachers ensure that all pupils receive the support they need to reach their full potential.

Teachers can take on the role of a *coach*. The coach focuses on supporting students to achieve specific outcomes or goals, helping learners deal with challenges, overcome obstacles, and maximise their performance. A coach offers space to reflect on the past, present and future in one's career to enable autonomy, reflect on dynamics and processes, and help students develop a story about their occupational vision. A coach can also promote self-responsibility, like the learning facilitator, but often places more emphasis on guidance, teaching specific skills and techniques so that students can improve their performance and achieve their personal goals.

In the role of a *communicator, manager, and coordinator*, teachers maintain open and respectful communication with students, as well as with parents, career counsellors, VET trainers, and other colleagues. They can understandably communicate complex information and respond to the individual needs of learners. Teachers promote dialogue and interaction in the classroom and act as a hub in the career choice process to disseminate information and bring together different stakeholders.

In Nägele and Stalder (2023, this volume), we discuss whether the concept of career education could serve as an umbrella term for all the functions and the roles a teacher is expected to fulfil mentioned above. We argue that teachers are, first, experts in enabling and supporting the educational process. They are not a coach, not a guide – but partly because it is demanded from the partners in the network, they have to play those roles too.

1.2 Challenges for teachers

As outlined above, teachers must juggle sometimes conflicting expectations of students and parents, school principals, VET trainers and upper secondary general schools. The framework conditions to handle those expectations effectively and a professional actor (Dreer, 2020) are not always favourable. Particular challenges include, for example,

- the multitude of possible vocational education and training programmes and schools that the teachers themselves do not know about;
- teachers sometimes limited experience and expertise in guiding their students in the career choice process; including a lack of consistent and thorough teacher training and/or further education, for that matter; or do not have the time to acquire the relevant competencies in due time;
- students that seem not to be interested, capable or willing to engage in the career choice process; or lack the basic skills in reading, comprehension, and writing, in maths, or regarding transferable competencies; or feel torn between their own wishes for their future, the plans of their parents, and what peers approve;
- school classes that are very heterogeneously composed, with academically strong and weak young people, with students from many different nations, or students who have solid or little support from their parents.
- parents who expect teachers to place students in the most challenging education possible, even if they do not meet their academic requirements; have distinct opinions about what

kind of apprenticeship or school is suitable for their child or are "just not there" to support their children;

- peers who prevent students from making independent choices; or act as role models whom students might emulate unasked and unthinkingly.
- schools that primarily expect teachers to ensure that all students have a follow-up solution, no matter which one, or cannot give enough resources to teachers to prepare and carry out the career orientation lessons and the accompaniment of all students;
- educators from companies who expect teachers to prepare their students for specific occupations and act as matchmakers; or upper secondary schools (gymnasias) who only want their future students to be better prepared in maths and language.

This list of examples is not exhaustive. But it shows that teachers cannot always meet all actors' demands and must decide what to focus on. More specifically, they are asked to be flexible and adapt their role, depending on the situation and the current state of a student's career orientation process. In the following sections, we use data from the project digibe to explore and describe the different roles of teachers.

2 Method

2.1 Digibe

The project digibe www.digibe.ch (2021 to 2026) focuses on digital reflection and transformative learning (Nägele et al. 2020). It covers students in grades 9 to 11, ages 13 to 16, at the lower secondary level. Students regularly work on reflection tasks and report on their career orientation status up to 6 times a year. The online tool is used as an additional source, complementing and not replacing the instruction in the class, the information and counselling provided by career counsellors, and, finally, the role of the parents, who are the main responsible partners in the career orientation process. Most lessons in career orientation in the German-speaking cantons of Switzerland are provided in grade 10.

2.2 Data and sample

This paper is based on student and teacher data collected in the spring and early summer of 2023. Students were invited to work on the task "networks" in the digibe-online tool. In this task, they were asked to enumerate 5 to 10 persons who played a significant role in their career choice process. They commented on the role of their teacher(s) and evaluated to what extent the teacher(s) had informed, guided, and supported them. In addition, they expressed their view on what they missed and how their teacher(s) could have supported them better.

The student sample consisted of 348 persons (48.9% female) from 29 classes of 10 cantons in the Swiss German part of Switzerland. When students worked on the network task, 56.0% were at the end of grade 10, while the other 44.0% were about to finish grade 11, which is the end of compulsory schooling. Half of the students (49.9%) reported that they had completed their vocational choice process (10th graders: 23.5%; 11th graders: 83.2%). The other half (50.1%) indicated they are still investigating different options and searching for an apprenticeship or school-based education.

In a qualitative study, interviews were conducted with 20 lower secondary teachers responsible for career education (7 female, 13 male). All of them were class teachers, currently teaching 10th graders, and thus responsible for guiding and supporting the career choice of their students. Teachers described their career orientation lessons, commented on their role in the career orientation process (e.g., instructing, coaching, guiding, coordinating) and highlighted specific challenges that emerge during the lessons and the guidance of their students. Interviews were

transcribed and will be analysed with Maxqda. The results provide a preliminary insight into the data, as depth analyses are not yet available.

3 Results

3.1 Teachers as important persons in the career orientation process

A first indication of teachers' role in the career orientation process is given simply by looking at the number of students who think their teacher is essential in the career choice process.

Of the 348 students, 329 enumerated persons that had played (a positive or negative) role in their career choice process. Two-thirds (69.6%, N=229) indicated that one or several teachers had played an important role. All others did not mention a teacher - neither the class teacher nor another teacher from their school. As expected, parents are most often named, with 316 students (96.0%) mentioning them, and this is often in the first place.

3.2 Students' perception of their teachers' activities and roles

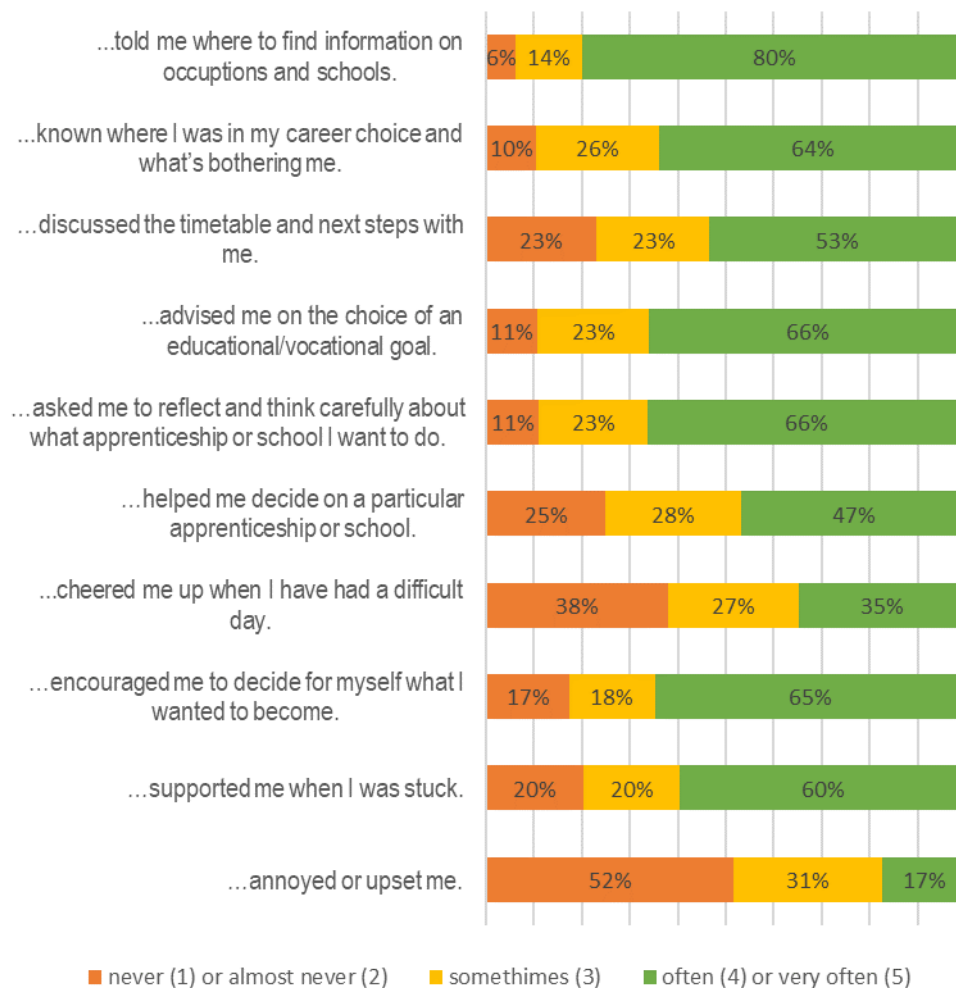
A second indication of how students perceive the role of teachers can be derived when asking students about particular actions of their teachers in the career choice process. Students rated several activities related to information, reflection, guidance, and support and indicated how often their teachers performed them. Descriptive results are shown in Table 1.

In general, students had a positive view of their teachers. Most of them felt adequately supported and informed. Teachers advised how and where to find information and helped in decision-making. Importantly, in line with the goals set in the curriculum, they demanded students to reflect carefully on their career goals and encouraged them to decide for themselves.

Analyses of variance showed that 10th-grades felt more supported than 11th-graders, which might be due to the greater importance of career choice activities in the 10th grade. Also, those still searching for information and deciding on their pathway perceived their teachers as more active than those who had already finished their career choice process. This result might indicate that teachers adapt their role to the needs of their students by focusing more on those students that need more support.

At a second glance, results might be interpreted more critically. The activities described above encompass the core tasks of teachers responsible for their students' career choice process. All teachers should, for example, lead and supervise the timing of the career orientation and each student's next steps. The fact that one out of five teachers did not seem to do so might be problematic and must be explored further.

Table 1
Teachers' activities and roles in the career choice process, students' perception



3.3 Particular experiences

A third indication of how students perceive the role of teachers is given by evaluating the activities or behaviours of the teachers, which students experienced most positively, and what they missed. Students answered two open questions and described what their teachers had done exceptionally well and what they could have done better.

Among the things teachers did particularly well were activities linked to career information and students' application to work experience days (*Schnupperlehre*) and apprenticeship places. Teachers informed about occupations, schools, and apprenticeships, instructed them how to write application letters and CVs and practised job interview situations. Other students highlighted that their teachers encouraged them to find their own way. Teachers advised them to explore different occupations and left ample space and enough time to think about their future. In doing this, teachers signalled that the students are responsible for their career choice. At the same time, they were available when students needed help.

When asked about possible improvements, most students reported that there is nothing the teacher could have done better. Others recommended they their teacher spend more time with individual students. They should motivate students more to engage in the career choice process and give more or more positive feedback. Others wished to have had more time for career choice in general or related to specific tasks like learning and practising to apply for apprenticeships.

3.4 Teachers' perception of their role

Teachers were asked to reflect on their role as instructor, guide, coordinator, etc., and report how they fulfil their different roles (s). The results reveal that teachers take on several different roles. In describing their roles, they used various terms that do not necessarily correspond to the abovementioned roles. Moreover, they interpreted their roles and the social expectations underlying them very differently.

Many interviewees described themselves as *coaches* who accompany the students in their career choice process, motivating them and giving them impulses. They tried to help the students initiate the career orientation process and supported them in reflecting on their interests and goals. Some teachers mentioned that they acted as *mediators*, assisting the students in accessing resources such as the Vocational Guidance Centre (BIZ). They provided information and contacts and supported students in using the services offered. Many of the interviewees described their role as being a *supporter* of the students by providing resources to make career choices. They encouraged the students to take responsibility for themselves, but at the same time, were there to help, especially if parents did not support students. Some interviewees saw themselves as a *guide* who assists the students at every step of the career guidance process. They helped them to stay on track, dealt with their questions and fears and tried to find solutions. In some cases, the role of the *coordinator* was mentioned. This role included working with career counsellors and other relevant partners to ensure students receive appropriate support and information. As a coordinator, teachers also helped to find follow-up solutions for students who had not found an apprenticeship place.

The interviews demonstrate that the roles of teachers in the career orientation process are multifaceted, partly overlap, and cannot be well distinguished from each other. They changed over time as students grew older, as one of the teachers stated: "Yes, I think the role also changes depending on the school year. In the first year, it's more like showing and instructing. In the meantime, it's more like coaching and a bit of (stimulating) reflection" [T22_167.02]. Roles also change as teachers gain more experience as a career orientation teacher: "So my role is to initiate thoughts and accompany the students in the process they are in. It was different in the beginning when I started. I always had the feeling that I was responsible for making it work in the end. But that is, I think, a little bit of the difficulty of separating oneself (from the expectations of students and parents) [T31_180.04].

Finally, teachers expressed that they are just one of several important players in a network. A teacher stated that his role is "Advising, motivating, supporting "; and continued: "The responsibility is clearly with the parents, together with the children. That's why the parents' evening in the BIZ (Vocational Guidance Centre) is very early. That's where it's communicated. I don't see myself as having the main responsibility, but I know some students don't have any support at home. Then I try to help them a lot." [T18_180.04].

4 Conclusion

The vocational orientation process is embedded in a complex network in which students and their parents have the main responsibility. Other social actors involved accompany the process and act as gatekeepers. Teachers, particularly those responsible for career orientation, are important partners in this. They are responsible for fostering students' career planning and career choice competencies in the lessons and providing support in the career orientation process. While it is too early to draw a conclusion here, our data show that teachers are confronted with different expectations and, thus, take on different roles. The roles and tasks accompanying them include instruction, information, guidance, support, and the expectation to communicate with and coordinate the actions of all the partners involved. Our data suggest that, in many cases, teachers seem to meet the needs of students. Students particularly appreciated the practical competencies they learned. They also emphasised that teachers left them the space and time to

reflect on their future. Teachers thus enabled them to start shaping their careers while at the same time providing guidance and support when students needed help. Our data also show that teachers have to (and do) adapt their roles over time, reacting to the changing needs of the students during lower secondary and based on the experience and growing expertise of the teachers themselves. Juggling different roles is demanding and may result in role overload if teachers are not provided with enough resources by schools. Role clarification might help to unburden the teachers. Also, initial and further training might address these issues to prepare teachers better for their roles and tasks in the career orientation process.

References

- Bylinski, U. (2012). Anforderungen an die Professionalität des Bildungspersonals im Übergang von der Schule in die Arbeitswelt – Ergebnisse aus dem Forschungsprojekt des BIBB. In H. Loebe, & E. Severing, *Jugendliche im Übergang begleiten – Konzepte für die Professionalisierung des Bildungspersonals* (pp. 33–49). Forschungsinstitut Betriebliche Bildung (fbb) gGmbH. Bertelsmann.
- Deeken, S. (2008). Unterstützung der Lehrkräfte für eine erfolgreiche Berufsorientierung. In G.-E. Famulla (Ed.), *Berufsorientierung als Prozess. Persönlichkeit fördern, Schule entwickeln, Übergang sichern. Ergebnisse aus dem Programm «Schule – Wirtschaft/Arbeitsleben»* (pp 220–233). Schneider Verlag Hohengehren.
- D-EDK. (2016). Lehrplan 21: Gesamtausgabe. Deutschschweizer Erziehungsdirektoren-Konferenz (D-EDK). <https://www.lehrplan21.ch/>
- Dreer, B. & Weyer, C. (2020). *Kompetenzen von Lehrpersonen in der Studien- und Berufsorientierung*. In T. Brüggemann & S. Rahn (Eds.), *Berufsorientierung. Ein Lehr- und Arbeitsbuch* (2nd ed) (pp. 572–578). Waxmann.
- Driesel-Lange, K., Kracke, B., Hany, E., & Kunz, N. (2020). Entwicklungsaufgabe Berufswahl. Ein Kompetenzmodell zur Systematisierung berufsorientierender Begleitung. In T. Brüggemann & S. Rahn (Eds.), *Berufsorientierung. Ein Lehr- und Arbeitsbuch* (2nd ed., pp. 57–72). Waxmann.
- Nägele, C., & Stalder, B. E. (2017). Übergänge in die Berufsbildung – ein Arbeitsmodell. In M. P. Neuenschwander & C. Nägele (Eds.), *Bildungsverläufe von der Einschulung bis in den ersten Arbeitsmarkt* (pp. 21–36). Springer Fachmedien. <https://doi.org/10.1007/978-3-658-16981-7>
- Nägele, C., Stalder, B. E., Hell, B., & Düggeli, A. (2020). *Digitale Begleitung im Berufswahlprozess digibe. Wissenschaftlicher Teil Projektantrag*. Pädagogische Hochschule FHNW.
- Neuenschwander, M. P., & Schaffner, N. (2011). Individuelle und schulische Risikofaktoren und protektive Faktoren im Berufsorientierungsprozess. *Die Deutsche Schule*, 103(4), 326-340.
- Stalder, B. E., & Nägele, C. (2015). Berufliche Identität, Commitment und Engagement [Occupational identity, commitment and engagement]. In M. Fischer, F. Rauner, & Z. Zhao (Eds.), *Kompetenzdiagnostik in der beruflichen Bildung—Methoden zum Erfassen und Entwickeln beruflicher Kompetenzen* (pp. 259–273). LIT Verlag.
- Von Wyl, A., Sabatella, F., Zollinger, D., & Berweger, B. (2018). Reif für den Beruf? Schwierigkeiten und Ressourcen von Jugendlichen im Berufswahlprozess. In F. Sabatella & A. Von Wyl (Eds.), *Jugendliche im Übergang zwischen Schule und Beruf* (pp. 1–21). Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-662-55733-4_1
- Young, R. A., & Mundy, A. K. S. (2023). Action and the active life: The contribution of contextual action theory to current career development challenges. *Australian Journal of Career Development*, 32(2), 85–93. <https://doi.org/10.1177/10384162231172514>

Biographical notes

Dr Barbara E. Stalder is a full professor in educational and social science at the Institute of Upper Secondary Education at the Bern University of Teacher Education, Switzerland. She is co-chair of the European researchers VETNET. Her research interests focus on learning in the workplace and school, student engagement, and career development in and after vocational education.

Pia-Mara Gaupp is a former doctoral student in the digibe project. She has a master's degree in educational science and a teacher training diploma. Currently, she teaches at a lower secondary school, also in the role of a teacher for vocational orientation.

Dr Christof Nägele is a senior lecturer and researcher at the University of Applied Sciences and Arts Northwestern Switzerland, School of Education. He is co-chair of the European researchers VETNET. His research interests focus on VET, vocational choice, adjustment processes, social and group processes in VET, and transferable skills.

Vonken, M., & Schaar, P. (2023). Inclusion in VET – understanding lifeworlds and defining situations for inclusive learning. In C. Nägele, N. Kersh, & B. E. Stalder (Eds.), *Trends in vocational education and training research, Vol. VI. Proceedings of the European Conference on Educational Research (ECER), Vocational Education and Training Network (VETNET)* (pp. 243–253). <https://doi.org/10.5281/zenodo.8209142>

Inclusion in VET – Understanding Lifeworlds and Defining Situations for Inclusive Learning

Vonken, Matthias

matthias.vonken@uni-erfurt.de, University of Erfurt

Schaar, Patrick

patrick.schaar@uni-erfurt.de, University of Erfurt

Abstract

Context: The article deals with the theoretical foundations of and findings from a study concerning the possibilities and limits of inclusive teaching and learning in vocational classroom situations. The study was the main part of the project InklusiBuS that was funded by the BMBF (German ministry of education and research) within the research programme MQInkBi (Qualification of educational professionals for inclusive education). The main question of the study has been how VET teachers can enable inclusive learning situations by getting access to the heterogeneous lifeworlds in an inclusive class and understand these lifeworlds.

Approach: The initial point is a theoretical framework based on system-theoretical and phenomenological as well as action-theoretical approaches to inclusion. Based on this, a grounded theory approach was used in a first step to collect qualitative data on self-perception and perception by others, on defining the situation and exploring subjective (everyday) theories of the actors among VET teachers, in-company training staff and trainees with and without disadvantage / disability in the federal state of Thuringia (Germany). Constant comparisons were made both between the groups and within the theoretical samples. In a second (quantitative) step the results were checked in a subsequent online questionnaire study among teachers from vocational schools of all 16 federal states of Germany. The findings were condensed into teachers' strategies by using T-tests and PCA.

Findings: The theoretical base is presented, as well as results on how VET teachers understand and externalize lifeworlds, to support inclusive teaching and learning and which approaches and strategies they use to open up the horizons of the lifeworlds of others. From the multitude of strategies teachers use to interact with heterogeneous groups the strategies for controlling group work and collaboration was chosen to give an example in this article how these strategies were derived.

Conclusion: Joint (inclusive) teaching-learning processes represent action situations that depend on comparable interpretations of the situation by the actors involved. The challenges are disparate lifeworlds which form the basis for situation definitions and are further apart from one another the more heterogeneous the groups are. Therefore, it must be clarified how teachers can access these lifeworlds and how learners can understand each other's.

Keywords: vocational education, inclusive teaching, lifeworld, inclusion, situation



1 Introduction

The diversity of trainees in many respects has always been an integral part of vocational education, particularly because students with very different preconditions are involved. „Heterogeneity“ is a description of the usual situation in vocational schools. Efforts to act inclusively (actually: even more inclusively) in vocational education further increase this heterogeneity and bring new demands on teaching. So if „heterogeneity“ describes the state, „inclusion“ in a broader sense is the process that leads to more heterogeneity.

„Heterogeneity“ has many facets. For example, it can refer to students' origin, social status, previous education, performance, etc. pp. What those have in common is that they have an influence on the students' lifeworlds („Lebenswelten“) and therefore become relevant for their learning: „The subjectivity of the life world arises in a double sense: on the one hand, because people's living conditions differ. At the same time, people themselves differ (in their physical and psychological make-up). Thus, on the one hand, what is perceived differs, but on the other hand, how something is perceived also differs“ (Kraus, 2013, p. 149, own translation). In the following, these lifeworlds will form the starting point for investigating the facilitation of joint teaching-learning processes in inclusive VET. We will first present theoretical explanatory approaches. They form the basis for an empirical study of teachers, students and trainers in vocational education and training to enable inclusive teaching. We will conclude with recommendations for its design.

2 Inclusion in Systems Theory

Inclusion in terms of systems theory (in the sense of Luhmann's approach) is not about to be included individuals but about communication. A social system consists only of communication (Luhmann, 1999). 'People' as a union of different systems (mental system, cardiovascular system etc.) are in the environment of social systems, and most of their 'parts' are irrelevant in terms of systems theory. It is only about the mental systems, i.e. the consciousness of the individuals involved or to be involved in teaching. *Included* here are all those who are structurally coupled to a social system and thus contribute to and are influenced by the complexity of communication. „The difference of inclusion and exclusion refers to the way in which a society allows individuals to be persons and therefore to participate in communication“ (Baraldi et al., 1999, p. 78, own translation). As long as there is an individual opportunity to participate in communication, inclusion takes place. In the model presented here, „inclusive teaching“ means the structural coupling of all mental systems to teaching communication, i.e. to the one social system of teaching. It means a change in the complexity in the systems involved. The prerequisite for joint teaching would therefore be that the complexity of a social system does not overburden or underburden the mental systems to an extent that they can no longer handle.

3 Situation and Lifeworld

A prerequisite for the connectivity of communication in the social system is that the teacher, who contributes significantly to the production of this communication, can himself assess what is connectable, it means to understand what others can handle. This requires an understanding of the lifeworld of others and the ability to create suitable situations for joint action as a demand for all participating mental systems, i.e. also to the students with and without disabilities/disadvantages. In order to enable structural coupling, the life worlds of the individuals must become „understandable“ in order to promote joint learning actions. We will first look at the „situation“ in order to be able to show the meaning of „lifeworld“.

3.1 Situation

Situation is a very specific term that has been studied many times in different disciplines (e.g. Hoefert & Brauns, 1982; Markowitz, 1979; Schulz-Schaeffer, 2009), even if it is considered less intensively in pedagogy (see also Beck, 1996; differently in Mollenhauer, 1972). A distinction must be made here between situation and location. While the latter means a point in space and time, situation cannot be described in the same way. It is rather the reflection of being located. In this sense, situation is tied to individuals as much as location, but not to the same extent to space and time. „Situation is not the location someone is in (objectively) at a particular space-time point, but 'situation' is the subjective perception and interpretation of all the above factors at a particular space-time point“ (Reichertz, 2013, p. 159, own translation).

„If men define situations as real, they are real in their consequences“ (Thomas Theorem, Thomas & Thomas, 1928, p. 571). Situations therefore do not „subsist“, but require *discovery* or *creation* by the subject. They are to be defined, even though they *are already present in the lifeworld as a priori possible definitions of situations*. A situation only becomes a situation when a section of the lifeworld is consciously made into an object. This happens by thematising it, i.e. by giving it a meaning. With a definition of a situation, complexity is reduced at the same time by selecting from the multitude of possible situation definitions (cf. Vonken, 2005).

3.2 Lifeworld

The lifeworld is „represented by a culturally transmitted and linguistically organised stock of interpretative patterns“ (Habermas, 1987, p. 189, own translation). A situation is an excerpt from the referential contexts of this lifeworld (Habermas, 1987, p. 187). The concept of lifeworld describes „the pre-scientific common world of experience, the 'realm of original evidence',“ (Dietz, 1993, p. 31, own translation). It is not the object of human interpretations, but the framework within which interpretations are made. It has emerged from the constructions and interpretations of the world that have already taken place, consists of intersubjective certainties and interpretations that have become self-evident. It represents the acquired stock of possible interpretations between the a priori given and the a posteriori structured world.

The definition of a situation within the framework of the lifeworld is further limited by the horizon as a limitation of possible interpretations of situations by lifeworld boundaries; i.e. we define only those situations that are embedded in our lifeworld. The lifeworld in turn, and with it the boundaries, changes with each new situation and of course with learning. „Perspective and horizon are the interrelated features of what is phenomenologically called a situation (...). Being situated is the ongoing *movement from the actual to the possible*, the present to the future, the given to the new, the real to the imaginary. This movement or change is the principle of what we call experience and behaviour. To live means to live in and toward changing horizons“ (Graumann, 1989, p. 97, emphasis in original).

3.3 Learning, Lifeworld and Situation

This „ongoing movement“ shows a close connection to learning as a departure from the now into the future. Learning takes place in situations (e.g. Lave, 1991), and also means the expansion of the lifeworld and its boundaries. We can only start a learning process from what is already embedded in our lifeworld and limited by our personal boundaries, but expand the latter through learning.

Learning together requires a common definition of the situation. „The situation is first given to everyone from their own perspective and is thus unique for everyone, often also not precisely determined, but only provisional or vague, and the interpretations are open to development“ (Reichertz, 2013, p. 161, own translation). This ‘own perspective’ is the lifeworld that must be aware of and externalised on the one hand, and understood and accepted by others on

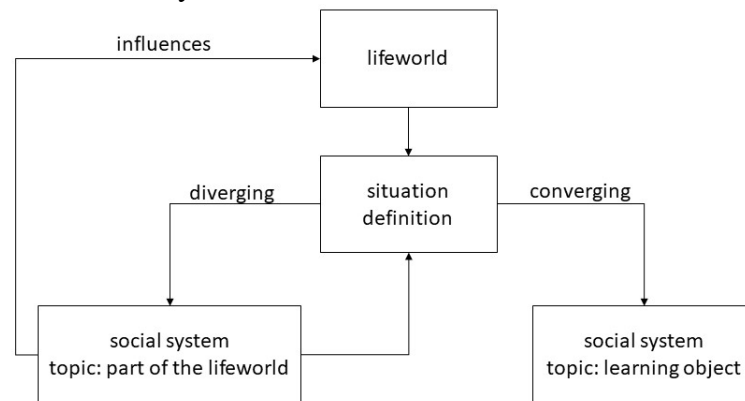
the other hand, for a common learning situation. According to Habermas, such a common situation definition can be achieved through communicative negotiations in which the participants agree on a common interpretation (Habermas, 1987, p. 185ff.). Theories of situation often seem to assume that all those involved in the situation can per se come to comparable situation definitions (e.g. Reichertz, 2013, p. 167). But this is not necessarily the case in inclusive teaching-learning situations, because the lifeworlds here can be very different. The distance of the lifeworlds increases with the distance of the circumstances in life: „The subjectivity of the lifeworld thus arises in a double sense: on the one hand, because people's living conditions differ. At the same time, people themselves differ (in their physical and psychological make-up). Thus, on the one hand, what is perceived differs, but on the other hand, how something is perceived also differs“ (Kraus, 2013, p. 149, own translation).

For joint learning, possibilities of common situation definitions must first be created by enabling participants to understand each other's lifeworld and boundaries so that the mental systems can be structurally linked to the social system of teaching. Therefore, the complexity of the social system must not over- or under-challenge the mental systems. The lifeworld serves as a structuring aid for the mental system. If communication in the social system suggests mental processes that are not only not reflected in the structure, but go far beyond it, the possibility of connection is missing. In this respect, „learning“ is always a balancing act of latent overtaxing of mental systems, which in the case of success and under the condition of basic lifeworld compatibility leads to a change in this lifeworld. Through the build-up of complexity in the social system, an indirect influence on the development of the lifeworld and the horizons takes place.

The lifeworld is the background against which situations are interpreted (defined). The situation definition in turn determines whether individuals can contribute to a communication or not (converging/diverging situation definition) (Fig. 1).

Figure 1

From the lifeworld to the social system



If there are divergent definitions of the situation, the social system should change to a negotiation process about the interpretation of the situation, thematising the process of understanding the different life worlds (or relevant parts). Afterwards a renewed situation definition can either lead to communication about the learning object or require renewed negotiation processes. Failure of this process is also possible and probable. However, joint learning is only possible when the situation definitions have converged sufficiently to establish a common social system. In the course of the communication process, the lifeworld also changes („learning“) in the sense that when the respective subjective horizon of one's own situation definition is exceeded, the boundary of the lifeworld can change and, in the best case, the different situation horizons move towards each other: „In this respect, due to the operational closure of human

cognition, the lifeworld is, on the one hand, an ineluctably subjective category, which is, however, on the other hand, subject to the conditions of the life situation due to the structural coupling“ (Kraus, 2013, p. 152, own translation).

The probability of converging situation definitions decreases with increasing divergence of the relevant lifeworlds. The teacher is therefore given a role in mediating and generating communication, and this also and especially applies to negotiating common definitions of situations and making the different life worlds understandable. The students need to do this as well. These considerations lead to the following questions regarding the promotion of inclusive teaching and learning:

- How can individual lifeworlds be made accessible and understandable for others?
- How can boundaries of lifeworlds be shown and made understandable?
- What strategies do teachers already use to make different lifeworlds and horizons visible to others?
- How do students (with/without impairments) make their lifeworlds understandable for others in order to make common situation definitions possible?

4 Research Methodology

In order to answer these questions, first a qualitative interview study was conducted, which was intended to reveal the subjective (everyday) theories of actors in vocational education concerning handling of lifeworlds. Based on the theoretical considerations, three groups were identified as relevant to the survey: Vocational school teachers, trainees and in-firm trainers. The survey was conducted in form of guided interviews and analysed according to the method of grounded theory (Glaser & Strauss, 1967, 1998). After a total of 53 interviews (24 teachers, 6 trainers, 23 young people with/without disadvantage/disability), a saturation set in. In conducting the interviews, we followed the defining components of the practice of grounded theory according to Glaser & Strauss (Charmaz, 2014, p. 7f.; Glaser & Strauss, 1967, 1998; Strauss, 1987). Constant comparisons were made both between the groups and within the theoretical samples (for further details see Vonken et al., 2021). The results were checked in a subsequent online questionnaire study and condensed into teachers' strategies using T-tests and PCA. A total of 866 teachers from 1781 schools from all 16 federal states of Germany participated.

5 Understanding other Lifeworlds and creating Situations for sharing Lifeworlds

In this section we present the results of the two studies in abbreviated form¹. First, we show several approaches to understanding lifeworlds by teachers, followed by the findings on the creation of lifeworld exchange situations by teachers in the classroom.

5.1 The search for Access to other Lifeworlds

As a first step, teachers must decipher their student's lifeworlds by getting access to them. The teachers in our interviews are intuitively aware of it and so four forms of access could be extracted.

1. Direct communicative access

This is the most obvious variant of gaining access to the students' lifeworlds through communication. It takes place in classroom situations through direct questioning or more explicitly in get-to-know rounds, but also in the form of short conversations before or after class. Students also reveal their lifeworld by themselves when the teacher serves as a contact person for private matters, but this presupposes an established relationship of trust.

¹ For a more detailed analysis see (Vonken et al., 2021).

2. Observational approach

Less obtrusive than directly addressing students seems to be their observation in different contexts. This approach offers the possibility of recognising aspects of the lifeworld but is also more dependent on interpretation by the teacher than is the case with the direct communicative approach. However, this and the other approaches increase the distance to the bearers of the lifeworld. Teachers focus primarily on the body language of their students and pay attention to mood swings. Lifeworld shows itself in the deviation, in the change of roles (cf. Mead, 2000), when proven patterns of one's own lifeworld are used to interpret situations. An observational approach is ultimately more presuppositional for teachers when attempting interpretation.

3. Indirect-communicative approach

Communication with third parties, e.g. with parents, other teachers, social workers or the students' company trainers, is characteristic for the indirect-communicative approach. In the interviews, as well as corroborated by the quantitative study, this access is described more as completing and supplementing one's own picture.

4. Access via documents

Depending on the educational institution, teachers and trainers have access to various documents related to students, such as CVs, training contracts, school reports, medical reports and school records, which teachers can use to obtain information. However, this also leads to a dependence on the quality of the construction of third parties who have written the documents. Nevertheless, they offer a form of orientation and a comparison to one's own constructions about the students. In the studies, it was noticed that access via documents does not tend to occur in combination with other accesses. In the worst case, the documents are not decoded by the teachers or do not have any effect in everyday school life for other reasons.

It is easy to see that the distance to the lifeworld also increases with this approach and that the interpretation on the part of the teacher becomes more difficult, since the teacher has to rely on the reliability of the assessment of others instead of making it himself.

5.2 Understanding the Lifeworld

The results of the different variants of approaches to lifeworlds must be processed in the second step, i.e. reconstructed, in order to then create situations for inclusive teaching-learning processes. In the process of understanding, it often becomes clear that one's own limits of access to the lifeworld of the other must be overcome. On the basis of one's own rationality, an attempt is made to put oneself in the other person's rationality: „It is obvious: that if one wants to imagine a thinking being, one must put oneself in its place and thus subordinate one's own subject to the object one wants to consider“ (Kant, 2003, p. A223, own translation). Teachers identify a different lifeworld when it shows a deviation from some kind of behavioural norm/expectation, or in situations of conflict, e.g. when students reach a certain frustration level. Such behaviour often evokes a demand from the teacher (see chapter 5.1). After this observation, further processing of what has been perceived must take place. Let us work out an example of how such a process of understanding can take place. An interviewed teacher said:

„Because to put myself in their shoes, to penetrate the reality of their lives, would also mean that in principle I would have to understand their reality of life. But to a large extent I don't understand them, because I come from a completely different background, from socially different backgrounds, from educationally different backgrounds than some students. To be honest, I have to say that. I think someone who received his whole life a welfare aid and who, for example, is only perceived by his parents as somehow being able to do that, and who then struggles to go to school. I can't understand the reality of his life.“ (LK 03, 26, own translation).

1. Own lifeworld as a construction background

The example shows one's own lifeworld as the basis for reconstructing access to others. Obviously, the teacher could not gain any experience in her life of what it means to live on

welfare aid, so that here there are own constructions about it and information from third parties is used for understanding. Situations are interpreted within the boundaries of one's own lifeworld; a context of reference is already embedded in every situation (cf. Heidegger, 1996; Joas, 1996), which anticipates its interpretation. Far-away life worlds are an obstacle to their comprehensibility: „In the natural setting, I only become aware of the lack of harmony in my stock of knowledge when a new kind of experience does not fit into the reference scheme that was previously considered unquestionable“ (Schütz & Luckmann, 2003, p. 35, own translation). Interpretations with one's own lifeworld as a constructional background and with the help of foreign constructions can help to overcome the limits of understanding foreign lifeworlds.

2. Putting oneself in the place of the other person

Accordingly, it is difficult to put oneself in the other person's shoes and this is not done in this case. This depends on understanding the reality of the other person's life in order to be able to anticipate or think along with their feelings in a particular situation or challenge. Reflectively, a development of lifeworlds initially takes place on a purely cognitive level, whereby the attempt is made to also comprehend the respective emotions.

3. Constructions of other lifeworlds

The result then represents one's own constructions of the lifeworld of the counterpart. In the example, the teacher deduces a student's unwillingness to go to school from the fact that he/she grew up in a welfare recipient household, i.e. a construction on behaviour and participation in lessons. In relation to teachers, constructions about the students' interaction with each other, about the students' private environment, about the students' world of thoughts and feelings as well as constructions about disability, disadvantage and inclusion could be worked out. These will subsequently guide the further interaction with the counterpart and, to draw a loop back to the approaches, should possibly be questioned and validated by further findings.

4. Recognising the boundaries of others' lifeworlds

If we understand the lifeworld as a space of experience and possibility of acting and interpreting in the world, it becomes immediately clear that this space is not infinite but limited. What is meant are limits of understanding. Beyond these limits, we leave our safe patterns of interpretation. Just as the teacher mentioned above cannot comprehend the life world of the student, teachers observe this with students among themselves. Two approaches to this have been noticed in the research: either on a communicative level or on the basis of observed behaviour.

5.3 Creating Situations for Lifeworld Exchange

After the teacher has identified and interpreted the students' lifeworlds, the next step is to transfer this to the action level. The teacher supports the students to go through a similar process of identifying and interpreting. For this, it is necessary that he/she reflects on his/her constructions and derives teaching approaches.

The insights gained into teaching approaches for creating situations can be structured in the form of questions:

Who or what?

Three levels can be found for initiating and framing situations of creating a lifeworld exchange. First of all, teachers often place themselves at the centre in the implementation of teaching approaches. By consciously orienting their own actions to the needs of the students, paying attention to correct pronunciation, treating the students and their lifeworld information with respect and exemplifying other secondary virtues, the teacher maintains the framing of these situations. Teachers are also responsible for adjusting the level of demands in class. On a second level, they focus on the cooperation of the students. In order to recognise the life worlds, they should support each other and, if necessary, act as lifeworld mediators in the case of incomprehensible facts. On the third level, there are forms of rules that help teachers to create or maintain

situations. Values such as respect, solidarity and loyalty, as well as the introduction of rules of conduct, create an atmosphere that makes it possible to open up the lifeworld among the students.

2. *For whom?*

The approaches to supporting students differ in whether they refer to an individual or a group. The former can be seen in the individual adaptation of school procedures and structures, such as in physical education, when students with physical disabilities „(...) can go to a special gym, for example, to work on the rest of their posture, so to speak“ (LK 04, 04, own translation) or through the individual use of additional media.

3. *How?*

Both communicative and experiential approaches are used for the exchange of students' lifeworlds with each other. The communicative approach is to let the students have their say as much as possible and to deal with issues discursively. Discussion rounds, get-to-know-you games and partner interviews encourage the students to exchange ideas on the basis of set topics. Alternatively, the structuring of situations can be dispensed with and the students can be given the responsibility of exchanging their lives. In this free space, they should develop their own forms of communication and get to know each other. This is justified either by great trust or also by the feeling of not being entitled to penetrate the lifeworlds.

5.4 Example from the survey

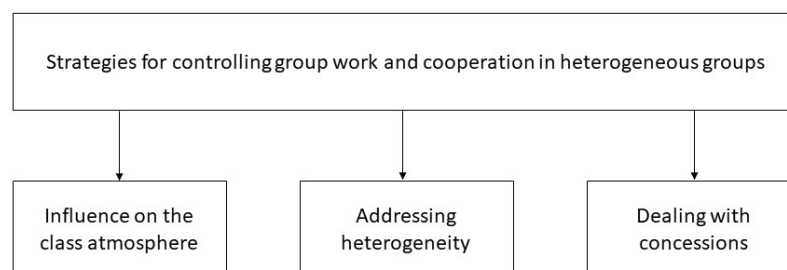
With regard to experiences, specific methods with individual lifeworld references are applied first. The starting point for biography-oriented teaching are examples from the lifeworlds of both, students and teachers. Thus, lifeworld topics as lesson content are linked to the lifeworlds of students and teachers. Using PCA, the items in the questionnaire study were divided into three strategies:

- (1) A more communicative approach by using partner interviews, chair circles, group discussions or more discursive forms of discussion;
- (2) A more performative approach when, for example, disabilities/disadvantages of students are a concrete topic in the classroom; and
- (3) Approaches that are adaptive to teaching.

As short explanation, we will use the example of *strategies for controlling group work and collaboration* to show how these strategies were derived²:

Figure 2

Strategies for controlling group work and collaboration



As can be seen in Figure 2, the strategy consists of three sub-strategies. The table below shows the components of these strategies:

² For the entire analysis with all strategies and data see (Vonken et al., 2021).

Table 1
PCA for strategies for controlling group work and collaboration

	Component			Mean ³
	1	2	3	
In group work, I assign students to groups so that there are changes in the working groups.		.578		2.15
In class, I encourage students to support each other.	.487	.502		1.57
In my classes, I deliberately place students with learning disabilities next to the best students in the class.		.698		2.59
I have already discussed my students' impairments as a lesson content with the whole class in order to achieve a better understanding.		.570		2.88
I use everyday examples from my students' lives to make the lesson content more understandable.	.617			1.66
I require all students to participate in group work.			-.772	1.50
I let students who do not want to work with others solve group tasks on their own.			.794	3.05
I try to create a class atmosphere among the students that makes it easier for them to open up.	.733			1.51
In open class discussion, I make sure that quieter students also participate in the lesson.	.421	.466		1.66
In open class discussion, I allow quieter students to withdraw.	.326		.546	2.50
My students share their lifeworlds on their own.	.630			2.04

Influencing the class atmosphere

When teachers pursue the strategy of consciously influencing the class atmosphere in order to promote cooperation among the students, they often use the approach of referring to the lifeworld already described in the qualitative evaluation (see Vonken et al., 2021). In order to create an atmosphere in the class that should make it easier for all participants to open up to the others ($M = 1.51$), the teachers consciously refer to the students' lifeworlds ($M = 1.66$) by illustrating learning content with everyday examples from students' lives. In addition to a more comprehensible teaching of the subject matter, according to our assumption from the qualitative empirical study, the teachers also show the students that the disclosure of lifeworlds can be significant for the course of the lesson and is valued. The quantitative data now shows that as soon as the teachers reported using the strategy of influencing the classroom atmosphere, they were also able to determine that their students were already sharing their lifeworlds predominantly on their own ($M = 2.04$). This suggests that the teachers already consider the use of the strategy to create a conducive atmosphere to be successful, that the students can actually appreciate the reference to the lifeworld on the part of the teachers and that this has a conducive effect on the class atmosphere for the disclosure of lifeworlds.

Addressing heterogeneity

Furthermore, the control of group processes can take place by means of a strategy of offensive thematisation of heterogeneity in the class. If this strategy is chosen, teachers again use approaches of referring to the lifeworld, but rarely address the concrete impairment characteristics of individual students explicitly and openly in front of the group. Also, the impairment characteristics are hardly ever discussed as a lesson content in the whole class ($M = 2.88$) and therefore the approach of using the students' lifeworld as a visual example is hardly used. The

³ The scale of these items is: 1 - very often, 2 - often, 3 - rarely, 4 - never

reference is rather made as a didactic facet of lifeworld exchange in the composition of groups in class. Whereas the interviews previously showed that teachers put together their learning and working groups both consciously and unconsciously without any significant tendency, in this strategy they clearly rely on a conscious allocation of students ($M = 2.15$). This leads to a constant change of the confronted lifeworlds in the attempt to make the heterogeneity in the class apparent to the students.

The implicit characteristic of this strategy becomes even clearer when looking at another approach. Students with learning disabilities are rarely placed next to high achievers ($M = 2.59$). Rather, the teachers ask all students in the class to support each other in the classroom ($M = 1.57$). The research thus shows that teachers who pursue this strategy rarely explicitly address the diversity of the students themselves in front of the group. They avoid taking on a central role in communicating disadvantages and rely on group processes in the experience of the students' lifeworlds among each other. Possible reasons for this can be found elsewhere in the survey. In order to confidently lead conversations about different impairment characteristics, it is advantageous to have acquired a basic knowledge about these. With regard to the question of which documents teachers use to inform themselves about the lifeworld of their students (PCA of variants of developing lifeworlds, factor 1, Vonken et al., 2021, p. 159, table 15), it becomes clear that a large number of them hardly obtain any additional third-order information besides school reports, CVs, training contracts or student files. If there is a lack of knowledge about the realities of life of students with impairments or possible disabilities in general, teachers will probably tend to leave the discussion of impairments to the students themselves or to create situations in which the students are supposed to become implicitly aware of their differences themselves.

Dealing with concessions

With regard to granting concessions as a strategy for managing group and student cooperation in class, it is evident that teachers are only rarely willing to do so and often assume the participation of all students ($M = 1.50$). Students who cannot work together with others in this constellation are rarely given the opportunity to solve group tasks independently ($M = 3.05$). Even outside the group work phases, the approach of making concessions to some students based on personal characteristics or supporting them in their communication is hardly used. For example, the teachers state that they rarely give quieter students the opportunity to withdraw in open classroom discussions ($M = 2.50$). Based on the quantitative data, it becomes clear that the strategy of granting concessions to students in heterogeneous classes is hardly used by teachers at vocational schools. With a view to the further research of the online survey, it also becomes apparent that the teachers surveyed, according to their own assessment, consciously refrain from giving preferential treatment to students (cf. Vonken et al., 2021). This confirms the assumptions about the teaching approach to support the communication of students from the evaluation of the qualitative interview study, that the teachers are aware of different possibilities of individual support in heterogeneous classes, but that they deliberately only rarely use them because they do not want to make any differences.

6 To the End

As can be seen, the conditions for inclusive vocational learning are as manifold as the possibilities to initiate it. We have deliberately limited ourselves in this study to exploring and describing the conditions of the possibilities for inclusive VET. What is not to be found here are explanations of the thematic design of inclusive teaching and learning. That is left to subject didactics. However, before thinking about whether and how content can be prepared inclusively, an attempt should be made to design the teaching situation itself inclusively, independently of the subject, so that a structural coupling of all to the teaching communication becomes possible. This is the real challenge, because if it is not made possible for those

involved in learning processes to learn together, teaching can only be integrative, but never inclusive.

References

- Baraldi, C., Corsi, G., & Esposito, E. (1999). *GLU - Glossar zu Niklas Luhmanns Theorie sozialer Systeme* (3rd ed.). Suhrkamp.
- Beck, K. (1996). Die ‚Situation‘ als Bezugspunkt didaktischer Argumentationen – Ein Beitrag zur Begriffspräzisierung. In W. Seyd & R. Witt (Eds.), *Situation, Handlung, Persönlichkeit: Kategorien wirtschaftspädagogischen Denkens; Festschrift für Lothar Reetz* (Vol. 6, pp. 87–98). Feldhaus.
- Charmaz, K. (2014). *Constructing grounded theory* (2nd edition). Sage.
- Dietz, S. (1993). *Lebenswelt und System. Widerstreitende Ansätze in der Gesellschaftstheorie von Jürgen Habermas*. Königshausen & Neumann.
- Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Aldine.
- Glaser, B. G., & Strauss, A. L. (1998). *Grounded theory: Strategien qualitativer Forschung*. Huber.
- Graumann, C. F. (1989). Perspective Setting and Taking in Verbal Interaction. In R. Dietrich & C. F. Graumann (Eds.), *Language Processing in Social Context* (pp. 95–122). Elsevier Science.
- Habermas, J. (1987). *Theorie des kommunikativen Handelns. Band 2: Zur Kritik der funktionalistischen Vernunft* (4th ed.). Suhrkamp.
- Heidegger, M. (1996). *Being and time*. State University of New York Press.
- Hoefert, H.-W., & Brauns, H.-P. (Eds.). (1982). *Person und Situation: Interaktionspsychologische Untersuchungen*. Hogrefe.
- Joas, H. (1996). *The creativity of action*. Univ. of Chicago Press [u.a.].
- Kant, I. (2003). *Kritik der reinen Vernunft u.a.* Fourier.
- Kraus, B. (2013). *Erkennen und Entscheiden: Grundlagen und Konsequenzen eines erkenntnistheoretischen Konstruktivismus für die Soziale Arbeit* (1. Aufl.). Beltz Juventa.
- Lave, J. (1991). Situating learning in communities of practice. In L. B. Resnick, J. M. Levine, & S. D. Teasley (Eds.), *Perspectives on socially shared cognition* (pp. 63–82). American Psychological Association. <https://doi.org/10.1037/10096-003>
- Luhmann, N. (1999). *Soziale Systeme. Grundriß einer allgemeinen Theorie*. Suhrkamp.
- Markowitz, J. (1979). *Die soziale Situation: Entwurf eines Modells zur Analyse des Verhältnisses zwischen personalen Systemen und ihrer Umwelt* (1. Aufl.). Suhrkamp.
- Mead, G. H. (2000). *Mind, Self, and Society from the Standpoint of a Social Behaviorist* (29th ed., Vol. 1). The University of Chicago Press.
- Mollenhauer, K. (1972). *Theorien zum Erziehungsprozeß: Zur Einführung in erziehungswissenschaftliche Fragestellungen* (Vol. 1). Juventa-Verl.
- Reichertz, J. (2013). ‚Auf einmal platzte ein Reifen.‘ Oder: Kommunikatives Handeln und Situation. In A. Ziemann (Ed.), *Offene Ordnung?* (pp. 155–182). Springer Fachmedien Wiesbaden. https://doi.org/10.1007/978-3-658-01528-2_8
- Schulz-Schaeffer, I. (2009). Handlungszuschreibung und Situationsdefinition. *Kölner Zeitschrift Für Soziologie Und Sozialpsychologie*, 61(2), 159–182.
- Schütz, A., & Luckmann, T. (2003). *Strukturen der Lebenswelt* (1. Aufl., Vol. 2412). UVK Verl.-Ges. <http://www.utb-studi-e-book.de/9783838524122>
- Strauss, A. L. (1987). *Qualitative analysis for social scientists*. Cambridge University Press.
- Thomas, W. I., & Thomas, D. S. (1928). *The child in America*. Knopf.
- Vonken, M. (2005). *Handlung und Kompetenz. Theoretische Perspektiven für die Erwachsenen- und Berufspädagogik*. VS Verlag für Sozialwissenschaften.
- Vonken, M., Reißland, J., Schaar, P., Thonagel, T., & Benkmann, R. (2021). *Inklusive Berufsbildung: Vom Verstehen der Lebenswelt und dem Erzeugen inklusiver Lehr-Lern-Situationen*. wbv.

Biographical notes

Dr Matthias Vonken, M.A., is an extraordinary professor for vocational education and training at the University of Erfurt. His main subjects are educational and competence theory, vocational didactics and action theory.

Patrick Schaar, M.A., is a teaching and research fellow in the department for vocational education and training at the University of Erfurt. His subjects are evaluation and empirical research on vocational education.

Wahlgren, B., & Aarkrog, V. (2023). What constitutes a good learning environment in VET?. In C. Nägele, N. Kersh, & B. E. Stalder (Eds.), *Trends in vocational education and training research, Vol. VI. Proceedings of the European Conference on Educational Research (ECER), Vocational Education and Training Network (VETNET)* (pp. 254–262). <https://doi.org/10.5281/zenodo.8209150>

What Constitutes a Good Learning Environment in VET?

Wahlgren, Bjarne

wahlgren@edu.au.dk, Aarhus University, Denmark.

Aarkrog, Vibe

viaa@edu.au.dk, Aarhus University, Denmark.

Abstract

Context: The learning environment at vocational schools influences the students' learning, well-being, and drop-out rates. In the paper, we summarize factors that affect the learning environment in vocational education and training programs.

Approach: The factors have been identified in a literature review of international research. The literature includes studies on learning environment from a previous mapping, literature search in the ERIC database and in the journals, 'International Journal for Research in Vocational Education and Training', 'Nordic Journal of Vocational Education and Training', and 'ECER VETNET proceedings'. In the study, we have categorized the factors in two main categories: the professional learning environment and social learning environment.

Findings: Concerning *the professional learning environment*, it is important that the students accomplish authentic vocational tasks and that they are involved actively and responsibly in the learning process. It is important that the teachers ensure systematic and differentiated feedback, have positive expectations for the students' performance and guide the students to set and stick to realistic goals. Concerning *the social learning environment*, it is important that the teachers establish positive relationships with the students and that the teachers act as authentic role models for the students in and outside the classroom. Furthermore, it is important that the teachers encourage positive relations among the students by creating vocational and social communities, counteracting bullying, and gender discrimination.

Conclusion: The teachers play an important part in the development of the learning environment. Consequently, it requires several competences to be a good VET-teacher, competences that encompass much more than the specific subject and job-related competences. A well-functioning learning environment requires the teachers to have social and personal competences.

Keywords: learning environment, literature review, goal setting, feedback, role models, teacher competences

1 Introduction

The learning environment at vocational schools influences the students' learning, their well-being, and their drop-out rates (Rambøll, 2018; Epinion/DPU, 2020). Consequently, the content and form of the learning environment is an important factor in the learning process.

In the article, we summarize factors that affect the learning environment in vocational education and training programs. These factors have been identified in a literature review of international research. The literature includes primary sources on learning environment from a



previous mapping, literature search in the ERIC¹ database and in the journals, 'International Journal for Research in Vocational Education and Training', 'Nordic Journal of Vocational Education and Training', and 'ECER VETNET proceedings'.

We define learning environment as the context in which the learning takes place. By context we mean the educational setting in which the vocational training programs are conducted. The setting includes the form and content of the training programs. In the current article we focus on factors in the education and training process.

2 Significant factors in a learning environment

A general conclusion from the current study is that many factors play a role in the constitution of the **beneficial learning environment. Moreover, these factors are interrelated and sometimes overlapping. Three examples of such studies can illustrate this complexity.**

A German study of factors having impact on the learning environment based on both review results and comprehensive interviews with students in a vocational setting found that several indicators are vital. The study concludes that a 'powerful' learning environment is characterized by authentic and challenging tasks, activating teaching methods (collaborative learning and problem-based teaching), differentiated teaching and guidance that focuses on the student's professional development (Placklé et al., 2014, 2018, 2020). An Italian study demonstrate the same complexity and summarizes 13 factors that influence the teaching environment in vocational education. The most important factors are the students' experience of autonomy and responsibility and the importance of simulating the work context in teaching (Perini & Pentassuglia, 2018). A study from Malta indicates that a 'powerful learning environment' includes clarification of professional identity, a high degree of participant involvement and reflective learning, comprehensive differential guidance from teachers, and teachers' support for the development of students' motivation for learning and independent management of learning (Said, 2018).

Based on the complexity in the patterns of factors and some overlapping variables, we have located different types of factors in the literature review. We have categorized the factors into two main categories. Factors related to the professional learning environment and factors related to the social learning environment. The first category, defined as the conditions that relate to the teaching process, we have divided into 1) authenticity in the training programs, 2) the students goal setting, 3) feedback from the teacher, and 4) support and differentiation. The second category, defined as the social relationship between teacher and student and among students, we have divided into 1) the relation between teacher and student, and 2) the relations between students.

We present the general findings found in the literature. We have not analyzed the relative influence the different factors have on the quality of the learning environment. Likewise, we have not analyzed how different factors interact. We present factors – found in the analyzed studies - having an impact on the learning environment.

3 The professional learning environment

3.1 Authenticity in the training programs

The students working in the classroom must have *authenticity*. A Norwegian study finds that the teaching must be authentic. Practice-based teaching, where students work with realistic

¹ The search in ERIC has used the following search threads: VET OR 'vocational education and training' or 'vocational education' or 'vocational training' or 'vocational school' AND 'Learning environment' or 'education environment' or 'school environment'. The search has been accomplished in the period 2010-2020.

tasks and relate these tasks to a future job, improve their motivation. In school, vocational practice provides a decisive opportunity for learning and development of motivation. Access to realistic or authentic tasks is of great importance. Students in all program areas highlight it as important (Høst, 2015). A study of vocational training in media production also points to the importance of authentic tasks - particularly at the beginning of the training program. Authentic tasks increase the students' perception of the relevance of education (Aakernes, 2018).

A study of the use of simulation in health care education shows that students understand the theoretical knowledge much better when they can test it in a simulated practice. Thus, simulation can contribute to creating a better connection between theory and practice – and offer a more coherent study environment (Aarkrog & Puge, 2019). Teachers may find it difficult to carry out practice-based teaching. An Australian study points out that teachers must be trained to connect theory and practice in authentic contexts, to include the students' prior learning and to use realistic evaluation methods (Downing, 2017).

The connection between school and internship can be improved through the collaboration between the school's teachers and the supervisors in the internship. Thus, a Danish study shows that a good relationship between the teacher at the school and the supervisor at the internship can promote the experience of coherence. The challenge is to create a systematic relationship at teacher level and to utilize this relationship to give students a clear perception of the connection between school and internship (Louw & Katznelson, 2019). The students' opportunity to form a clear and coherent picture of their future profession through the company internship has a positive impact on motivation for the school part and the learning environment (Nielsen et al., 2013).

According to a Swedish study of the teachers' relation to learning in practice, teachers with good relationships with the local working life can support students better than teachers without such relationships. It is thus important that teachers have knowledge not only about their subject, but also about the local labor market, companies and their trainers and supervisors (Mårtensson et al., 2019). This is confirmed by another study, where it is concluded that teachers' contact and relationship with businesses in the local environment are important for the learning environment (Høst, 2015). A close collaboration between schools and internships is vital (EVA, 2017b). Such collaboration can also prevent students from feeling that their expectations for the internship are not met, which is a significant reason for dropping out (Dyssegaard et al., 2014 a; 2014 b).

A Dutch study points to the importance of a positive interaction between the learning environment at the school and the learning environment at the workplace. The students experienced that their internship changed their way of learning at school. Through practical experiences, the school-based environment became more meaningful for the students. The study stresses the importance of teachers stimulating these reflections for the students (Bartman et al., 2018).

3.2 The students' goal setting

The clearer the students perceive *the goals* and the meaning of the teaching, the better the learning environment. A Danish study finds that the students' goals for the training and their ability to maintain these goals have a positive effect on the students' motivation for learning and retention in the education. It is therefore important that teachers clarify this in the learning programs (Mariager-Andersson et al., 2019; Aarkrog & Wahlgren, 2022). The schools must strengthen the students' own interests and abilities in relation to their choice of education to maintain and strengthen their goal orientation (Becker et al., 2018). Not least in relation to vulnerable students, it is important that counselors and teachers participate in determining and maintaining young people's goals (Martínez-Serrano et al., 2019). It is important that it is the student who sets the goal, and that the goal setting reflects the student's future and not the content of the education. The challenge is to guide the student to formulate goals that are motivating

as well as realistic (Cedefop, 2016). A study points to the importance of being able to talk to students about their goals and their career paths (Draaisma et al., 2018).

3.3 Feedback from teacher to student

Feedback contributes to increased retention and to strengthening the individual's perception of the learning environment. The teacher's positive expectations of the students and feedback on the students' performance in relation to this positively influence the students' learning and the learning environment (Rambøll, 2018). A study shows that teachers using frequent measurements of the students' development, providing continuous feedback and creating a high level of expectation in the class, make the students more independent achieving better results (Helaire, 2014). A Danish case study of carpentry education shows that it is important for teachers to make it clear to the students what is expected of them and what criteria they are measured against. The teachers must clarify the rules for the students' performance and the assessment of the students. The challenge is to communicate these rules to the students in such a way that they take ownership of the rules and norms of the education (Louw, 2013).

A Norwegian study shows that students' engagement increases when emphasis is placed on the students' own assessment of their work and development. The didactic element is 'station training', i.e., structuring the training in a series of stations (subtasks) that the students accomplish. The students are assessed, and they assess themselves in relation to how they solve the various sub-tasks, learning how they progress. Thus, an important element in the training is the teachers' ongoing professional and pedagogical feedback to the students (Stousland & Witsø, 2015).

3.4 Support and differentiation

The teachers' ability to provide personal and differentiated *professional support* strengthens the learning environment. Individualized support and differentiated teaching have a positive effect on students' well-being (Rambøll, 2016). Teachers with professional practice and working life experience, who can create confidence and give students personal support, are perceived by students as the best teachers (Høst, 2015).

A prerequisite for a good digital learning environment is that the teacher can uncover the students' prerequisites, instruct the students, and give them feedback (EVA, 2017a). In addition, a challenge with digital learning courses is that they require relatively small class sizes, so that the teacher can interact with the individual student (EVA, 2019). IT-supported teaching can be used in connection with differentiation, feedback, motivation and linking of school and practical parts of the programs (EVA, 2017a).

Using IT in teaching can strengthen student retention. The results from a development work show that video-based presentations of simulations of practice-oriented projects and of systematic guidance strengthen the learning environment and reduce dropouts (Salvà et al., 2018).

4 The social learning environment

4.1 The relations between teacher and student

Interaction between teachers, students, counselors, and school leaders support student retention and the development of the learning environment (Dyssegaard et al., 2014b).

The students' autonomy and self-determination, which is supported in student-activating forms of teaching such as project work, has a positive effect on their relationship with the teachers. The more the teachers collaborate with the students, the more the students are motivated and take responsibility for their learning (Rambøll, 2016). An Australian study points to factors that are important for engaging students in education, including care for the student's well-

being, positive teacher-student relationships, an overall goal of building students' faith in their own abilities and more generally faith in themselves (Murray & Mitchell, 2016). A Spanish study shows that it has a positive impact on retention in education when teachers have faith in the students' potential, make demands on the students and evaluate these demands. In addition, that the teachers create closeness and are available to the students (Pinya et al., 2018).

Students who do not show sufficient respect for the teacher have a negative influence on the relationship with the teacher. Teachers favoring some students and stigmatizing others also negatively affect the relationship. It has a positive effect on the students' well-being and retention in education that the teacher is friendly, caring, and professionally and personally supportive. Finally, it is important that the schools appreciate teachers who work to create positive teacher-student relationships (Krane et al., 2016).

A study of the teachers' relational work shows that this makes demands on the teacher's socio-emotional competences, which include that the teacher acts sensitively and responsibly, that the teacher is present and can handle emotions, and that the teacher acknowledge the student and supports his emotional development (Aspelin, 2019). Furthermore, regarding the teachers' competences, an Australian study shows that it is important that teachers are aware of their importance for retention and student engagement. Positive relationships must be created with the students. The relationships must be respectful, inclusive, and supportive in relation to the students' differential needs. Students must feel valued and respected by their teacher (Dutschke, 2018).

A Danish study of the teachers' relational competence, i.e., the ability to create relationships among the students and between the students and the teacher, shows that the relational competence has an influence on the students' dropout. The relational competence included teachers' ability to meet students as individuals, know their names, greet them, encourage them; but also, their ability to understand the students' situation and the difficulties they may have in and outside of school. The study also showed that the teachers' relational competence and their social responsibility could be increased through teacher training (Wahlgren & Mariager-Andersson, 2017).

A part of the relationship between teachers and students is that the teachers are role models for the students. A German study shows that contact with practice and with professional role models strengthens a professional environment. Career guidance of students can be strengthened through the inclusion of role models related to the students' wishes (Neuenschwander et al., 2018). Another study points out that the students in vocational education are mainly engaged in the workshop training rather than in theoretical education, partly because the students perceive the workshop teacher as a role model (Nielsen et al., 2013).

4.2 Relations between students

Students' cooperation has an impact on the learning environment. It has a positive impact on retention when students experience a family-like community that centers on the students' needs (Adam, 2012). The students' cooperation has a positive effect on their active participation in their own learning process (Dyssegaard et al., 2014b). Postponing the division of students into levels also has a positive effect on retention and the learning environment (Munk et al., 2015). A study, on what extent the establishment of a 'community of learners' in different teaching courses has an influence on the learning environment, concluded that when students gather in communities with a view to qualification in relation to a vocational orientation, their learning is strengthened (Boersma et al., 2016).

The student's self-image is important for the student's ability to have good relationships with classmates (Mariager-Andersson et al., 2019). A Swiss study points to the importance of the learning environment and the students' self-image for the students' school progress. Self-image is measured by three factors: Self-efficacy, self-esteem, and degree of negative emotions.

The study shows that the learning environment must contribute to strengthening the students' self-image (Lüthi, & Stalder, 2018, 2019). A Finnish study points to the importance of having friends and support from friends (peer support) at school. This is particularly important at the beginning of the education having an impact on the students' sense of (in)security and their commitment and career choice. The researchers recommend that there must be time in class for the students to work with these conditions (Niittylahti et al., 2019). Thus, the teachers must create good relationships with the students and among the students early in the study program. (EVA, 2017b). Furthermore, it is important that the school is aware of early signs of dropping out and failure to thrive to organize a safe and confident learning environment (Cedefop, 2016; EVA, 2017b; Mariager-Andersson et al., 2019).

5 Summary and discussion

In the study, we have identified several factors that have an impact on the learning environment. We have categorized these factors into the professional learning environment and the social learning environment.

In the category of factors improving the professional learning environment, we can summarize that: It is important that the students work with authentic tasks reflecting their future jobs as skilled workers. It is important that the students have a clear goal for the training and that they can maintain this goal during the training program. It is important that the students receive continuous feedback from the teacher, that the teacher has positive expectations of the students and can convey these expectations to the individual student.

In the category of factors improving the social learning environment, we can summarize that it is important that the teacher emphasizes creating positive relationships with the students. Such relationships include being authentic role models for the students inside and outside the classroom. Furthermore, the teachers must support positive relationships among the students by creating professional and social communities. The social teaching environment focuses on the teachers' social and personal competences.

There are methodological limitations in results and conclusions. One is that we have summarized across national contexts and different types of educational institution. Thus, the conclusions are not related to the specific contexts and are therefore rather general.

It is also a limitation that the method used only makes it possible to point to various factors which have been shown to have an influence on the learning environment. The method does not give reason to assess the mutual strength of the various factors. It also does not provide the opportunity to describe how the different variables interrelate.

However, we have located several factors that, individually and combined, have shown to have an influence on the content of a learning environment. The specific design of the factors will depend on the educational and cultural context.

The teachers play an important part in the development of the learning environment. A well-functioning learning environment requires the teachers have social and personal competences.

References

- Adams, B. E. (2012). *Linked learning: Can career and technical education programs take California High Schools into the 21st century?* California Lutheran University.
- Aspelin, J. (2019). Enhancing pre-service teachers' socio-emotional competence. *International Journal of Emotional Education*, 11(1), 153-168.
- Baartman, L.K.J., Kilbrink, N., & de Bruijn, E. (2018). VET students' integration of knowledge engaged with in school-based and workplace-based learning environments in the Netherlands. *Journal of Education and Work*. 31(2), 204-217.

- Becker, S., Pfof, M., & Artelt, C. (2018). New challenges, new motivation? Goal Orientation development in graduate of higher track schools and their peers in vocational training. *Frontiers in Psychology, 9*, 1-15.
- Boersma, A., ten Dam, G., Wardekker, W., & Volman, M. (2016). Designing innovative learning environments to foster communities of learners for students in initial vocational education. *Learning Environments Research, 19*, 107–131.
- Cedefop (2016). *Leaving education early: putting vocational education and training centre stage. Volume II: evaluating policy impact*. Luxembourg: Publications Office. Cedefop research paper, 58.
- Downing, J. J. (2017). Design principles for applied learning: bringing theory and practice together in an online VET teacher-education degree. *International Journal of Training Research, 15*(1), 85-102.
- Dutschke, A. (2018). Understanding VET teacher attitudes to student support in a major public VET provider. *International Journal of Training Research, 16*(2), 163-181.
- Dyssegaard, C. B., Egeberg, J. H., Steenberg, N., Tiftikci, N., & Vestergaard, S. (2014a). *Forskningskortlægning af håndterbare forhold til gavn for fastholdelse, øget optag og forbedrede resultater i erhvervsuddannelserne*. Dansk Clearinghouse for Uddannelsesforskning, Institut for Uddannelse og Pædagogik (DPU), Aarhus Universitet.
- Dyssegaard, C. B., Egeberg, J. H., Steenberg, N., Tiftikci, N., & Vestergaard, S. (2014b). *Virkningsfuld undervisning, praktik og vejledning på erhvervsuddannelserne. En forskningskortlægning*. Dansk Clearinghouse for Uddannelsesforskning, Institut for Uddannelse og Pædagogik (DPU), Aarhus Universitet.
- Draaisma, A., Meijers, F., & Kuijpers, M. (2018). The development of strong career learning environments: the project ‘Career Orientation and Guidance’ in Dutch vocational education. *Journal of Vocational Education & Training, 70*(1), 27-46.
- Epinion/DPU (2020). *God praksis for undervisningsmiljøer på erhvervsuddannelserne*. Børne- og Undervisningsministeriet, Styrelsen for Undervisning og Kvalitet (STUK).
- EVA (2017a). *It som pædagogisk værktøj på erhvervsuddannelserne. Inspiration til at udvikle brugen af it i undervisningen*. Danmarks Evalueringsinstitut.
- EVA (2017b). *Overgange mellem grundskole og ungdomsuddannelse*. Danmarks Evalueringsinstitut.
- EVA (2019). *Kvalitet i digitale læringsforløb på VEU-området. Et litteraturstudie med fokus på dansk- og engelsksproget forskning*. Danmarks Evalueringsinstitut.
- Helaire, A. (2014). *Career technical education instructors’ perceptions of adult students’ academic ability in career technical education classes*. Pepperdine University, Graduate School of Education and Psychology.
- Høst, H. (red). *Kvalitet i fag- og yrkesopplæringen Sluttrapport*. Nordisk institutt for studier av innovasjon, forskning og utdanning
- Krane, V., Ness, O., Holter-Sorensen, N, Karlsson, B., & Binder P-E. (2016). ‘You notice that there is something positive about going to school’: how teachers’ kindness can promote positive teacher-student relationships in upper secondary school. *International Journal of Adolescence and Youth, 22*(4), 377-389.
- Louw, A. W. (2013). Pedagogical practices in VET: between direct and indirect teacher approaches. *Nordic Journal of Vocational Education and Training (NJVET), 3*(1), 1-16.
- Louw, A., & Katznelson, N. (2019). Transfer and reflection in the Danish dual model: Findings from development projects in the Danish vocational education and training programmes. *Nordic Journal of Vocational Education and Training (NJVET), 9*(2), 51–70, <https://doi.org/10.3384/njvet.2242-458X.199251>.

- Lüthi, F., & Stalder, B.E. (2018). Situational and individual resources predict learning opportunities and career outcomes in VET. In Nägele, C. & Stalder, B.E. *Trends in Vocational Education and Training Research, VETNET*, 226-237.
- Lüthi, F., & Stalder, B.E. (2019). Who stays – who moves? How core self-evaluations are linked to changing resources in the workplace and school. In Nägele, C. & Stalder, B.E. *Trends in Vocational Education and Training Research, VETNET Vol. II*, 259–268.
- Mariager-Anderson, K., Gottlieb, S., Wahlgren, B., & Aarkrog, V. (2019). *At blive på sporet: Nye perspektiver og bæredygtige løsninger på uddannelsesfrafald for unge voksne*. DPU/Aarhus Universitet.
- Martínez-Serrano, M.-E., Pérez-Herrero, M.-d.-H., & Gurguera, J.-L. (2019). Life project clarity in vulnerable adolescents. In Nägele, C. & Stalder, B. E. *Trends in Vocational Education and Training Research. VETNET*, 269-276.
- Munk, M., Bohn, L., & Baklanov, N. (2015). *Grundforløbspakker og frafald på danske erhvervsskoler*. Aalborg Universitetsforlag.
- Murray, S., & Mitchell, J. (2016). Teaching practices that re-engage early school leavers in further education: an Australian study. *Journal of Further and Higher Education*, 40(3), 372-391.
- Mårtensson, Å., Andersson, P., & Nyström, S. (2019). A recruiter, a matchmaker, a firefighter: Swedish vocational teachers' relational work. *Nordic Journal of Vocational Education and Training (NJVET)*, 9(1), 89-110.
- Neuenschwander, M. P., Hofmann, J., Jüttler, A. & Schumann, S. (2018). Professional Desires and Career Decisions: Effects of Professional Interests, Role Models, and Internship in Lower Secondary School, *International Journal for Research in Vocational Education and Training*, 5(3), 126-243.
- Nielsen, C., Jørgensen, C. H., Koudahl, P., Munk, M. D, Jensen, T. P., Pedersen, L.T., Grønborg, L., Hvitved, L., Ingemann, L., Jonasson, C., & Lippke, L. (2013). *Slutrapport: Erhvervsskoleelever i det danske erhvervsuddannelsessystem*. Psykologisk Institut, Aarhus Universitet.
- Niittylahti, S., Annala, J., & Mäkinen, M. (2019). Student engagement at the beginning of vocational studies. *Nordic Journal of Vocational Education and Training (NJVET)*, 9, (1), 21–42, <https://doi.org/10.3384/njvet.2242-458X.199121>.
- Perini, M., & Pentassuglia, M. (2018). one step forward: Advancing knowledge on Italian VET-laboratory instructional practices. In Nägele, C. & Stalder, B.E. *Trends in Vocational Education and Training Research VETNET*, 289–296.
- Pinya, C., Salvà, F., Pomar, M. I., & Calvo, A. (2018). Preventing school dropouts in intermediate VET from the schools' perspective. In Nägele, C. & Stalder, B.E. *Trends in Vocational Education and Training Research. VETNET*, 297-304.
- Placklé, I., Könings, K. D., Jacquet, W., Struyven, K., Libotton, A., van Merriënboer, J. J. G., & Engels, N. (2014). Students' preferred characteristics of learning environments in vocational secondary education. *International Journal for Research in Vocational Education and Training*, 1(2), 107-124.
- Placklé, I., Könings, K. D., Jacquet, W., Libotton, A., van Merriënboer, J. J. G., & Engels, N. (2018). Students' embracing change towards more powerful learning environments in vocational education, *Educational Studies*, 44(1), 26-41.
- Placklé, I., Könings, K. D., Struyven, K., Libotton, A., van Merriënboer, J. J. G., & Engels, N. (2020). Powerful learning environments in secondary vocational education: towards a shared understanding. *European Journal of Teacher Education*, 43(2), 224-242.
- Rambøll. (2016). *En systematisk kortlægning af viden vedr. klare mål (eud)*. Rambøll.
- Rambøll. (2018). *Kortlægning. Styrket søgning og gennemførelse af EUD*. Rambøll.

- Said, A. (2018). Vocational Teaching-learning through the eyes of undergraduate vocational students in Malta: A qualitative exploratory study. *International Journal for Research in Vocational Education and Training*, 5(1), 42-63.
- Salvà, F., Pinya, C., Álvares, N., & Calvo, A. (2018). Dropout prevention in secondary VET from different learning spaces. A social discussion experience. *International Journal for Research in Vocational Education and Training*, 6(2), 153-173.
- Stousland, H., & Witsø, H. (2015). Er stasjonsopplæring i videregående skole en metode som er egnet til å støtte yrkesfageleven i vurdering av egen læring? *Nordic Journal of Vocational Education and Training (NJVET)*, 5.
- Aakernes, N. (2018). From school to work: Coherence between learning in school and learning in workplaces for apprentices in the media graphics programme in Norway. *Nordic Journal of Vocational Education and Training (NJVET)*, 8(1), 76–97, <https://doi.org/10.3384/njvet.2242-458X.188176>.
- Wahlgren, B., & Mariager-Anderson, K. (2017). Improving completion rates in adult education through social responsibility. *Adult Learning*, 28(1), 20-26, [hhttps://doi.org/10.1177/1045159516634078](https://doi.org/10.1177/1045159516634078).
- Aarkrog, V., & Puge, K. (2019). „Man skal holde sig læringsmålene for øje”. *Resultater fra forskningsprojekt i relation til regionalt udviklingsprojekt om simulation på fem midtjyske SOSU-skoler*. DPU, Aarhus Universitet.
- Aarkrog, V., & Wahlgren, B. (2022). Goal orientation and decision-making in education. *Vocations and Learning*, 15, 71-86.

Biographical notes

Dr Bjarne Wahlgren is professor of adult education and director for National Centre for Competence Development at Aarhus University. His research concerns school development, evaluation, validation of prior learning, and transfer from school to practice.

Dr Vibe Aarkrog is associate professor of vocational education and training at Aarhus University and professor II at Oslo metropolitan University. Her research concerns VET pedagogy and ‘didactic’ focusing on transfer of learning and on the interrelation of theory and practice and school-based and workplace-based training, on VET learning environments and dropout.

