

Career Decision, Work Adjustment, and Person–Job Fit of Adolescents: Moderating Effects of Parental Support

Journal of Career Development
1-14

© Curators of the University
of Missouri 2021



Article reuse guidelines:
sagepub.com/journals-permissions
DOI: 10.1177/0894845321995960
journals.sagepub.com/home/jcd



Markus P. Neuenschwander¹ , and Jan Hofmann¹

Abstract

We applied the social cognitive model of work satisfaction to the transition from lower secondary education to work in Switzerland and combined career decision and adjustment to work. The model assumes that self-efficacy affects career decision outcomes and adjustment after transition to work. Self-efficacy interacts with parental support during career decision making. We tested the model using a longitudinal sample of 603 adolescents who filled out questionnaires in seventh grade, ninth grade, and 1 year after starting work. Structural equation models showed that parental support weakens the effect of self-efficacy on anticipated person–job fit and expectations of work conditions (moderation). Expectations of work conditions and a company’s support help newcomers to attain a high perceived person–job fit. These findings have several implications on how to support adolescents’ school-to-work transition.

Keywords

career decision making, transition from school to work, workplace adjustment, parental support, person–job fit, longitudinal studies, path analysis/structural equation modeling

Adolescents’ Transition From School to Work

The transition from school to work is an important step in people’s professional careers. This transition starts with a career decision process and ends with an adjustment process at work. Career decisions mainly depend on one’s self-efficacy expectations and are embedded in social contexts (Lent & Brown, 2013). Research on work adjustment focuses on the process of how young people become socialized in a new job (Kammeyer-Mueller & Wanberg, 2003; Lent & Brown, 2008). Following these approaches, in this article, we will address three new topics: First, research on career decisions has rarely examined the effects of career decision on the adjustment process at work using longitudinal data (Brown & Lent, 2019). At the same time, research on work adjustment has rarely studied the

¹ Center for Learning and Socialization, University of Applied Sciences and Arts Northwestern Switzerland, Windisch, Switzerland

Corresponding Author:

Markus P. Neuenschwander, Center for Learning and Socialization, University of Applied Sciences and Arts Northwestern Switzerland, Bahnhofstrasse 6, CH-5210 Windisch, Switzerland.
Email: markus.neuenschwander@fnw.ch

processes prior to the transition to work. Typically, research on career decisions and research on work adjustment are treated as separate domains. It is important to gain more knowledge about the transition that includes characteristics of career decisions and adjustment at work because adolescents are expected to make a career decision that they realize and that leads to a successful professional career (Lent & Brown, 2013). Career decisions influence adolescents' hopes and wishes and their motivation when they start working (Sortheix et al., 2013). Researchers and vocational counselors need more evidence on how career decisions support the professional pathway after the transition.

Second, many researchers have examined the effects of self-efficacy on career decisions (Ireland & Lent, 2018). Additionally, there are many findings on how parents support adolescents in career decisions (Keller & Whiston, 2008; Raymund et al., 2012). However, more knowledge is required on how individual agency such as self-efficacy interacts with environmental factors such as parents' support during career decision making and how this interaction affects the adjustment after transition to work. Brown and Lent (2019) reported that moderator hypotheses in the social cognitive career theory (SCCT) framework have rarely been tested, though they are often postulated. If parents' support moderates the effect of self-efficacy on adolescents' career decisions in the transition to work, consequences for adolescents with low supportive parents deserve attention.

Third, a lot of research on career decisions and adjustment to work has been done with U.S. college students (Brown & Lent, 2019). However, no researchers have used a longitudinal study design to examine how students in lower secondary education (educational environment) prepare for the transition to work (work environment), which is the most common situation in Switzerland. It is unclear whether the model that was developed in the U.S. context and the results for U.S. college students can be applied to other national contexts such as Switzerland (Howard et al., 2009). Findings for the Swiss context allow for evaluating the usefulness of the model for countries with an elaborated vocational education and training (VET) system. In comparison to U.S. adolescents, adolescents in Switzerland move on to work earlier in life. Institutions at the federal and state levels organize the transition by specific laws and professional support in schools, companies, and counseling institutions. More knowledge is needed about the generalizability of the SCCT to other age groups and national contexts with an elaborated VET system.

To treat these three gaps, in this article, we answer the following research question: How does parental support interact with self-efficacy in career decision making to predict adolescents' work adjustment after the transition? We examined this question using parts of the social cognitive model of career self-management (Lent & Brown, 2013) and the social cognitive model of work satisfaction (Lent & Brown, 2008). These models were supported in many studies (Brown & Lent, 2019). We examined a combination of these models and outlined a social cognitive model of work adjustment. Through this approach, we investigated whether parents' career support moderates the effect of adolescents' self-efficacy on expectations toward work and the anticipated person–job fit before the transition and the perceived person–job fit after the transition for the case of Switzerland. The understanding of the transition from school to work is improved if career decision theory is combined with research on work adjustment (Royle, 2015).

In Switzerland, about 45% of adolescents choose a profession and directly move on to dual VET after lower secondary education in compulsory school (Babel & Lagana, 2016). At the beginning of VET (10th grade), they are on average between 15 and 16 years old. They work in a company 3 or 4 days a week and attend vocational school the remaining days of the working week. Apprentices interpret the transition to VET as starting to work (Neuenschwander et al., 2012). VET is accredited as a formalized work and educational setting at the upper secondary level (Stalder & Nägele, 2011). Most adolescents remain in their chosen professional field when they move from VET to the free labor market (Leemann & Keck, 2005). Thus, adolescents make important career decisions before starting VET. A VET diploma allows them to acquire a professional baccalaureate that makes them eligible for a program at a university of applied sciences. Adolescents with a VET diploma have a very low risk for unemployment. They have a much lower risk for unemployment than do adolescents without a higher secondary education diploma (Scharenberg et al., 2014).

Adjustment to Work

In the social cognitive model of work satisfaction, Lent and Brown (2008) extended the SCCT (Lent et al., 1994) with components measuring work adjustment outcomes such as work satisfaction and person–job fit. The model assumes that adolescents' self-efficacy and outcome expectations, supported by environmental resources, help adolescents progress at their career goals. Competences and agentic behavior help them follow their career goals and adjust to workplace. As a result, adolescents develop work satisfaction and life satisfaction. The model proposes that career goals, work satisfaction, and life satisfaction are also influenced by personality and affective traits.

Research has shown that work satisfaction and person–job fit are highly correlated (Kristof-Brown et al., 2005). However, whereas work satisfaction is a judgment of the individual work situation (Diener, 2000), person–job fit refers to the relationship of an individual's personality to the work environment (Neuenschwander et al., 2012; Kristof-Brown et al., 2005). In line with Bandura (1977), we prioritized a concept that relates a person to their environment. Thus, we used person–job fit as an indicator of work adjustment outcome. The perception of person–job fit positively correlates with motivation and achievement on the job (Neuenschwander et al., 2012; Feij, 1998; Kristof-Brown et al., 2005).

Prior to the transition from school to work, adolescents anticipate how they will fit with characteristics of their future job. This anticipated person–job fit corresponds with the perceived person–job fit after starting work and results from prior career decision efforts (career decision outcome). Even before adolescents have started work, in prior studies, researchers reported that adolescents in Switzerland have valid information about their future job (Nägele & Neuenschwander, 2014).

In line with the social cognitive model of work satisfaction, perceived person–job fit depends on contextual factors. In the SCCT framework, supportive company strategies help newcomers follow their career goals, perceive themselves as competent and self-efficacious, and thus perceive a high person–job fit. These strategies include creating social structures and curricula in companies that help newcomers adjust. Environmental support helps the individual adjust to the work and implement career goals by modeling, encouragement, and feedback (Lent & Brown, 2008). Prior studies showed that companies employ strategies to introduce young employees to new tasks and social contexts (Kammeyer-Mueller & Wanberg, 2003; Saks & Gruman, 2018). Company strategies that support adolescents' adjustment to work correspond with a high person–job fit (Kristof-Brown et al., 2005). To summarize, we tested the following hypothesis.

Hypothesis 1: Supportive company strategies positively influence perceived person–job fit.

Career Decisions and Transition to Work

The school-to-work transition does not only consist of work adjustment processes but also of career decision making. The SCCT introduced various determinants of career decisions, such as self-efficacy, outcome expectations, professional actions, and contextual influences proximal to decision behavior (Lent & Brown, 2013). Two core concepts in the SCCT to predict career decision are self-efficacy and expectations of work conditions (Lent & Brown, 2013).

Self-efficacy refers to one's perceived ability to complete a task (Bandura, 1977). Lent and Brown (2013) described domain-specific self-efficacy and coping self-efficacy. We included coping self-efficacy in the model to equally address both tasks, career decision (Lent & Brown, 2013) and adjustment to work (Lent & Brown, 2008). Adolescents with high self-efficacy are actively engaged and feel competent to apply appropriate strategies to find a job and to adjust to the work. Prior cross-sectional research showed correlations between self-efficacy and adjustment (Lent et al., 2012). However, we did not find any studies that examined longitudinal effects of self-efficacy prior to the transition on work adjustment outcomes such as perceived person–job fit after the transition.

Lent and Brown (2008) conceptualized expectations of work conditions as outcome expectations. Expectations of work conditions measure the anticipated consequences of performing one's work role. Adolescents with accurate expectations of work conditions have more knowledge on how to adjust to work and to elaborate a high person–job fit. Expectations of work conditions motivate adolescents' goal-directed behavior and provide guidelines to effectively cope with the company's demands (Hom et al., 1999) and enhance the adjustment process. Prior studies revealed correlations between expectations of work conditions and job satisfaction (Lent et al., 2019) and newcomers' adjustment (Kammeyer-Mueller & Wanberg, 2003). However, there is very little research on whether expectations of work conditions before the transition predict person–job fit after the transition in VET (Neuenschwander & Gerber, 2014). The SCCT assumes that adolescents behave in the company according to their expectations that resulted from their career decision making. These expectations predict the adjustment process in a company, independent of the company's strategies to welcome newcomers. While expectations of work conditions and anticipated person–job fit influence adolescents' goal-directed behavior to adjust to work, socialization tactics create social structures in work groups and define curricula. Socialization tactics refer to a different level of work adjustment than expectations of work conditions and anticipated person–job fit. Accordingly, Lent and Brown (2008) did not consider environmental support as a moderator in their work adjustment model.

The SCCT postulates that self-efficacy predicts expectations of work conditions and decisional outcomes such as anticipated person–job fit. Adolescents with high self-efficacy are able to organize their actions and to persist in the face of challenges to achieve favorable career decision outcomes (Lent & Brown, 2013). They expect outcomes that are more positive when they view themselves as capable performers. They collect information about professions and companies where they can apply for an apprenticeship (Singer et al., 2014). Hence, they have accurate expectations of work conditions (Hom et al., 1999; Sheu et al., 2017). Moreover, based on the information, adolescents with high self-efficacy choose a company according to their goals and competences. As a result, adolescents with accurate expectations of work conditions establish a high person–job fit (Singer et al., 2014). To summarize, we hypothesized the following:

Hypothesis 2: Expectations of work conditions (2a) and anticipated person–job fit (2b) before transition positively predict perceived person–job fit after transition to work.

Hypothesis 3: Self-efficacy before transition positively predicts expectations of work conditions (3a) and anticipated person–job fit (3b) before transition. Self-efficacy before transition positively predicts perceived person–job fit after transition, mediated by expectations of work conditions and anticipated person–job fit (3c).

Parental Support During Career Decision Making

In the SCCT tradition, resources in the social context give a feeling of competence and support adolescents to explore career options and make a career decision (Dietrich & Kracke, 2009). Adolescents list their parents as the most important persons of reference in their career decisions (Herzog et al., 2006). Parents strongly influence adolescents' career decisions in various ways (Bryant et al., 2006). They provide motivation and advice for adolescents to explore career options and follow their career goals (Lent & Brown, 2013). They help adolescents obtain information about the prospective company, establish accurate expectations of work conditions, and find a job that fits their goals. Lent and Brown (2013) assumed that environmental support by parents directly influences career decisions and moderates the effect of self-efficacy on career decisions. Parents' support reduces the importance of individual agency and competence to establish accurate expectations of work conditions and to anticipate a high person–job fit (Lent & Brown, 2013). Adolescents have little work experience and trust the advice of persons with more work experience such as their parents. Thus, parents' support

weakens the effect of self-efficacy on expectations of work conditions and on finding a job that fits with the person. Although recently, researchers (e.g., Ireland & Lent, 2018; Keller & Whiston, 2008) have examined the predictive effects of parental support on career decisions, parental support moderating adolescents' career decisions has less frequently been a subject of research (Amarnani et al., 2018; Garcia et al., 2011). We did not find any longitudinal findings on how parental support moderates the effect of self-efficacy on expectations of work conditions and anticipated person–job fit in lower secondary education. To summarize, we postulate the following hypotheses.

Hypothesis 4: Parental support during adolescents' career decision making positively affects expectations of work conditions (4a) and anticipated person–job fit (4b). It moderates the effect of self-efficacy on expectations of work conditions (4c) and on anticipated person–job fit (4d), such that high levels of parental support weaken the effect of self-efficacy on expectations of work conditions and anticipated person–job fit.

To combine Hypotheses 3 and 4, parental support reduces the importance of self-efficacy to develop expectations of work conditions and anticipated person–job fit and therefore, it reduces the effect of self-efficacy on perceived person–job fit after the transition. We assume a multiple mediated moderation of parental support on the indirect effect of self-efficacy before the transition on perceived person–job fit after the transition.

Hypothesis 5: Parental support during adolescents' career decision making moderates the indirect effect of self-efficacy before the transition on perceived person–job fit after the transition, such that high levels of parental support weaken the indirect effect of self-efficacy on perceived person–job fit.

Method

Participants

The researchers initiated the study to examine educational pathways from primary school to employment in four German-speaking cantons in Switzerland. The study was funded by the Swiss National Science Foundation and the Swiss Secretariat for Education, Research and Innovation. It started in 2011 and involved five measurement waves. In this article, we used data from the last three waves. In the first of these three waves, adolescents were in seventh grade (fall 2013); in the second wave, adolescents were in ninth grade (the last year of their compulsory schooling, spring 2016); and in the third wave, they were at the end of their first year of VET (spring 2017). We used the subsample of 603 adolescents who indicated they were in VET after compulsory schooling on either the second- or third-wave questionnaire (mean age in third wave: 16.81 years, *SD* age: 0.59; female: 44.3%). There were 111 adolescents who participated in all three waves. To reduce missing values, we only included the adolescents who did not participate in the third wave if they participated in both Waves 1 and 2 (492 adolescents).

To test for missing response patterns, we conducted *t* tests with SPSS 25 for all first- and second-wave variables in the analyses. We tested missing response patterns between follow-up waves using the total sample for each wave of measurement. There were no response biases for first-wave variables: self-efficacy, $t(1,498.807) = -0.91, p = .36$, Cohen's $d = .05$. There were no missing response effects or only small effect sizes for second-wave variables: expectations of work conditions, $t(1,070) = -0.51, p = .61$, Cohen's $d = .03$; parental support, $t(1,333.22) = 3.23, p < .001$, Cohen's $d = .18$; anticipated person–job fit, $t(2,240) = 2.22, p = .03$, Cohen's $d = .09$. Small effect sizes indicate that missing response patterns do not vary between the waves of data collection in a relevant way. A connection between the missing data mechanism and the observed variables is ignorable (Little & Rubin, 2020).

Procedures

In the first and second waves, adolescents voluntarily filled out standardized questionnaires in their classrooms or at home. Trained members of the research team administered the survey in the first wave, and the classroom teacher did so in the second wave. In the third wave, researchers emailed adolescents who participated in the second wave and asked them to answer a standardized online questionnaire. Members of the research team contacted all adolescents who did not fill out the online questionnaire to participate in a computer-assisted telephone interview with a shortened questionnaire. Some of these adolescents later answered a supplementary questionnaire with the remaining questions of the online questionnaire. In contrast to the first and second waves, in the third wave, the adolescents were offered incentives prior to the survey. All questionnaires met ethical standards.

Measures

First-wave questionnaire. Adolescents' coping self-efficacy was measured using six items developed by Schwarzer et al. (1999). Adolescents responded on a 6-point Likert-type scale ranging from 1 (*not true at all*) to 6 (*completely true*; $N = 344$, $M = 4.12$, $SD = 0.63$, missing = 43.0%). Example items included "If something opposes me, I can find the means and ways to get what I want" and "It is easy for me to stick to my aims and accomplish my goals." Cronbach's α reliability for the Self-Efficacy Scale was .71. Schwarzer et al. (1999) reported α reliability in prior studies between .75 and .91. Factor analysis explained 29.8% of variance.

Second-wave questionnaire. Adolescents reported their perceived parental support during their career decision making using five items from Dietrich and Kracke (2009). Adolescents responded on a 6-point Likert-type scale ranging from 1 (*not true at all*) to 6 (*completely true*; $N = 564$, $M = 4.86$, $SD = 0.93$, missing = 6.5%). Example items included "My parents help me find a suitable study program or get a suitable apprenticeship" and "My parents give advice on the decision of careers available." Cronbach's α reliability for the Parental Support Scale was .92. Dietrich and Kracke (2009) reported an α reliability of .93 for girls and .84 for boys. Factor analysis explained 69.8% of variance.

Adolescents reported expectations of work conditions using five items (Breugh & Mann, 1984). Adolescents rated their level of information about the work conditions and responded on a 6-point Likert-type scale ranging from 1 (*not true at all*) to 6 (*completely true*; $N = 519$, $M = 5.08$, $SD = 0.67$, missing = 13.9%). Example items included "I know what the good points and bad points of my training company are" and "I have a clear understanding of what this training company will entail for me." Cronbach's α reliability for expectations of work conditions was .87. Factor analysis explained 57.0% of variance.

Adolescents reported anticipated person–job fit using five items from Neuenschwander and Gerber (2014). Adolescents responded on a 6-point Likert-type scale ranging from 1 (*not true at all*) to 6 (*completely true*; $N = 587$, $M = 5.31$, $SD = 0.66$, missing = 2.7%). Example items included "My future situation in VET corresponds with my person" and "My future situation in VET corresponds with my school abilities." Cronbach's α reliability for the anticipated person–job fit was .86. Neuenschwander and Gerber (2014) reported an α reliability of .81. Factor analysis explained 57.0% of variance.

Third-wave questionnaire. Adolescents reported the perceived socialization tactics employed by their training company using three items from Cable and Parsons (2001). At the end of the first year of VET, adolescents retrospectively rated the socialization tactics employed by their training company at the beginning of VET on a 6-point Likert-type scale ranging from 1 (*not true at all*) to 6 (*completely true*; $N = 322$, $M = 4.62$, $SD = 1.10$, missing = 46.6%). Example items included "At the beginning of the apprenticeship, the individual training steps in my company were clearly defined" and "At the beginning of my apprenticeship, I was familiarized with the chronological sequence of my training in my

company.” Cronbach’s α reliability for the socialization tactics was .83. Factor analysis explained 62.8% of variance.

Adolescents reported perceived person–job fit using the same five items as for the anticipated person–job fit ($N = 358$, $M = 5.05$, $SD = 0.78$, missing = 40.6%). The item wording was adjusted to match adolescents’ new environmental context (Neuenschwander & Gerber, 2014). Example items included “My current situation in VET corresponds with my person” and “My current situation in VET corresponds with my school abilities.” Cronbach’s α reliability for the perceived person–job fit was .85. Neuenschwander and Gerber (2014) reported an α reliability of .88. Factor analysis explained 52.7% of variance.

Analytical Procedure

We examined the hypotheses using structural equation modeling (SEM). In the first step, we tested measurement models for invariance in Mplus 8.1. To test configural invariance, we tested all measurement models. Latent variables were correlated. The same items of the person–job fit variables that were tested in second and third waves were set to be correlated. Then, we tested for metric invariance between the waves of measurement for person–job fit. We used the measurement models of anticipated person–job fit (t_1) and perceived person–job fit (t_2) that resulted from the configural invariance test. We compared a model in which the factor loadings between the waves were constrained to be equal (constrained model) with a model in which the factor loadings between the waves were freely estimated (unconstrained model). We compared models using the χ^2 difference statistics with Satorra–Bentler correction. Nonsignificant χ^2 difference statistics indicated metric invariance between waves.

In the second step, we tested the full SEM using the measurement models that resulted in the invariance tests in Mplus 8.1. We tested the moderation effects of parental support in two models: In the first model, we included parental support as a predictor of expectations of work conditions and career decision outcomes. In the second model (moderator model), we additionally included parental support as a moderator via the interaction term of parental support and self-efficacy (Sardeshmukh & Vandenberg, 2017). All items were centered by the grand mean. We tested the gain in model fit after including the moderator by comparing the change of the Akaike information criterion (AIC). A lower AIC indicates a lower loss of information and a better fit of the model.

Examination of skewness and kurtosis indicated that maximum likelihood estimation with robust standard errors was appropriate for this study (Boomsma, 2000). We used the full information maximum likelihood procedure implemented in Mplus to deal with missing data, which leads to more reliable and less biased estimations than other methods (Schafer & Graham, 2002).

The evaluation of model adequacy was based on the χ^2 statistics, comparative fit index (CFI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR). A nonsignificant χ^2 value ($p > .05$) indicates a good fit between the model and the data. However, χ^2 values tend to become significant in large samples. We reported other model fit indices according to Schermelleh-Engel et al. (2003). They recommended that good fit is indicated if the CFI is greater than or equal to .97 (acceptable fit: .95), the RMSEA is less than or equal to .05 (acceptable fit: .08), and the SRMR is less than or equal to .05 (acceptable fit: <.10). In the full SEM, we modified the model when indices’ values did not meet the criterion of acceptable fit. We report the results of SEM analyses for a one-sided significance level because we postulated directed hypotheses.

Results

Analysis of Invariance

First, we tested the measurement models for configural invariance, $\chi^2(303, N = 603) = 411.6, p < .001$, CFI = .98, RMSEA = .02, SRMR = .06, AIC = 27,725. Correlations among variables ranged from $-.14$ to $.41$ (Table 1).

Table 1. Intercorrelations Among Latent Variables.

Variable	1	2	3	4	5	6
1. Self-efficacy t_1	—	.11	.18*	.18*	-.14	.09
2. Parental support t_2		—	.21***	.14*	.03	.06
3. Anticipated person–job fit t_2			—	.41***	-.04	.30***
4. Expectations of work conditions t_2				—	.03	.28***
5. Company support t_3					—	.31***
6. Perceived person–job fit t_3						—

Note. t_1 : seventh grade, t_2 : ninth grade, t_3 : end of first year of work.

* $p < .05$. ** $p < .01$. *** $p < .001$ (two-tailed).

Second, we tested the metric invariance for the measurement model of person–job fit. Both the unconstrained, $\chi^2(13, N = 596) = 20.36, p = .09, CFI = .99, RMSEA = .03, SRMR = .04$, and the constrained model, $\chi^2(16, N = 596) = 20.48, p = .20, CFI = 1.00, RMSEA = .02, SRMR = .05$, fit the data well. The χ^2 difference statistics for those models were not significant, $\chi^2(3, N = 596) = 1.85, p = .60$, indicating metric invariance.

The Structural Models

The SEM fits the data adequately, $\chi^2(308, N = 603) = 414.5, p < .001, CFI = .98, RMSEA = .02, SRMR = .06, AIC = 27,718$. Standardized estimates are reported. In line with Hypothesis 1, companies' support significantly predicted perceived person–job fit ($\beta = .31, p < .001$). In accordance with Hypotheses 2a and 2b, both anticipated person–job fit and expectations of work conditions predicted perceived person–job fit ($\beta = .23, p < .001$ and $\beta = .17, p = .019$, respectively). In line with Hypothesis 3a, self-efficacy predicted expectations of work conditions ($\beta = .17, p = .011$). Self-efficacy further predicted anticipated person–job fit ($\beta = .17, p < .01$; Hypothesis 3b supported). In line with Hypothesis 3c, there is a significant total indirect effect of self-efficacy on perceived person–job fit through anticipated person–job fit and expectations of work conditions (total standardized indirect effect: $\beta = .06, p = .013$). The direct effect of self-efficacy on perceived person–job fit was not significant ($\beta = .04, p = .407$). Thus, expectations of work conditions and anticipated person–job fit fully mediated the effect of self-efficacy on perceived person–job fit. Parental support significantly predicted expectations of work conditions ($\beta = .12, p = .021$; Hypothesis 4a supported) and anticipated person–job fit ($\beta = .19, p < .001$; Hypothesis 4b supported). Explained variances in perceived person–job fit, anticipated person–job fit, and expectations of work conditions were 21.5%, 7.0%, and 4.9%, respectively.

Moderation Through Parental Support

To test Hypotheses 4c and 4d, we specified parental support as moderating the effect of self-efficacy on expectations of work conditions and anticipated person–job fit. The models' fit improved ($AIC = 27,716, \Delta AIC = -2, N = 603$). All effects remained the same in terms of the level of significance. Figure 1 shows the unstandardized estimates. The moderator significantly influenced the effect of self-efficacy on anticipated person–job fit and the effect of self-efficacy on expectations of work conditions. The difference between high and low values of the moderator for the effect of self-efficacy on expectations of work conditions was significant ($B = .60, p = .036$). At high levels of parental support, the effect of self-efficacy on expectations of work conditions was low ($B = -.12, p = .230$), whereas at low levels, the effect was high ($B = .48, p = .013$).

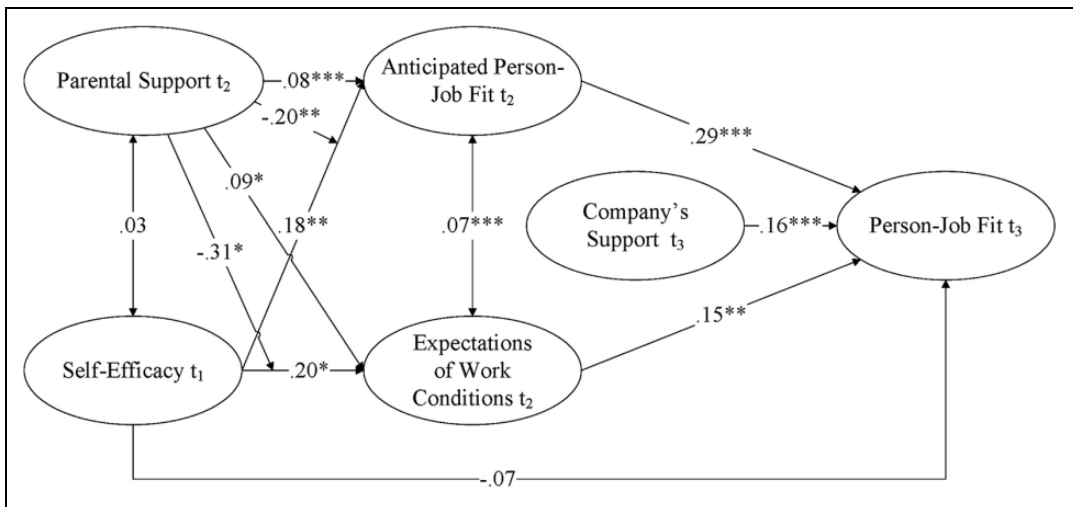


Figure 1. Prediction of perceived person–job fit by career decision and company’s support. Note. Unstandardized estimates; * $p < .05$, ** $p < .01$, *** $p < .001$ (one-tailed); t_1 : seventh grade, t_2 : ninth grade, t_3 : end of first year of work.

The difference between high and low values of the moderator for the effect of self-efficacy on anticipated person–job fit was significant ($B = .39, p < .01$). At high levels of parental support, the effect of self-efficacy on anticipated person–job fit was low ($B = -.03, p = .287$), whereas at low levels, the effect was high ($B = .36, p < .01$; Hypotheses 4c and 4d supported).

The total unstandardized indirect effect of self-efficacy on perceived person–job fit was significant ($B = .08, p < .01$). The indirect effects did not differ between high and low values of the moderator: The difference between high and low values of the moderator in the indirect effect mediated by expectations of work conditions was $B = -.04 (p = .29)$ and for the mediator anticipated person–job fit was $B = -.03 (p = .28)$. Thus, the moderator did not affect the indirect effects of self-efficacy on perceived person–job fit at work (Hypothesis 5 rejected).

Discussion

Using an adapted and extended version of the SCCT, we combined career decision and adjustment to work and elaborated an extensive view on school-to-work transition. We outlined a social cognitive model of work adjustment that is supported in the SEM with longitudinal data in the Swiss context. In career decision making, self-efficacious adolescents gain a high level of expectations of work conditions and find a job with a high person–job fit. In this article, we present two new main results: (a) Adolescents’ accurate knowledge about the work and a high anticipated person–job fit before the transition promote the adjustment process after the transition. This, as well as companies’ support for newcomers, helps them adjust to their work and establish a high person–job fit. (b) Parental support weakens the role of self-efficacy in the work adjustment process. High parental support weakens the effect of self-efficacy on expectations of work conditions and on anticipated person–job fit. However, this moderating effect should be replicated in countries where adolescents make career decisions later in life than in Switzerland.

Contrary to the hypothesis, parental support did not moderate the indirect effect of self-efficacy on perceived person–job fit after transition. Although adolescents strongly rely on parental advice in career decision making (Neuenschwander et al., 2012), we assume that parental support before the

transition does not have a long-term effect on adolescents' work adjustment after the transition. According to SCCT, parents support their adolescents by giving advice and the feeling of competence to make a sound career decision. We assume that the adjustment process at the workplace is structured by the company and by adolescents' expectations of work conditions. Within this structured context, parental support before the transition does not moderate the effect of self-efficacy on perceived person–job fit.

Furthermore, in line with findings of studies on the SCCT in various countries such as the United States, China, Italy, Portugal, Angola, and Mozambique (cf. Brown & Lent, 2019; Sheu et al., 2017), self-efficacy and expectations of work conditions also predict adjustment to work in the Swiss context. Self-efficacy and expectations of work conditions are concepts that can be interpreted as basic principles that explain the transition from school to work in the U.S. context as well as in the Swiss VET context.

Our results highlight the important role parents have in adolescents' career decision making. To help adolescents achieve favorable career decision results, parents can take various supporting actions. Based on our results, these actions are, among others, talking with adolescents about their interests and skills; encouraging information seeking about professions and apprenticeships in which the adolescent is interested, but also drawing attention to post-compulsory education pathways the adolescent seems to overlook; and co-evaluating adolescents' chances of completing various post-compulsory education pathways. However, though parents' support helps adolescents with low self-efficacy to make a good career decision, parents' support of adolescents with high self-efficacy has ambivalent effects. Supportive parents may insinuate adolescents that agentic behaviors are not necessary in career decision and take the adolescents' responsibility to achieve favorable career decision results. As a consequence, adolescents might become lazy. This risk is not so high because the correlation between parental support and self-efficacy is positive.

Limitations and Conclusions

The study is subject to limitations. First, we could not group adolescents into types of professions due to limitations in the sample size. Thus, we could not test the validity of the model for various professional domains separately in line with Lent et al. (1994). Career decision and work adjustment might interact with domain specificity of the professions. In contrast to domain-specific studies on the SCCT (e.g., Lent et al., 2008), we followed the social cognitive model of career self-management and investigated domain-unspecific processes. Future research should examine these processes for various professions separately. Second, parental support was operationalized in the adolescents' perspective only. Garcia et al. (2011) reported that the parental perspective could lead to extended results. Replicating this study using data on parental support provided by the parents is important. Third, we did not investigate the transition from VET to the labor market. The results are limited to the transition from school to work in VET. Adolescents choose a profession before starting VET and have to adjust to their job in VET. Thus, this transition includes a major step in career decision making and adjustment to work, but not the whole transition from school to labor market. Fourth, we only measured one aspect of parental support in career decision. In line with the SCCT, it might be worth extending the analyses, studying parents' influence as role models in the career decision and transition to work (Neuenschwander et al., 2018) and analyzing in more detail the processes of vicarious learning in the career decision to better understand career decision making. By examining more aspects of parental behavior, we receive a more detailed picture on parents' role in career decision. This line of research has the potential to be extended to siblings and peers and to the study of their mutual influence in the career decision.

These results exemplify how specific strategies of persons of reference in social contexts support adolescents during the school-to-work transition. It is a characteristic of the SCCT tradition that career

decision making and transition to work are conceptualized as individual processes regulated by characteristics of the social context (Lent et al., 2001). In an educational perspective, these results offer a background for how to design parental support and VET contexts that support students' school-to-work transition (Neuenschwander et al., 2012). Future research should examine if and how other persons from the social context, such as teachers and supervisors, can apply these behaviors and support adolescents' career decision making process with low self-efficacy expectations.

More research is needed to combine career decision and work adjustment to elaborate more aspects of these complex processes. In particular, longitudinal studies can provide reliable results on how the career decision process prepares adolescents for successful adjustment at work and for their life career. In line with the rich literature on socialization tactics (e.g., Saks & Gruman, 2018) and onboarding (e.g., Doepner-Hove, 2012), the results showed the importance of a company's socialization tactics. Companies play a major role in supporting adolescents to elicit a high person–job fit. In the perspective of transition research, future research should examine companies' strategies that influence the level of expectations of work conditions and anticipated person–job fit before the transition. We assume that face-to-face interactions and short internships effectively inform job applicants about the company. Characteristics of career decisions play a key role in preparing adolescents for the adjustment process after transition, but the experiences at work influence the perceived person–job fit even more.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research and/or authorship of this article: This study was supported by Staatssekretariat für Bildung, Forschung und Innovation (Grant ID: 1315000504) and Schweizerischer Nationalfonds zur Förderung der wissenschaftlichen Forschung (Grant ID: 100013_134594/1).

ORCID iD

Markus P. Neuenschwander  <https://orcid.org/0000-0003-4154-9238>

References

- Amarnani, R. K., Garcia, P. R. J. M., Restubog, S. L. D., Bordia, P., & Bordia, S. (2018). Do you think I'm worth it? *Journal of Career Assessment*, 26(1), 77–94. <https://doi.org/10.1177/1069072716679925>
- Babel, J., & Lagana, F. (2016). *Der Übergang am Ende der obligatorischen Schule* [Transition at the end of compulsory school] (Report No. 1665-1600). Bundesamt für Statistik. <https://www.bfs.admin.ch/bfsstatic/dam/assets/1520326/master>
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191–215. <https://doi.org/10.1037/0033-295X.84.2.191>
- Boomsma, A. (2000). Reporting analyses of covariance structures. *Structural Equation Modeling: A Multidisciplinary Journal*, 7(3), 461–483. https://doi.org/10.1207/S15328007SEM0703_6
- Breaugh, J. A., & Mann, R. B. (1984). Recruiting source effects: A test of two alternative explanations. *Journal of Occupational Psychology*, 57(4), 261–267. <https://doi.org/10.1111/j.2044-8325.1984.tb00167.x>
- Brown, S. D., & Lent, R. W. (2019). Social cognitive career theory at 25: Progress in studying the domain satisfaction and career self-management models. *Journal of Career Assessment*, 27(4), 563–578. <https://doi.org/10.1177/1069072719852736>

- Bryant, B. K., Zvonkovic, A. M., & Reynolds, P. (2006). Parenting in relation to child and adolescent vocational development. *Journal of Vocational Behavior, 69*(1), 149–175. <https://doi.org/10.1016/j.jvb.2006.02.004>
- Cable, D. M., & Parsons, C. K. (2001). Socialization tactics and person–organization fit. *Personnel Psychology, 54*(1), 1–23. <https://doi.org/10.1111/j.1744-6570.2001.tb00083.x>
- Diener, E. (2000). Subjective well-being: The science of happiness and a proposal for a national index. *American Psychologist, 55*(1), 34–43. <https://doi.org/10.1037//0003-066X.55.1.34>
- Dietrich, J., & Kracke, B. (2009). Career-specific parental behaviors in adolescents' development. *Journal of Vocational Behavior, 75*(2), 109–119. <https://doi.org/10.1016/j.jvb.2009.03.005>
- Doepner-Hove, S. (2012). The development of a comprehensive onboarding program at a big ten research university. In C. R. Wanberg (Ed.), *The Oxford handbook of organizational socialization* (pp. 288–302). Oxford University Press.
- Feij, J. A. (1998). Work socialization of young people. In P. J. D. Drenth, H. Thierry, & C. J. de Wolff (Eds.), *Handbook of work and organizational psychology* (2nd ed., pp. 207–256). Psychology Press.
- Garcia, P. R. J. M., Restubog, S. L. D., Toledano, L. S., Tolentino, L. R., & Rafferty, A. E. (2011). Differential moderating effects of student- and parent-rated support in the relationship between learning goal orientation and career decision-making self-efficacy. *Journal of Career Assessment, 20*(1), 22–33. <https://doi.org/10.1177/1069072711417162>
- Herzog, W., Neuenschwander, M. P., & Wannack, E. (2006). *Berufswahlprozess* [The career decision process]. Haupt.
- Hom, P., Griffeth, R. W., Palich, L. E., & Bracker, J. S. (1999). Revisiting met expectations as a reason why realistic job previews work. *Personnel Psychology, 52*(1), 97–112. <https://doi.org/10.1111/j.1744-6570.1999.tb01815.x>
- Howard, K. A. S., Ferrari, L., Nota, L., Solberg, V. S. H., & Soresi, S. (2009). The relation of cultural context and social relationships to career development in middle school. *Journal of Vocational Behavior, 75*(2), 100–108. <https://doi.org/10.1016/j.jvb.2009.06.013>
- Ireland, G. W., & Lent, R. W. (2018). Career exploration and decision-making learning experiences: A test of the career self-management model. *Journal of Vocational Behavior, 106*, 37–47. <https://doi.org/10.1016/j.jvb.2017.11.004>
- Kammeyer-Mueller, J. D., & Wanberg, C. R. (2003). Unwrapping the organizational entry process: Disentangling multiple antecedents and their pathways to adjustment. *Journal of Applied Psychology, 88*(5), 779–794. <https://doi.org/10.1037/0021-9010.88.5.779>
- Keller, B. K., & Whiston, S. C. (2008). The role of parental influences on young adolescents' career development. *Journal of Career Assessment, 16*(2), 198–217. <https://doi.org/10.1177/1069072707313206>
- Kristof-Brown, A. L., Zimmerman, R. D., & Johnson, E. C. (2005). Consequences of individuals' fit at work: A meta-analysis of person–job, person–organization, person–group, and person–supervisor fit. *Personnel Psychology, 58*(2), 281–342. <https://doi.org/10.1111/j.1744-6570.2005.00672.x>
- Leemann, R. J., & Keck, A. (2005). *Der Übergang von der Ausbildung in den Beruf* [The transition from VET to occupation]. Federal Office of Statistics.
- Lent, R. W., & Brown, S. D. (2008). Social cognitive career theory and subjective well-being in the context of work. *Journal of Career Assessment, 16*(1), 6–21. <https://doi.org/10.1177/1069072707305769>
- Lent, R. W., & Brown, S. D. (2013). Social cognitive model of career self-management: Toward a unifying view of adaptive career behavior across the life span. *Journal of Counseling Psychology, 60*(4), 557–568. <https://doi.org/10.1037/a0033446>
- Lent, R. W., Brown, S. D., & Brenner, B. (2001). The role of contextual supports and barriers in the choice of math/science educational options: A test of social cognitive hypotheses. *Journal of Counseling Psychology, 48*(4), 474–483. <https://doi.org/10.1037/0022-0167.48.4.474>

- Lent, R. W., Brown, S. D., & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance. *Journal of Vocational Behavior, 45*(1), 79–122. <https://doi.org/10.1006/jvbe.1994.1027>
- Lent, R. W., Lopez, A. M., Jr., Lopez, F. G., & Sheu, H.-B. (2008). Social cognitive career theory and the prediction of interests and choice goals in the computing disciplines. *Journal of Vocational Behavior, 73*(1), 52–62. <http://dx.doi.org/10.1016/j.jvb.2008.01.002>
- Lent, R. W., Morris, T. R., Penn, L. T., & Ireland, G. W. (2019). Social-cognitive predictors of career exploration and decision-making: Longitudinal test of the career self-management model. *Journal of Counseling Psychology, 66*(2), 184–194. <https://doi.org/10.1037/cou0000307>
- Lent, R. W., Taveira, M., & Lobo, C. (2012). Two tests of the social cognitive model of well-being in Portuguese college students. *Journal of Vocational Behavior, 80*(2), 362–371. <https://doi.org/10.1016/j.jvb.2011.08.009>
- Little, R. J. A., & Rubin, D. B. (2020). *Statistical analysis with missing data* (3rd ed.). Wiley.
- Nägele, C., & Neuenschwander, M. P. (2014). Adjustment processes and fit perceptions as predictors of organizational commitment and occupational commitment of young workers. *Journal of Vocational Behavior, 85*(3), 385–393. <https://doi.org/10.1016/j.jvb.2014.08.011>
- Neuenschwander, M. P., & Gerber, M. (2014). Schulische Vorbereitung auf die berufliche Sozialisation im Lehrbetrieb [School preparation for professional socialization in the training company]. *Unterrichtswissenschaft, 42*(3), 244–260. <https://doi.org/10.3262/UW1403244>
- Neuenschwander, M. P., Gerber, M., Frank, N., & Rottermann, B. (2012). *Schule und Beruf* [School and occupation]. VS.
- 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 (IJRVET), 5*(3), 226–243. <https://doi.org/10.13152/IJRVET.5.3.5>
- Raymund, P., Garcia, J. M., Toledano, L. S., Tolentino, L. R., & Rafferty, A. E. (2012). Differential moderating effects of student- and parent-rated support in the relationship between learning goal orientation and career decision-making self-efficacy. *Journal of Career Assessment, 20*(1), 22–33. <https://doi.org/10.1177/1069072711417162>
- Royle, M. T. (2015). Theoretical drivers of early career success for new entrants to the job market. *International Journal of Management and Marketing Research, 8*(1), 31–56. <http://www.theibfr2.com/RePEc/ibf/ijmmr/ijmmr-v8n1-2015/IJMMR-V8N1-2015-3.pdf>
- Saks, A. M., & Gruman, J. A. (2018). Socialization resources theory and newcomers' work engagement. *Career Development International, 23*(1), 12–32. <https://doi.org/10.1108/cdi-12-2016-0214>
- Sardeshmukh, S. R., & Vandenberg, R. J. (2017). Integrating moderation and mediation: A structural equation modeling approach. *Organizational Research Methods, 20*(4), 721–745. <https://doi.org/10.1177/1094428115621609>
- Schafer, J. L., & Graham, J. W. (2002). Missing data: Our view of the state of the art. *Psychological Methods, 7*(2), 147–177. <https://doi.org/10.1037/1082-989x.7.2.147>
- Scharenberg, K., Rudin, M., Müller, B., Meyer, T., & Hupka-Brunner, S. (2014). *Ausbildungsverläufe von der obligatorischen Schule ins junge Erwachsenenalter: Die ersten zehn Jahre* [Educational pathways from school to young adulthood: The first ten years]. TREE.
- Schermelleh-Engel, K., Moosbrugger, H., & Müller, H. (2003). Evaluating the fit of structural equation models: Tests of significance and descriptive goodness-of-fit measures. *Methods of Psychological Research Online, 8*(2), 23–74. <https://scinapse.io/papers/1627191216>
- Schwarzer, R., Mueller, J., & Greenglass, E. (1999). Assessment of perceived general self-efficacy on the internet: Data collection in cyberspace. *Anxiety, Stress & Coping, 12*(2), 145–161. <https://doi.org/10.1080/10615809908248327>
- Sheu, H. B., Liu, Y., & Li, Y. (2017). Well-being of college students in China: Testing a modified social cognitive model. *Journal of Career Assessment, 25*(1), 144–158. <https://doi.org/10.1177/1069072716658240>
- Singer, A., Gerber, M., & Neuenschwander, M. P. (2014). Individuelle und soziale Bedingungen der beruflichen Sozialisation im Lehrbetrieb [Individual and social determinants of professional socialization in the training

- company]. In M. P. Neuenschwander (Ed.), *Selektion in Schule und Arbeitsmarkt* [Selection in school and labor market] (pp. 165–186). Rügger.
- Sortheix, F. M., Dietrich, J., Chow, A., & Salmela-Aro, K. (2013). The role of career values for work engagement during the transition to working life. *Journal of Vocational Behavior, 83*(3), 466–475. <https://doi.org/10.1016/j.jvb.2013.07.003>
- Stalder, B. E., & Nägele, C. (2011). Vocational education and training in Switzerland: Organisation, development and challenges for the future. In M. Bergman, S. Hupka-Brunner, A. C. Keller, T. Meyer, & B. E. Stalder (Eds.), *Youth transitions in Switzerland* (pp. 18–39). Seismo Verlag.

Author Biographies

Markus P. Neuenschwander received his PhD in psychology from the University of Berne (Switzerland) and his habilitation in education and educational psychology from the University of Berne. He is the head of the Research Center for Learning and Socialization at the University of Applied Sciences and Arts Northwestern Switzerland and teaches at the University of Basel (Switzerland). His research interests focus on the school-to-work transition and educational careers. To recreate, he often goes on hiking tours in the mountains.

Jan Hofmann, MSc, has a master's degree in educational science. He currently works as a junior researcher at the University of Applied Sciences and Arts Northwestern Switzerland. He is also a PhD student at the University of Basel. His research interests focus on the transition from school to work. In his leisure time, he likes to hike and to play soccer.