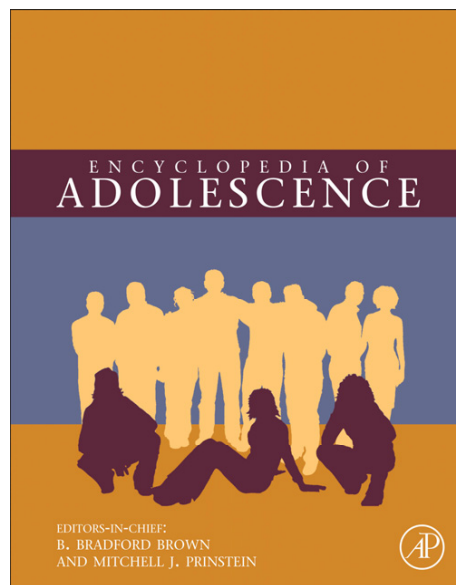


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## Career Development

**M P Neuenschwander**, University of Applied Sciences Northwestern Switzerland, Solothurn, Switzerland

**B Kracke**, University of Erfurt, Erfurt, Germany

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### Glossary

**Career counseling/career guidance:** Professional strategies of assessing and promoting individual career-related competencies in all phases of the lifelong career development process.

**Expectancy-value theory:** A theoretical approach stating that one's choices and behaviors are a function of one's expectancies and the value of the goal toward which one is working.

**Occupation:** Employed or self-employed paid work.

**Profession:** Vocational activities based on formal qualifications conducted in a regulated institutional setting.

**Stage–environment fit:** The match between the current level of individual's abilities, characteristics, and interests and the requirements and opportunities provided by the immediate environment.

**Transitions:** The diachronic and synchronic moves between social contexts.

**Vocational choice:** The process of making a decision on a professional career.

### Introduction

Career development is a lifelong endeavor that starts in childhood and usually ends in old age after retirement from paid work. Although career development is a life-time biographical project with relevant demands in every life stage, adolescence is a period with particular challenges for the individual. Career goals have to be developed and first choices concerning educational trajectories have to be made, channeling future career options and pathways with many personal, social, and economic consequences. Even though many adolescents choose to deviate from their primary vocational decision in adult years, the first career choice strongly influences later career development in many countries. These choices have to be well prepared by exploring one's own abilities, interests, and values and available career opportunities. How adolescents cope with this task varies considerably among individuals. Personal characteristics as well as the social, institutional, and economic contexts are important for the way in which adolescents prepare for their future occupational career. Thus, these contexts define educational and professional opportunities and pathways that individuals can choose among. These contexts regulate the individual's development. In this article, after an overview on theoretical approaches

towards career development, we conceptualize career development as transitions in the life course and as a stressful challenge particularly for adolescents. We discuss career development as the interplay of individual, social, and institutional contexts and finally introduce concepts of vocational guidance and policy implications.

### Theoretical Perspectives on Career Development and Choice

Theories on career development have been developed since the 1950s and have stimulated many research studies and policy interventions. They conceptualize the influence of individuals or of social contexts on career development, or they focus on the relationship or fit between individuals and contexts. Some theories describe the micro processes in short time periods, whereas other theories focus on developmental processes during the life course. They give varying explanations of how individuals and their professional environment establish a good fit. Some form of dynamic balance between individuals' interests, competences, and attitudes and the professional demands is required for successful professional activities. Because individuals always develop and because professional

contexts change, this fit remains dynamic and needs to be reestablished in a lifelong process. Generally speaking, career choices are prepared in families, peer-groups, and schools in childhood, although the vocational choices highly depend on experiences during adolescence. To shed light on these processes, we present four highly influential approaches in career development with a special emphasis on developmental perspectives.

### Trait-and-Factor Matching Approaches

In trait-and-factor matching approaches reaching back to Frank Parsons's seminal work in 1909, personal characteristics are considered to be attributed to professions. The basic idea is a close match between individual personality traits and occupational characteristics. A good fit is a precondition for a successful professional career and work satisfaction. Adolescents recognize patterns of personal competences, interests, and traits and learn professional characteristics.

Following this idea, John Holland described in the late 1950s six ideal personality types that corresponded to six ideal types of occupational activities. He proposed Realistic, Investigative, Artistic, Social, Enterprising, and Conventional personality types (RIASEC). Each personality style is characterized by specific competences, professional preferences and values, life goals, and self-concepts. The corresponding types of occupational activities, although not exhaustive, are assumed to include all the major kinds of work environments. Holland called them motoric, intellectual, supportive, conforming, persuasive, and esthetic environments.

This approach received much attention in vocational counseling and stimulated further research addressing mainly the number of dimensions. Using questionnaires, adolescents are classified into one of these personality types or they get scores on the six personality dimensions resulting in an interest profile. Based on this personality diagnosis, they are allocated to corresponding professional work types and occupations that help them planning their work career.

However, a simple and static allocation of personality types to occupational areas does not provide process-related information. First, it is still not clear how the personality types develop. Second, the person-environment fit approach does not explain how adolescents make choices and how they can be supported in their vocational choice process and career development. Nevertheless, the idea of person-environment fit is an important aspect in career development and has influenced theory and research in career development.

### Decision Making Approaches

The decision making approaches do not address long-term developmental processes but rather focus on how vocational choices are made. Typically, vocational choices are a sequence of partial choices. Adolescents approach their final choice step by step, excluding alternatives or weighing options. It is of core interest how students evaluate professions and occupations and how they perceive their own competences, interests, and attitudes. The complexity and multidimensionality of vocational choices with their enduring consequences lead adolescents to choose professions and work places with incomplete

information. Students typically do not have all available information about professions and occupations or even about themselves. They cannot evaluate every option. Therefore, vocational choices are only partially logical, partially spontaneous and intuitive. Cost-benefit analyses in vocational choice processes are more plausible in the context of approaches of ecological rationality. That is, vocational choices are rational because they are adapted to their life situation.

An important decision making approach with high impact is the social cognitive theory of career choice that was elaborated by Lent, Hackett, Brown, and Eccles. It stresses attitudes such as student expectations and values. The basic idea is that students' expectancies and values are main points of reference for vocational choices. Expectancies describe anticipated occupational challenges in relation to individual competences. Expectancies for success predict how well adolescents do on upcoming tasks and define the level of aspiration of the chosen profession or occupation. Values like attainment, intrinsic quality, utility, and costs express subjective students' preferences and predict the quality and content of the chosen profession or occupation. Choices are seen to be influenced by both negative and positive task characteristics. All choices are assumed to have costs associated with them precisely because one choice often eliminates other options. The relative value and probability of success of various options are key determinants of choice.

Research shows that students' expectancies and values can quite precisely predict educational pathways and vocational choices in western countries and age groups – even in long-term perspectives. For example, expectancies and values of seventh graders predict college enrollment at age 20 in the US educational system and in Western European countries. These attitudes also are reminiscent of motivational processes as proposed by Atkinson's expectancy-value-theory of achievement motivation in the 1960s: Students with inappropriate expectancies and values are less engaged in their education and have a higher risk of youth unemployment.

Modern expectancy-value theory stresses the interplay of student attitudes with contextual factors. Student expectancies are internalized from the expectancies of their parents and friends and adapted to achievement-related feedback from teachers and other persons of reference. Values are internalized from persons of reference who express their values verbally or behaviorally and they are modified by their general values and priorities to make up a coherent value structure.

### Developmental Approaches

Developmental approaches stress the long preparation period of vocational choices and how these are modified in the life course. They stress the process of how individual professional dreams in childhood translate to initial vocational choices and become realized in occupations. Adults will perhaps commence further vocational training and switch to new occupational fields. They can become unemployed or take a break as parents. After retirement, they can find new challenges and become engaged in age appropriate activities. The long-term perspective of developmental approaches enables the identification of general and age-specific processes and structures in career development and to identify the thread in professional biographies.

### **Lifelong career development**

In the 1950s, Donald E. Super presented a comprehensive theory of lifelong career development. His theory is still important because the life-course approach captures basic developmental processes and because it shows how vocational choices are situated in long-term developmental pathways. The theory includes an 'arch of career determinants' to explain vocational choices and a 'life-career rainbow' with four main developmental stages. Super's arch of career determinants describes how biological, psychological, social, and societal factors affect the self-concept and vocational choices. It explains the micro processes within the broader developmental theory and contextualizes individual processes.

The four developmental stages are exploration (about age 10–20), establishment (age 20–35), maintenance (age 35–55), and decline (after age 55). Today, this sequence looks normative and heuristic because many professional biographies have become nonlinear and are interrupted with breaks and detours. Career development results from a professional self-concept that is differentiating and integrating during the life-course. Super assumed a match between a person's self-concept and occupations. But this match is only weak, so that the person fits in varying occupational areas.

Research has confirmed the correspondence between self-concept and professional and occupational activities. For example, the academic self-concept helps to predict the person-environment fit for apprentices in Switzerland. A high professional self-concept is an effective personal resource in conflict situations, high work load and stress in work situations. However, losing an occupation lowers the self-concept. The link between self-concept and professional and occupational activities should, thus, be conceptualized as a mutual interplay.

### **Career goals, life goals**

Career development is determined by social and biological factors, but it is also highly self-regulated. Approaches focusing on this aspect have become particularly successful in explaining career development because adolescents have many options from which to choose in this domain. Drawing on general and domain-specific values and social feedback from persons of reference, students set up career goals. Life goals are rather general in scope and have a long-term perspective, whereas career goals relate to the near or far occupational and professional future. Adolescents report personal goals in various life domains. Their most important goals in middle adolescence are related to education and occupation. Adolescents expect to achieve their educational goals first, followed by occupational and family goals and, finally, securing material assets.

Driven by their goals, adolescents influence the educational and occupational contexts where they work or learn or they choose the educational or work contexts that determine their actions and development. Thus, goals also have an indirect effect on adolescents' development. Moreover, goals have a strong motivational impact and regulate actions and development. Individuals monitor and control their actions and developmental process. Students with high self-efficacy and agency beliefs use more efficient strategies and thus achieve their goals more directly and faster. Self-efficacy beliefs are students' expectations concerning their ability to act as they

want to act. In contrast, agency beliefs are expectations that an action has the desired outcome.

For vocational choices, curiosity and exploration are effective aspects of self-regulation. Adolescents who intensely explore their proper vocational interests, competences, and traits and who systematically collect information about professions and occupations choose their profession more self-confidently. They increase self-efficacy beliefs, career decid- edness, and commitment to the chosen profession, and are more motivated working in their job. After intense exploration, students' career goals become more important and more concrete. But career exploration does not predict the level or the type of the chosen profession or occupation.

### **Contextual Approaches**

Career development in the life-course is strongly determined by structural features of the social context. Social contexts define how well the person-environment match is established. The individual plays an important role in shaping the career development although choices and initiatives are always constrained by social forces and biological limitations. Glen H. Elder, Jr. and Michael J. Shanahan as well as Walter Heinz described the life course as an age-graded sequence of socially defined roles and events that are enacted and even recast over time. People generally work out their life course in relation to established, institutionalized transitions and pathways and their regulatory constraints, such as the curricula or tracks of a school and the professional careers of a firm or culture. Professional careers result from individual motives and goals restricted by the constraints of educational and occupational contexts. These constraints are weaker in transition situations when individuals can choose between available contexts and find new pathways within these contexts.

The school-to-work transition is a typical example of the interplay between the individual and his or her context. Adolescents as subjects become members of a society pondering and establishing their relation to societal institutions and contexts. They try to fulfill their personal interests and goals activating their resources and using the available institutional chances. The strong contextual effect on individuals' career development is, thus, moderated by individual motives, goals and competences and biographically based perceptions of social expectations.

### **Transition as a Challenge**

Transitions from one context to another are core elements of career development. Even though these transitions are often planned and receive high social approval, they usually challenge individuals' coping abilities as they require adaptation to expectations of new contexts and bear the risk of failure to reach desired goals. To successfully cope with this task increases public approval, social status, and well-being. Then, the new context provides new stimulation. Selected situations bearing potential problems, such as career indecision, transition stress, selection processes, school-drop out, and unemployment as well as related psychological risks in transition situations will be discussed.

### Career Indecision

Career choice in adolescence depends on the timing of identity development. Vocational choices are a challenge for students lagging behind in their identity development because their self-concept is not elaborated and they have diffuse personal values and professional goals. This challenge is accentuated in educational systems where adolescents have to choose professions early (e.g., in countries with a well established dual apprenticeship system). Research shows strong correlations between professional identity problems and career indecision in late adolescence. Female students with low professional self-efficacy beliefs and with low exploration are especially at risk with regard to career indecision. Students with insufficient social resources or with high stress (critical life-events, high school pressure, little parental support, overprotective parents) are at risk for developing professional identity problems and career indecision. Career-undecided adolescents are academically and professionally less engaged, have unclear and unrealistic professional goals, and need to change them to more realistic ones (cooling down effect). They tend to start their professional training at a later point. They perceive a lower fit between their interests or competences and their profession, have a lower self-esteem and are less happy in their profession. They are less confident to have chosen the appropriate profession and think about moving to a new professional area.

### Transition Stress

School transitions, school-to-work transitions, and job mobility at the beginning of young adult careers are associated with challenges and often experienced as stressful events. Before transitions, individuals have to set up vocational goals, make plans, and find ways to realize them. They lose friends and have to establish new social relations with peers and teachers or supervisors and find social relationships in new social contexts after the transition. Parents, siblings, and close friends remain important persons of reference. Young people need social skills to become integrated in a new social context and to receive acceptance and social prestige. Moreover, they have to negotiate their work conditions with their supervisor, especially when they change their job. Research shows that this process becomes stressful when the new school, college or workplace is large and anonymous and does not support positive social relationships.

This social process overlaps with higher or modified achievement-related expectations after transition. After transition to high-school or college, students have to fulfill higher achievement standards and to learn more independently. They receive less advice and feedback about their learning process and examination preparation. Adolescents have to learn in a self-regulated manner and find control strategies to ask for help and feedback.

Then, during the transition period students have to accommodate their daily routine. They may have a longer commute between home and school, a new timetable for their classes, or less leisure time. Upon entry into occupation, in particular, the daily routine typically changes dramatically when the school schedule and work hours differ greatly. Adolescents have to elaborate a new social role and new habits after transition.

They can prepare for this transition by learning from older students' experience and by thus anticipating the challenges. Once having entered the world of work, young employees have to face new challenges. They have to be mobile and flexible in terms of willingness to accept timely limited and part-time jobs to ensure their economic independence. However, frequent job changes go along with more work pressure and less commitment with the enterprise.

### Selection Processes

School transitions, school-to-work transitions, and job mobility at the beginning of early adults' careers are associated with the choice of and the passage into educational and professional channels. Both individuals and institutions are interested in establishing a match between individuals' interests and competences and institutional demands. In the matching process, the number of positions offered in an academic or professional field in contrast to the supply of workers plays a crucial role. If there are fewer offers than the supply in the market, institutions select persons that more precisely match their profile. Individuals have a larger risk of not obtaining the desired position and become frustrated or even depressed.

Selection strategies of institutions vary between school systems and countries. In some European countries such as Switzerland and Germany, only students who have passed an academic examination are allowed to enter high school (Gymnasium). In many countries, selection takes place during the transition to universities, typically based on aptitude and intelligence tests or prior academic grades. In contrast, the selection process leading to apprenticeships or the job market is based on academic achievement or prior professional experience as well as on social competence and motivation. Through effective coaching, students can be prepared for these evaluations during selection periods and can be supported coping with frustration in case of not being successful.

Unsuccessful selection and disengagement in education or training often lead to downward pathways like school dropout or youth unemployment. Those pathways may end in permanent low-status occupations. Some individuals, however, undertake new educational efforts to improve chances for more prestigious occupational positions.

### Individual Differences in Career Development

Career development trajectories vary among individuals and groups of individuals. The impact of structural features such as gender and socioeconomic background as well as of individual characteristics such as interests, values and individual competences will be discussed.

#### Gender

Population statistics show that some professions are female or male gender-typed and some professions are not. This reality of the world of work is reflected in adolescents' vocational goals. In general, adolescent boys and girls do not show the same professional preferences. They differ in their vocational interests, goals, and conceptions of their own futures. These gender

differences in vocational interests, however, start at a very young age. Already in elementary school when vocational interests are not very differentiated, girls prefer jobs they perceive as being appropriate for women whereas boys prefer male-dominated professions. In mid-adolescence, when the structure of vocational interests is rather similar to that of adults, in most cultures girls score higher in the artistic and social domains while boys score higher in the realistic and investigative domains, as assessed by the RIASEC dimensions of Holland. These gender differences are also present when adolescents report on possible academic selves. Gender differences in the entrepreneurial and conventional domains are not that dramatic.

Gender differences in vocational interests and goals can be mainly explained as being a product of gender role socialization. Gottfredson's Circumscription and Compromise Theory describes how an individual's perception about gender role socialization influences career choice. The individual's learning experiences in his or her sociocultural context shapes the perception of what types of gender appropriate roles and behaviors are commonly associated with the tasks and duties of a particular occupation. Consequently, the individual develops gender stereotypes concerning occupations. At the same time, children and adolescents develop ideas about behaviors by which they want to individually express their way of being a male or a female. The combination of the perceived gender appropriateness of occupations and the own gender concept creates a limited space of careers which appear to be suitable for the individual. Gender differences are not only reported in vocational interests but also in the perceived efficacy to achieve in certain occupational fields. Girls, for instance, seem to lose confidence in their abilities associated with investigative interests. This has dramatic consequences for course choice in school and studies at university and in the end for occupations. But if girls endorse science-related career goals in adolescence they are more likely to enter careers in these fields as adults.

Gender differences are also found in how adolescents anticipate their future career paths. Girls are more confident concerning their educational goals than boys are, whereas boys report a greater number of occupational goals and are more specific in their plans to attain them. More boys than girls expect to work full time during their occupational lives. Girls tend to expect to have a partner and children at an earlier age than boys, which, in turn, affects their anticipation of career paths.

Because adolescents limit their vocational interests based on gender-stereotypes of occupations and not mainly on their abilities to fulfill the job demands, early interventions should be developed that sensitize adolescents to gender biases, broaden their options, and facilitate their pursuit of these options. Although gender stereotypes about occupations already develop in childhood, adolescence is a timely period to intervene because adolescents are open for experiences and explore several options for their future lives. Thus, they may also consider alternative occupations when they are introduced to them.

### Socioeconomic Background, Migration Background, Ethnicity

Socioeconomic status (SES) strongly influences educational career trajectories. How adolescents perceive their future occupational options and how they pursue their occupational goals are partly influenced by their SES. High SES is generally

related to higher educational goals and higher educational trajectories leading to more prestigious occupations. At the same time, SES affects already the chances of a successful entrance into the world of work and, by the same token, is a (negative) predictor of youth unemployment. The character of occupational aspirations such as job status and income, however, is influenced by more proximal family factors than by SES. Material conditions, parental support, involvement and aspirations as well as adolescents' academic achievement and self-concept are more influential than SES per se. However, offspring of more advantaged families have generally higher career aspirations than those from less affluent families.

The role ethnicity and migration background play for educational pathways and job entry is complex. Specific stereotypes are associated with specific ethnicities, suggesting that some ethnic groups emphasize educational success more than others, which then would be reflected partly in adolescents' educational and occupational aspirations. Moreover, there are empirical findings that migrants differ in their educational and occupational aspirations from the majority population. But despite these differences, there is a considerable cross-cultural overlap in adolescents' valuing of educational and occupational goals. The main difference between ethnicities is what traditionally is regarded as a valuable occupation in their group. Migration status is often confounded with SES and, thus, has not much information value itself for the explanation of variations in educational pathways and job entry.

### Interests and Values

A young person's choice of profession is based on their personal and professional interests and values. Much research addressing the role that the fit between vocational interests and values and the success plays in one's career is based either on Holland's RIASEC dimensions or on expectancy-value theory. Adolescents who choose an apprenticeship or start college or university studies that fit their interests are more satisfied with their choice, achieve better, and tend to drop out to a lesser degree.

It is still unclear how specific interests develop. Competencies seem to have an important impact. The structure of interests and perceived competencies develop across adolescence. Both become more differentiated partly because of cognitive development, enabling more complex thinking processes that are further refined by different social experiences such as competition and grades. If an individual perceives him or herself competent in one domain he or she is more likely to invest more time in the future in this domain because the feeling of being competent is satisfying. This has been shown particularly for the choice of math and science classes in school. However, the link between competencies and interests is reciprocal. If individuals like something, they will put more effort into it and become more competent. How this link develops in future career paths is still not thoroughly examined.

### Intellectual and Social Competences

Occupational interests and goals, educational and occupational aspirations, and achievements are strongly influenced by intellectual competences. Students with higher general

cognitive abilities tend to have better grades, more sophisticated interests and higher scores in achievement tests, which enable them to apply for more demanding studies and/or professions. Individuals with lower ability enter less demanding educational tracks, are interested in and look for less complex jobs. Grades in school and general cognitive abilities are the best predictors of achievement in university education or in apprenticeship. Once launched into a career, higher intellectual capacities contribute to the pursuit of more successful careers as reflected in more autonomy and increasing complexity. Job demands and intellectual competencies mutually influence each other positively. While cognitive abilities are important for the level of the occupation, social competences such as the ability to cooperate, to resolve conflicts, and empathy influence adolescents' social adaptation to new situational demands after having left the school context. They help adolescents to get along with the collaborators in an enterprise and establish a good person–environment fit.

### The Social Context of Career Development

The long-term and multifaceted process of the development of an adolescents' educational and vocational biography takes place in interaction with proximal social contexts. Parents, peers, and teachers provide learning opportunities, give feedback about abilities, and lend emotional as well as instrumental support for these various aspects of adolescents' vocational development.

#### Parents

Parents influence their adolescents' career development in different ways. First of all, parents influence their adolescents' educational trajectories by transmitting to them certain cognitive abilities and temperament characteristics via their genetic heritage. On the basis of their genetic makeup, they provide specific environments which are more or less stimulating for intellectual growth and self-determination. Second, parents' educational and occupational biographies are models for their adolescents. The work experiences, both, positive and negative ones that parents convey at home and their knowledge about occupations influence their children's images about the world of work and shape their expectations concerning their future vocational lives. Parental work values and virtues such as reliability or effort are blueprints for the development of their offsprings' attitudes towards work.

Apart from those features of parents' educational and work experiences, parental attitudes toward their children's aspirations and parental activities to support the pursuit of educational goals are of great importance for adolescents' vocational development. High parental educational aspirations for their children generally translate into high adolescent aspirations and educational achievements which in turn influence vocational aspirations. Parental and adolescent educational aspirations correspond positively, particularly when parental aspirations are accompanied by support, acceptance and closeness, encouragement and interest and involvement in adolescents' learning activities.

Because career development is a long-term multifaceted process, some features of parental support have to change over time to be adaptive to specific situational demands. Empirical findings show that in primary and middle school those students do best whose parents provide a stimulating learning environment and encourage academic achievement. In high school, those adolescents progress best in their vocational development whose parents support exploration activities which are necessary to acquire self-knowledge and knowledge about the opportunities given in the world of work. In addition to formulating high expectations concerning academic achievement, these parents provide access to appropriate career-related information and opportunities for the adolescents to explore the world of work. A continuous feature of parental behaviors stimulating the development of a career identity is their willingness to arrange situations in which children and adolescents can experience their own abilities and to give appropriate feedback to their children about their observations.

Mothers and fathers partly have different functions in supporting their children's educational and vocational development. Mothers' expectations and role modeling seem to be particularly important for the formulation of higher educational goals. If they stimulate independence their children are more likely to strive for independence and leadership. Mothers generally provide more support in the process of vocational development than fathers do. For girls, working mothers serve as important models for their own career aspirations and goals. The special role of mothers as advisors in career related issues is mostly due to the greater amount of time that mothers spend with their children, especially in dyadic interactions, as compared to fathers. Nevertheless, fathers are important role models for sons and the extent of their involvement in their daughters' education positively relates to daughters' career achievement.

#### Peers

From early on, peers play an important role in the development of an individual's self-concept. While the positive role of peer support for academic achievement and peers potential negative effects on adolescents' problem behaviors are thoroughly studied, the role of peers in the course of adolescents' career development has only rarely been considered. The few studies addressing this issue show that peers give feedback about certain features of jobs, such as prestige and gender-stereotypes, and that they can be important in the process of career exploration. If an adolescent expresses certain occupational goals that in terms of prestige do not fit to the expectations of their peer group, they get negative feedback and may, thus, be pushed away from that goal. This would be particularly dramatic if the intended vocation would perfectly fit to the individual's abilities and other vocations that would be accepted by the peer group might be too demanding or not demanding enough for the individual. The same holds with respect to gender stereotypes about vocations. If the goals of an individual violate the gender stereotypic expectations of their peers he or she might give up plans in order to fit to their peers' expectations. The impact of peers'

judgments about the appropriateness of goals should be especially strong in early adolescence when young people tend to conform to their peers in order to keep up a high self-esteem.

Peers can have a positive impact on adolescents' career development when they serve as models showing how to cope with career relevant tasks. They can help to improve adolescents' vocational exploration and decision process by giving hints about important information sources, about appropriate behaviors in internships or during the applications process for jobs or apprenticeships. Peers also serve as a sounding board in the process of exploration and decision making itself. They provide security when they accompany the adolescent in unknown situations such as job centers or interviews with counselors, and they can exchange information about jobs or studies.

### Teachers and School

Although adolescents perceive school, in general, and teachers, in particular, as being less important for their career development than their parents, both may have a positive impact. First of all, schools and teachers provide learning opportunities and give feedback about adolescents' abilities. This allows students to differentiate their academic and vocational interests. In a tracked school system such as the German one, school is a very important channel for future job opportunities because school tracks lead to different levels of entrances to the labor market with different employment opportunities. In Germany, school track is not only related to adolescents' career aspirations but also to the role teachers ascribe to themselves concerning their students' careers after their leaving school. In the lower track mainly leading to blue collar and craft jobs and in the middle track mainly leading to white collar or administration occupations, teachers generally feel more responsible for their adolescents' after-school career than in the higher track which prepares students for the transition to university. Beyond tracking, another aspect of school organization can influence adolescents' development of vocational identities, namely, gender segregation. Girls, for instance, who visit girls-only schools more often report career aspirations in sciences and expect to have more influential and prestigious jobs in general than those in mixed schools.

Beyond these peculiarities of school structure, the organization of individual schools within a track can influence students' career development. Schools vary a lot with respect to the opportunities they provide for their students to explore the world of work by integrating internships into the curriculum or special courses on career preparation. The more students experience their schools as institutions interested in their future vocational development and providing them with information, learning experiences, and support, the more they report own exploration activities and less uncertainty about their occupational options. The same holds for teachers. If students perceive their teachers as being interested in their future and providing emotional and instrumental support concerning vocational issues, they engage more in the process of exploration of occupational interests and planning and show higher occupational self-efficacy.

## The Institutional Context of Career Development

Normative career trajectories are defined by the institutional contexts in a country. Although educational institutions in many countries have become open, pluralistic, and flexible, and pathways may include detours and breaks, educational institutions typically define a number of pathways by national laws and standards that specify how the school-to-work transition is organized. Rarely do students choose unexpected upward or downward pathways. In the following, we present normative pathways from school to work in an international perspective.

### International Perspectives

From an international perspective, there are two main pathways for school-to-work transitions: In some western European countries such as Germany, Switzerland, and Austria, after compulsory schooling many students enter the dual vocational and educational training system (dual VET) and learn a profession. During VET, they typically search for a job corresponding to this vocation. In contrast, high-school and college curricula in the United States, Canada, and Great Britain typically focus on general education. Students learn competences to cope with the occupational demands while on the job, generally not beforehand. Students are thus qualified for a broad range of occupations and are flexible in order to switch between varying occupations, but they have little professional and practical experience and they have to learn intensively on their first job. Professional careers are less determined by students' educational qualifications than in countries with a VET system. The educational and employment systems are less linked. In Japan, we find an alternative transition pathway to college that corresponds well to the Japanese culture: The transition to high school and to university is a selection process that depends on academic entrance tests and on the prestige of the preparatory school. Students from highly prestigious high schools who have demonstrated sufficient academic achievement are allowed to move on to highly prestigious universities or companies. Supported by a broad network, employers inform teachers about the free positions in these companies and teachers encourage a few students from their class apply in the firm. Thus, the job market is highly regulated by the involved teachers.

### Learning in the VET System

In several European countries, the dual vocational and educational training system (vocational school and enterprise) has become the main transition system. For example, in Switzerland, about two thirds of all apprentices enter the VET system and move on to the job market or to tertiary education (e.g., universities of applied sciences). The VET curricula and the certification system are vocation-bound; permeability between occupations is low and pathways from vocational education to employment are highly standardized. Apprentices (ages about 16 to 20) acquire theoretical knowledge in a vocational school and practical competences on the job while preparing for their full entry into work life. Apprentices are still in the role of students and have limited responsibilities. They are not yet 'full' workers, but no longer 'pure' students. During three to



four days a week, apprentices participate in real production processes in their training company and earn a modest wage; for one or two days they are students in vocational schools.

Many apprentices like this combination of theoretical learning in schools and the acquisition of practical knowledge for their profession in their firm, because they acquire knowledge with high relevance to their ensuing professional life. Furthermore, adolescents' levels of maturity are reflected in their pre-professional status in society. Employers like workers who have finished an apprenticeship with a diploma because of their theoretical and practical knowledge, so they are willing to hire them. The professionally trained workers, on the other hand, are less flexible and need further training during the life course to enter new professional fields. Because companies require a high degree of flexibility, professions may lose their significance and the VET system must be transformed. From an international perspective, the two transition systems (VET vs. college bound) are thus likely to eventually converge.

### Learning on the First Job

In educational systems in which colleges or universities prepare students for employment, the link between college and occupation is weak, so that the transition becomes particularly stressful. Students typically have a broad academic education that allows them to work in different professional fields. But they need specific skills for their occupation and workplace; they are not employable for stable jobs. In a floundering period, those students switch from one occupation to another in short intervals and gain the required knowledge on the job. To perform a task in their occupation, they typically receive instructions from the employer or more experienced employees. During the work process, they learn techniques, routines, and tools by imitating and by being coached by more experienced employers or workers. First-time workers learn in a self-regulated manner. In some enterprises, young employees receive formal training on the job to fulfill a function. During their professional career, they continually acquire the required competences with every new position.

### Vocational Guidance: Counseling and Policy Implications

The challenges during the process of career development justify establishing professional and institutionalized help. In Germany and Switzerland, for example, 20% of adolescents who start an apprenticeship after school quit it within one year. The same percentage is reported on students quitting their university studies. Research examining the reasons for this reveal that the dropout mainly is because adolescents did not have enough information about the contents and the requirements of the apprenticeship or studies, respectively. This draws attention to the contents of vocational guidance. It should provide adolescents with sufficient information about themselves and the world of work to make good vocational decisions. Because, as shown above, vocational development is a long-term and complex process which can only be successfully managed with sufficient knowledge, vocational guidance should address other competencies as well.

The guidance process should be organized under a developmental perspective considering the cognitive abilities of the developing child and adolescent and situational conditions of making experiences potentially relevant to vocational development depending on the age of the child and related legal conditions. Considering Gottfredson's theory of circumscription and compromise (which claims that gender stereotyped vocational interests form early, in elementary school) and research findings showing that perceptions of competencies related to vocational interests also develop quite early, it seems appropriate that vocational guidance should start well before adolescence. The first steps of vocational guidance should address information about educational tracks, jobs and career on a very general level, addressing gender issues as well as the fact that careers also demand certain abilities that can be acquired in the process of learning in school.

The second step of career guidance should enable children and adolescents to gather information about themselves and the world of work. That means, on the one hand, providing them with information, and, on the other hand, making them competent to seek information by themselves with appropriate methods such as interest and competence inventories or in relevant contexts such as the Internet, internships, and visits of work settings. This information competence can be conceptualized with reference to self-regulation processes including setting goals, planning, pursuing goals, and reflecting experiences with respect to the individual goals.

The third step of vocational guidance would concentrate on decision making and teach the adolescents how to narrow the range of alternatives, to evaluate alternatives with respect to the individuals' values and interests, and finally come to a decision which can be defended when challenged. In the fourth step adolescents need to be informed about best ways to apply for jobs, apprenticeships or studies.

In this guidance process, a network of competent partners should be involved. Parents and teachers as primary facilitators of career-relevant learning opportunities should be part of this network as well as specially trained experts in issues concerning the institutional context of career development. This network would operate best if all partners had well defined functions which complement each other. Moreover, it should also be able to compensate for one partner's possible lack of abilities to guide the adolescents. This could particularly be necessary for youths whose parents are not able to take care of their adolescents' vocational development because they are lacking work experience or abilities to act planfully in favor of their children. To support the efficient work of such a network, checklists featuring optimal occupational preparation could be utilized to early identify possible problematic candidates and offer them optimal help right from the beginning of the career development process. The work of this social network should also be assisted by internet based information sources which allow the adolescents to search for information by themselves.

### Conclusions

Career development has become a complex and flexible lifelong process with detours and interruptions. This process is partially regulated by the individual and partially by social

and institutional contexts. Regulation efforts of the individual and the regulating structures of the context have to be of certain quality to allow a successful career development. The international comparison of the pathways from school to work on the institutional level shows that adolescents are prepared for work life by societies in different ways. These alternatives are characterized by specific challenges and stress factors and they have their peculiar advantages and disadvantages for adolescents and enterprises.

At the individual level, specific core competences can be identified that are useful for the individual to successfully cope with the transition from school to work and the establishment in a job. In general, the ability to set and pursue goals as well as problem-solving and decision making competences and self-efficacy are functional individual characteristics which enhance the chances of a successful management of the career development process. Social competences such as conflict resolution skills and team cooperation help adolescents and young adults to establish a fit in their apprenticeship or first job after transition to work life. These competencies, however, have to be acquired by the individual. Some adolescents get enough positive stimulation in their families others need compensatory or complementary help – from school or other sources. To offer this assistance, schools need concepts and strategies for teaching the transition competences and preparing students for work life. Mandatory internships to promote exploration or procedures to make teachers conscious of their role as advisors could be effective features of such school concepts. Besides schools, parents and employers would benefit from more systematic programs teaching them to assist adolescents to make appropriate vocational choices.

To gain more insight into the specific interplay between individual and institutional factors shaping career development a promising strategy could be international comparisons

based on longitudinal data. More theory and data are needed to understand the complex process of individual development in social and societal contexts.

Finally, theory and research results may guide the development of programs for adolescents at risk. Special effort is needed to prevent school drop-outs, disengagement, and deviance in adolescence and to integrate these adolescents in the work system and to prevent unemployment. These strategies are not only justified by lower economic costs as a result of lower unemployment in a country but, in particular, by helping adolescents to find their place in society as citizens.

**See also:** Employment; School-to-Work Transitions; Vocational Training.

### Further Reading

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### Relevant Websites

- <http://careerplanning.about.com/>  
[www.careercounseling.com](http://www.careercounseling.com)