

Article

Educational and Occupational Aspirations: A Longitudinal Study of Vienna Youth

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Abstract

During their transition from lower to upper secondary education, young people make educational and occupational choices driven by their aspirations. Such aspirations are shaped by the individuals' social environment, their idea of what seems achievable and desirable, and their experiences. Therefore, aspirations can change during the transitional phase. In this article, we explore the development of educational and occupational aspirations of young people over three years. At the start of the study period, the students were attending the lower track in lower secondary education, the so-called *Neue Mittelschule* (8th grade), in the city of Vienna in the 2017–2018 academic year. Drawing on the panel survey data (2018–2020) of the Pathways to the Future project, we simultaneously explore stability and change of educational and occupational aspirations. We describe different patterns of change in aspirations and analyse the influence of sociodemographic characteristics and prior achievement on these patterns. Using latent transition analysis, we identify 11 patterns of aspirations with important differences depending on social background. Most of the students have stable aspirations. However, the results show that school performance, migration background, and the level of parental education play important roles in explaining different levels and patterns of aspirations over time. These longitudinal analyses of educational and occupational aspirations provide important insights into the transition process.

Keywords

educational aspirations; educational transitions; low-qualified young people; occupational aspirations; social inequalities

Issue

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1. Introduction

Educational and occupational aspirations are key predictors of outcomes in the process of status attainment and status reproduction (Sewell et al., 1969). The formation of aspirations is therefore a central developmental task in adolescence. In the European context, the formation of aspirations, as well as trajectories after leaving compulsory education, have become less linear

and more complex in recent years compared with the past (Hegna, 2014). So far, studies have looked at the development of and changes in either educational aspirations (e.g., Alexander et al., 2008; Bittmann & Schindler, 2021; Gutman & Schoon, 2018) or occupational aspirations (e.g., Basler & Kriesi, 2019; Miyamoto & Wicht, 2020), but not both jointly. The limited number of studies that consider both occupational and educational aspirations examine the relationship at only a single point in

time (Widlund et al., 2020). Research on development in both dimensions is scarce (Beal & Crockett, 2010). However, the alignment of occupational and educational aspirations is an important developmental task in creating coherent life trajectories and plans, setting the foundation for a smooth transition into the labour market (Sabates et al., 2011). Educational and occupational aspirations are linked to different social status positions and opportunity structures. So far, research lacks a longitudinal perspective on when and under what conditions young people develop aligned aspirations. To understand the complexity of the processes underlying young people's decisions, it is necessary to explore both educational and occupational aspirations simultaneously.

In this study based in Austria, we analyse the development of a combined measure of aspirations—the level of educational attainment and the level of occupational status aspired—of a group of young people who transition from the lower track in lower secondary education, the so-called *Neue Mittelschule* (NMS), to upper secondary education. Austria has a strong vocational education and training (VET) system, similar to the systems in Germany and Switzerland. In Austria, there are also tracks to combine vocational education with general education leading to a university entrance degree (Graf, 2016). In this context, the differentiation of occupation and education is particularly relevant as school leavers not only have to decide whether or not to continue education to achieve a university entrance diploma, but also whether they should undertake general education or vocational education. These decisions have lasting consequences for each individual's career as VET credentials are closely linked to later labour market outcomes (Bol et al., 2019).

VET is particularly appealing for young people in the lower educational track and those with lower family educational backgrounds (Becker & Hecken, 2009). This constitutes one facet of social inequality in the transition. Social differences influence key decisions, particularly when these decisions are made early in the educational career as in the group under consideration. NMS students are challenged to develop realistic career perspectives at the relatively early age of about 14, when they have to decide their next step after 8th grade. The international literature on the formation of (mainly educational) aspirations has shown that young people from low socioeconomic backgrounds are more likely to lower their aspirations (Hanson, 1994; Johnson & Reynolds, 2013). On the one hand, adolescents may have to “cool down” unrealistically high aspirations (Johnson, 2001), correcting for misjudgements of the opportunities available in the educational system and the labour market. On the other hand, the downgrading of aspirations in low-status groups is a reflection of social inequality, which is independent of school performance; thus, such downgrading represents a loss of talent (Hanson, 1994).

In our study, we address this strand of research. We first describe and analyse the development of ado-

lescents' educational and occupational aspirations in the transition in terms of the highest educational degree they would like to obtain and their desired occupation from lower to upper secondary education. Next, we assess the influence of sociodemographic characteristics and prior achievement on the students' aspirations. Specifically, we ask the following research questions:

1. Which patterns in the development of young people's educational and occupational aspirations can be discerned during the transition from lower to upper secondary education?
2. What is the relative influence of the socioeconomic profile and adolescents' prior school achievement on these patterns?

This study makes three contributions. First, we explore temporal patterns of educational and occupational aspirations jointly and assess whether they develop in parallel or separately from each other. By doing so, we attempt to discern whether social discrepancies are apparent not only in the level of educational and occupational aspirations, as in an isolated analysis, but also in their relational patterns over time. Second, we use three-wave longitudinal panel data from the time young people were in the 8th grade (lower secondary education), before they chose their educational or occupational track, to the 10th grade, when they have transitioned to upper secondary education or the labour market. Third, we study students from NMS (the lower track of lower secondary education), who tend to be underprivileged and to have fewer resources. According to official statistics, about 30% of NMS students have German as their first language versus 64% of all students in the higher track of lower secondary education *Allgemeinbildende Höhere Schule* (AHS; see Statistik Austria, 2016). Relatedly, the proportion of Austrian nationals in NMS is 60% versus 85% for AHS. This difference illustrates the specificity of our target group in relation to their cohort. This “within perspective” (Solga & Kohlrausch, 2013) allows us to investigate the degree of heterogeneity among school leavers from the lower track in lower secondary schools in a highly selective school-to-work transition system (Vogtenhuber, 2014). This focus is important as many social and labour market policy programs are targeted at this group. This study is informative beyond Austria's borders as evidence on the school-to-work transition from countries with a strong VET system is often considered to provide prime examples for reducing youth unemployment and occupational mismatch (e.g., Cefalo et al., 2020) and integrating lower qualified youth (e.g., Haasler, 2020).

Before we elaborate on the theoretical foundations of this study, we briefly introduce the Austrian educational system. Then we describe our data and methods and present and discuss results.

2. The Austrian Educational System and School-to-Work Transitions

The Austrian educational system is characterised by early tracking after four years of primary school. For lower secondary school, pupils are divided into the general track of lower secondary school (NMS) or the lower cycle of academic secondary school (the AHS, also called *Gymnasium*). Only students with good grades are admitted to the academic track. In the school year 2017–2018, 60% of students in the 5th grade were in the general track (NMS) in the whole of Austria, compared with 43% in Vienna (Statistik Austria, 2021a). Especially in Vienna, students in NMS include a high share of disadvantaged pupils, with about two-thirds of them having a non-German mother tongue (Statistik Austria, 2018). After four years of lower secondary education, young people transition to upper secondary education with different choices. Students who want to enter the labour market early have to continue in a one-year preparatory class (*Polytechnikum*) before starting an apprenticeship to become a skilled worker. The upper cycle of academic school (AHS) and colleges for higher vocational education (*Berufsbildende Höhere Schule*) prepare students for university entrance but require good grades. Furthermore, there is a three-year school-based track for vocational education (*Berufsbildende Mittlere Schule*) that does not entitle a student to study at a university. In sum, all students other than those who plan to enter AHS are confronted with occupational choices. AHS is the only path that does not include vocational training.

In Vienna, the majority of students in upper secondary education are in vocational education, and about 38% attend the upper track of academic secondary school in the 9th grade (Statistik Austria, 2019). Furthermore, only 8% of the pupils completing NMS shift to the academic track in upper secondary education (Statistik Austria, 2021b). In sum, our population is highly selected and comprises rather disadvantaged students that mainly enter vocational education. Therefore, most of these students are confronted with pressing occupational decisions that chart future educational and occupational trajectories.

3. Theoretical Background

3.1. Concepts of Educational and Occupational Aspiration and their Alignment

In the mechanistic model of status attainment (Sewell et al., 1969), occupational and educational aspirations are important channels through which status attainment takes place. Both types of aspirations are influenced by academic achievement, which varies according to social origin and by significant others (e.g., parents, peers, teachers).

Educational and occupational aspirations still differ substantially from each other in terms of the alternatives

they offer. Educational aspirations are related to decisions on educational investments and decisions between different educational tracks, such as an academic or a vocational pathway at the intermediate level. In contrast, occupations are hierarchically differentiated in terms of prestige or socioeconomic status (SES), which also implies that there are finer distinctions between occupations that may be reflected in the aspirations.

A crucial point for consideration is the relationship between educational and occupational aspirations which has been addressed in concepts of alignment (Schneider & Stevenson, 1999). Some authors characterise students who know which career they want and the education they need to achieve that career as having aligned ambitions (Kim et al., 2019). The perspective on the alignment of occupational and educational aspirations may differ in the Austrian context where both occupational and educational aspirations are partly intertwined. As mentioned earlier, the educational choice to strive for a university entrance degree in AHS is not related to any occupational choice. These students know which educational certificate they want to achieve, although they may not have decided about their preferred future occupation. However, the NMS track in the Austrian system forces young people to choose, but if they regularly receive feedback on their performance and opportunities, they might have already formed appropriate aspirations (Buchmann & Park, 2009). A longitudinal perspective on alignment and different potential relations between occupational and educational aspirations seems promising in this respect.

3.2. Development of Aspirations in the Transition

Concerning the stability of or the change in aspirations, the literature contains differing traditions. One strand of research addresses the strong social imprinting of aspirations and its association with a relatively high stability of aspirations (Paulus & Blossfeld, 2007). This stability may be reinforced in a tracked educational system, owing to young people adapting their aspirations to the track they are in (Buchmann & Park, 2009; Geven & Forster, 2021). The composition of peers in a track in terms of social background, attitudes, and academic outlooks can shape aspirations (Nygård, 2017). School performance regulates the access to upper secondary education tracks and selection procedures in companies and vocational schools. Anticipating this regulatory function, young people's school performance mirrors their aspirations. Various researchers have observed that students in lower tracks develop negative attitudes toward school, see little future payoff of education, have lower educational aspirations, and have more pronounced feelings of futility than students in higher tracks (Lee, 2014). However, these effects are not uniform across all students on the same track, as Geven (2019) points out.

Socio-psychological concepts explicitly address the processual formation of career aspirations during

adolescence (Gottfredson, 1996). Adolescents make compromises within a field of occupations, which they previously deemed socially acceptable, and limit their goals to alternatives that they perceive as achievable and accessible. At this stage, young people increasingly look at their opportunity structures and evaluate them. This may imply that the formation of aspirations is accelerated during “hot stages” when decision deadlines approach (Heckhausen & Tomasik, 2002), such as the transition from lower secondary education to upper secondary education. Patterns of educational and occupational aspirations in this transition may thus be largely dependent on the youth’s anticipation of opportunities. Gottfredson frames this as a process of social interaction with feedback from relevant others, such as teachers, parents, or career counsellors, that influences information gathering and career orientation (Gottfredson, 1996). These influences are likely to be stronger, the younger people are when they have to make decisions. Research findings suggest that there are group-specific formation processes. Studies from Germany for school leavers from the lower track who apply for VET indicate stability between aspirations from school days and the target occupations of the applications, with changes being rather observable in the group of young people with poorer school performance and low social background (Heckhausen & Tomasik, 2002; Schels & Abraham, 2021). Findings for the lower secondary school track in Germany show that youth increasingly develop aspirations in line with their school performance to avoid the risks of over- and under-aspiration (Heckhausen & Tomasik, 2002). A study from Switzerland, covering changes in the occupational aspirations over several years in the transition from youth to young adulthood, shows in particular how strongly the school track shapes aspirations, both for school attendance at ages 15–16 and for later changes (Basler & Kriesi, 2019).

The literature suggests that there are different developmental patterns of occupational and educational aspirations among school leavers from the lower track of secondary schools that may depend on the degree to which NMS students have explored their opportunities. Young people that have investigated their options may already have well-aligned aspirations. For others, the aspirations may align with their growing experience in the educational system. If aspirations before leaving school result from a lengthy orientation process taking account of opportunity structures, these aspirations are likely to be stable.

3.3. Social Differences

Social differences come into play in the formation of both types of aspirations. The process of developing aspirations is likely to reproduce social inequality because it is based on resources that are not equally distributed. The familial background—parental education, information, and migration background—is an important dimen-

sion of social inequality in the transition. First, families can differ in how well they support their children through the process and, second, they can have different motives for occupational and educational choices. Parents are a key source of information in the process of career orientation (Bryant et al., 2006), but the resources and support they can provide depend on their social status (Dietrich & Kracke, 2009). Overall, parents with higher education have a better understanding of the system and can better advise their children (Biewen & Tapalaga, 2017). This factor is significant for the formation of their children’s aspirations and accordingly the adjustments thereof (Buchmann & Steinhoff, 2017).

Rational choice approaches address the class-specific cost-benefit analysis of educational alternatives. School performance as well as family financial possibilities, information, and motives play a role in the assessment (Boudon, 1974). In contrast, according to Bourdieu (1973), aspirations are subculturally shaped by the family of origin because they derive from past experiences and socialisation processes and are related to cultural capital and influenced by structural constraints. Although approaches highlighting social differences in aspiration formation are mainly rooted in research on educational choices, they are also applicable to occupational aspirations (Wicht & Ludwig-Mayerhofer, 2014).

The reasons for high aspirations at the end of young people’s school years may differ depending on the individuals’ social background and the type of school. In families with high cultural capital, aspirations are high because young people try to avoid intergenerational social downward mobility (Breen & Goldthorpe, 1997). Thus, for them, there is limited scope for changes in aspirations. Further, low SES students may have less knowledge about the relationship between educational options and occupations (Perry et al., 2016). However, recent empirical studies from other countries with rather comprehensive educational systems have found an increasing number of students with low SES aspiring to obtain skilled jobs that require university degrees (Frostick et al., 2016) and opting for educational investment (Baudelot & Establet, 2000). If these aspirations are unrealistically high, young people from low SES backgrounds will experience strong checks and balances after leaving lower secondary school. This situation leads to further adjustments of their aspirations and a tendency to downgrade them (Jackson et al., 2012). With our study, we test if these findings are transferable to the Austrian context.

Important differences also exist according to students’ migration backgrounds (Geven & Forster, 2021). In general, despite lower educational achievement, adolescents with a migration background have higher idealistic and realistic educational aspirations (Engzell, 2019; Hadjar & Scharf, 2019). Moreover, they also have higher occupational aspirations (Wicht & Ludwig-Mayerhofer, 2014). Even when social background and school performance are controlled for, students with a migration

background tend to have higher aspirations than students from the national majority (Salikutluk, 2016). One explanation is that a familial desire for upward social mobility drives “immigrant optimism” (Kao & Tienda, 1995). At the same time, youth from migration families have deficits in information and knowledge about the educational system (Kao & Tienda, 1998), particularly because few countries of origin have a comparable vocational training system (Tjaden & Hunkler, 2017). Hence, we can also expect that processes of downgrading aspirations are present for youth with migrant backgrounds.

4. Data and Methods

4.1. Data

This research is based on longitudinal data from the Pathways to the Future project based at the Department of Sociology at the University of Vienna. The survey panel data were collected from 2018 to 2020 in a population of young people who were attending an NMS (8th grade) in the city of Vienna in the 2017–2018 academic year.

In the first wave of the project, all NMS schools in Vienna were invited to participate and further to gain consent from parents and students themselves. The population for the study includes all adolescents attending their final year in NMS in Vienna in the winter term 2017–2018. A multi-stage recruitment strategy via schools was used. All 117 NMS schools in Vienna were contacted, with a total of 351 classes and about 8,000 students. Ninety-six schools agreed to participate, constituting a 75% cooperation rate. In total, 3,078 young people from 236 classes started the survey and 2,854 completed it (for further information see Vogl et al., 2020). In the subsequent waves, 805 adolescents participated in wave 2 and 725 in wave 3; 1,000 students participated in at least two waves of the panel (Table a1, Supplementary File). As with all panel studies, sample attrition was a problem (Table a2, Supplementary File), which is particularly an issue in youth studies when adolescents change schools and have to be individually tracked for further panel participation. The greatest loss of the sample occurred between wave 1 and wave 2, during the transition from lower secondary to upper secondary education, when young people go to different schools. To deal with the missing data, we used full information maximum likelihood (FIML), and the final sample for analysis included 2,545 adolescents. Students were only eliminated from the analysis if they were missing on all observed variables used in the analysis. FIML is robust for missing at random data with the inclusion of missing-data-relevant variables in the model.

A comparison of official statistics from the school authority in Vienna on the cohort of students at NMS schools in Vienna in the winter term 2017–2018 with our sample shows little difference in the distribution of socio-demographic variables. Gender is equally distributed (Table a3, Supplementary File), while the place

of birth has more variation, with the share of respondents born in Austria being 6% higher than in the population. According to official data, about two-thirds of students in the NMS cohort in Vienna were born in Austria and 26% of them have German as their first language. However, in our sample, 56% speak German with their mother, 58% with their father, and 93% with their friends. The official statistics and our study are not directly comparable because we refer to “mainly used language” while the official statistics refer to “first language.” It is reasonable to assume that language barriers might have caused a bias towards fewer first-generation migrants—either at the respondents’ level or due to missing consent from a guardian (e.g., if the parents were not able to read or understand the consent form). Accordingly, languages spoken by the respondents are biased towards German (Table a4, Supplementary File). Nevertheless, overall there are only minor deviations between the population and the sample, at least based on the limited number of socio-demographic variables available for comparison.

Furthermore, for investigating panel attrition and missing cases, we employed bivariate analyses and a RLog analysis with dummy coded dependent variable (“responded W2” vs. “missing”; or “responded W3” vs. “missing”). These analyses investigate whether missing cases are explained by educational or migration background or if they are distributed equally among the different groups. In our case, missing cases did not have any specific profile, either in wave 2 or in wave 3, and are thus considered to be missing at random. However, there were differences by gender and by mathematics grades in wave 2 and by English grades in wave 3. Therefore, we included these variables in the analysis. Including variables related to missingness as auxiliary variables reduces the risk for biased results (Graham & Donaldson, 1993).

4.2. Variables

Respondents were asked in every wave which highest educational degree they would like to obtain (*educational aspirations*). The response options were the following: “I would like to study” (university or university of applied sciences); “I would like a Matura” (without further study); “I would like to finish a school for intermediate vocational education”; “I would like to obtain a diploma of apprenticeship”; “I would like to have a compulsory school leaving certificate”; “I would like to have some other degree”; and “I don’t know.”

The desired occupation (*occupational aspirations*) was recorded in an open format in each wave of the panel. The responses were classified using the International Socio-Economic Index of Occupational Status (ISEI) from 2008 (Ganzeboom et al., 1992). ISEI is an established continuous measure of occupational stratification based on information about required educational qualifications and expected income and is expressed in a 10–90 metric. However, to include

students who did not know which occupation they aspired to, we categorised the variable on the basis of the distribution of responses in the sample: ISEI \leq 40; ISEI = 41–56; ISEI = 57–70; ISEI \geq 71; “I do not have a desired occupation”; “I do not know”; or “I would prefer not to work.” Alternative approaches with established status categories such as EGP (Erikson & Goldthorpe, 1992) were tested and led to similar findings, but they were not nuanced enough, especially in the middle occupational segment, to reflect changes at the occupational level. Through the categorisation of the variable, some variance was lost on the ISEI scale. However, we conducted further analyses on occupational aspirations only with a metric measure, and we found little variation within the individuals across the waves.

Respondents indicated whether they were male or female (*gender*). There was a “diverse” option, but we did not include the category in the analysis because of the small number.

The variable *parents’ educational level* captured the highest parental educational level: compulsory education, secondary education, or higher education.

The variable *migration background* included non-migrant background, generation 1 (not born in Austria), generation 2 (parents not born in Austria), and generation 2.5 (one parent not born in Austria).

Students were asked to report their school grades (*school grades*) in mathematics and English in the last report card. The possible answers were 1 (excellent) to 7 (fail).

4.3. Analytical Strategy

The current study examines youth’s aspirations starting in 8th grade and the following two years using latent transition analysis (LTA) to explore the development of aspirations (Figure 1). This method is a type of latent Markov model (Abarda et al., 2020), and it is also an extension of the latent class analysis (LCA). LCA identifies unobservable groups within a sample using observed variables

(Collins & Lanza, 2010). Therefore, LTA enables the analysis and description of stability or change in latent categorical variables over time. Furthermore, LTA models include multiple latent class variables from multiple time points and provide the transition probabilities of changing from one class to another, from a one-time point to another (Nylund et al., 2007). The use of a LTA model enables determining the change between groups over time. This method is useful for modelling categorical variables for which other longitudinal methods (e.g., growth modelling) are not well-suited. In this sense, for our analysis, the method has the advantage that we can describe the longitudinal patterns of aspirations including those for the undecided students. Another advantage of the LTA models is that covariates can be included in the calculation of the probabilities (initial probabilities of membership to a specific group and transition probabilities).

A three-step method was used to prevent changes in the number of classes at each time point (Asparouhov & Muthén, 2013): (a) explore measurement model for each time point, (b) explore measurement invariance, and (c) explore structural LTA model and specify the final model. Thus, we performed a series of LCAs and evaluated the appropriate number of latent classes in each wave based on the Akaike information criterion, the Bayesian information criterion, the sample-size-adjusted Bayesian information criterion, and the entropy value. In this way, one-class to seven-class models were estimated without covariates to assess the variance between indicators (Table a7, Supplementary File).

Once the number of classes was selected, we analysed the LTA model and the longitudinal measurement invariance of the model. In addition, the following covariates were introduced into the model: gender, parents’ educational level, migration background, and school performance. To perform the analyses, we used MPlus 8 and maximum likelihood with robustness for non-normality of data to estimate the models and FIML to deal with missing data. We used a large number of random starts to ensure a global solution.

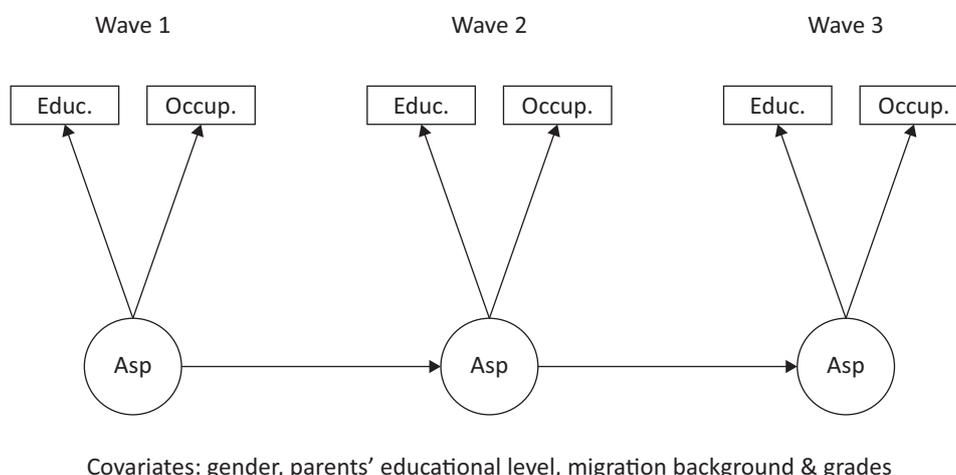


Figure 1. Conceptual model of latent class and LTA.

5. Results

5.1. Aspirational Classes

Based on the variables for the occupational and educational aspirations, the parameters suggested that a five-class model would be the optimal solution in each wave: (a) *high aspirations*, that is, students who aspire to a university degree and an occupation with an ISEI of more than 71; (b) *medium-high aspirations*, that is, students who aspire to Matura (university entrance certificate) and an occupation with an ISEI between 57 and 70; (c) *low aspirations*, i.e., students who aspire to have a diploma of apprenticeship or a compulsory school leaving certificate and an occupation with an ISEI of 40 or less; (d) *medium-low aspirations and educational indecision*, for students who aspire to an occupation with an ISEI between 41 and 56 and do not know about their desired education; and (e) *indecision*, that is, students who do not know which degree they would like to achieve and do not have a desired occupation (Table 1).

5.2. Longitudinal Patterns

After measurement of the longitudinal invariance of the aspiration classes in each wave, the LTA results with the covariates yielded 11 patterns in aspirations across the three waves of the panel (Table 2). These results

show that 75.5% of the respondents did not change their educational and occupational aspirations over the three waves.

In this way, the main pattern is one of high stability. The high stable-aspiration trajectory accounts for about 27.8% of respondents; the low stable trajectory accounts for 23% of respondents, and the medium-high stable trajectory for 8.4%. In addition, 7.9% of the students consistently did not have concrete aspirations. Furthermore, about the same share of surveyed students had increasing (6.6%) or decreasing aspirations (7.2%). In addition, 4% were undecided in both educational and occupational aspirations and moved to high/low aspirations, while another 4% moved from high/medium aspirations to indecision. These results indicate that indecision does not simply dissipate over time.

A multinomial logistic regression was applied to predict individuals' membership in a pattern type, and we calculated the average marginal effects (AME) for an easy interpretation of the coefficients (Table 3). Our analysis of the impact of covariates on the development of aspirational patterns reveals that the mathematics and English grades are significant for some aspirational trajectories. The lower the grades (i.e., the poorer the performance), the lower the likelihood of having high stable aspirations; and the lower the grades, the higher the likelihood of having low stable aspirations. However, even controlling for school grades, the results show important differences

Table 1. Aspiration classes by wave.

Class	Wave 1		Wave 2		Wave 3	
	N	%	N	%	N	%
High	768	30.2	763	30.0	969	38.1
Medium-high	609	23.9	326	12.8	214	8.4
Low	617	24.2	660	25.9	708	27.8
Medium-low and educational indecision	287	11.3	341	13.4	343	13.5
Indecision	264	10.4	455	17.9	311	12.2
Total	2,545	100	2,545	100	2,545	100

Table 2. Types of aspiration patterns over time.

	N	%
High stable	708	27.8
Medium-high stable	214	8.4
Medium-low indecision stable	214	8.4
Low stable	585	23.0
Indecision stable	201	7.9
Increasing	167	6.6
Decreasing	184	7.2
Indecision-high	58	2.3
Indecision-low	34	1.3
High or medium to indecision	110	4.3
Other patterns	70	2.8
Total	2,545	100.0

Table 3. Covariate effects of the aspiration patterns.

	High stable	Medium-high stable	Medium-low indecision stable	Low stable	Indecision stable	Increasing	Decreasing	Indecision-high	Indecision-low	High or medium to indecision
	AME (S.E.)	AME (S.E.)	AME (S.E.)	AME (S.E.)	AME (S.E.)	AME (S.E.)	AME (S.E.)	AME (S.E.)	AME (S.E.)	AME (S.E.)
Parents' educational level (ref. higher education)										
Secondary education	-0.18 (0.02)***	0.03 (0.02)*	-0.07 (0.02)***	0.10 (0.02)***	0.01 (0.01)	0.03 (0.01)**	0.07 (0.01)***	0.00 (0.01)	0.00 (0.01)	0.00 (0.01)
Compulsory or less	-0.14 (0.03)***	-0.03 (0.02)*	-0.06 (0.02)**	0.07 (0.02)**	0.00 (0.02)	0.11 (0.02)***	0.10 (0.02)***	-0.01 (0.01)	0.00 (0.01)	-0.02 (0.01)
Migrant background (ref. non-migrant)										
Generation 1	0.19 (0.03)***	0.06 (0.01)***	0.04 (0.01)**	-0.06 (0.03)*	-0.04 (0.02)**	0.02 (0.02)	-0.07 (0.02)***	-0.05 (0.01)***	0.00 (0.01)	-0.05 (0.01)***
Generation 2	0.08 (0.02)**	0.10 (0.01)***	0.05 (0.01)***	-0.15 (0.02)***	-0.02 (0.02)	-0.03 (0.02)	-0.02 (0.02)	-0.05 (0.01)***	0.00 (0.01)	0.01 (0.01)
Generation 2.5	0.02 (0.03)	0.10 (0.02)***	0.08 (0.02)***	-0.11 (0.03)***	0.00 (0.02)	-0.02 (0.02)	-0.01 (0.02)	-0.06 (0.01)***	0.00 (0.01)	0.00 (0.02)
Grades										
Grades_Maths	-0.05 (0.01)***	0.00 (0.00)	0.00 (0.00)	0.08 (0.01)***	0.00 (0.00)	-0.01 (0.00)*	0.01 (0.00)	0.00 (0.00)	0.00 (0.01)	-0.01 (0.00)**
Grades_English	-0.04 (0.01)***	-0.02 (0.01)***	0.00 (0.00)	0.06 (0.01)***	-0.01 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.01)	0.01 (0.00)**
Gender (control)										
*p < 0.05, **p < 0.01, ***p < 0.001.										

according to sociodemographic variables. In reference to the impact of the parents' level of education, we observed that students whose parents had compulsory education or less and students whose parents had secondary education were more likely to have low stable or changing aspirations (i.e., increasing or decreasing), rather than a high stable pattern. Specifically, students from lower social backgrounds (i.e., parents with compulsory education) were on average 14% less likely to have high stable aspirations, 3% less likely to have medium-high stable aspirations, and 6% less likely to have medium-low indecision stable aspirations than students with parents with higher education. Students with lower SES were on average 7% more likely to have low stable aspirations, 11% more likely to have increasing aspirations, and 10% more likely to have decreasing aspirations in comparison to students whose parents had higher education. On the other hand, young people whose parents had secondary education were more likely to be in the stable intermediate aspirations (on average 3% more likely than those whose parents had higher education; i.e., medium-high stable), to have low stable aspirations (10% more likely), to have increasing aspirations (3% more likely), and to have decreasing aspirations (7% more likely) in comparison with those whose parents had higher education. Therefore, students whose parents had higher education were less likely to have low stable and changing aspirations—that is, increasing or decreasing—and more likely to have high stable aspirations than students whose parents had compulsory education or less. Finally, indecision patterns were not clearly associated with parents' educational level.

Furthermore, concerning migration background, young people from generations 1 and 2 were more likely to have high stable aspirations than non-migrant students—on average 19% and 8% more likely, respectively. Moreover, generation 1, 2, and 2.5 students were more likely to have medium-high stable (generation 1: 6%; generation 2: 10%; generation 2.5: 10%) and medium-low indecision stable (generation 1: 4%; generation 2: 5%; generation 2.5: 8%) than non-migrant students. Students with migration background were less likely to have low stable aspirations (generation 1: 6%; generation 2: 15%; generation 2.5: 11%) and to change from indecision to high aspirations (generation 1: 5%; generation 2: 5%; generation 2.5: 6%) in comparison with non-migrant students. Specifically, if we look at generation 1, they were on average less likely to have indecision stable (4%), decreasing (7%), and high or medium to indecision aspirations (5%) than non-migrant students. Therefore, non-migrant students were overall more likely to have low stable aspirations and change from indecision to high aspirations.

6. Discussion

In this article, we applied LTA on panel data to explore how occupational and educational aspirations of stu-

dents from the lower track of secondary schools in Vienna develop over a three-year period. The results reveal a range of longitudinal patterns of aspirations. Three-quarters of students had stable aspirations over the study period. We found a smaller number of students who had changing aspirations or patterns of undecidedness. Our study shows a high degree of alignment between educational and occupational aspirations, that is, educational and occupational aspirations have corresponding levels. Young people most often aligned their occupational and educational aspirations before the transition to upper secondary education (8th grade in this study). We only found a misalignment in the specific form of intermediate occupational aspirations but undecidedness about educational goals. The reason could be that young people may decide later whether they want to continue to a university entrance diploma.

Our interpretation is that aspirations are strongly shaped by options in the highly segmented tracks in upper secondary education. The majority of students from NMS show stable patterns because aspirations have been pre-adjusted during NMS and therefore there is no further "need" for adjustments. This could be due to the fact that they are in a strongly tracked educational and VET system in which they receive ongoing feedback on their performance and opportunities (Buchmann & Park, 2009; Geven & Forster, 2021). At the same time, this also means that young people at the lower school track are locked in, which may limit their social mobility in the future. Previous research on the development of occupational aspirations in Switzerland and Germany came to similar conclusions (Basler & Kriesi, 2019; Schels & Abraham, 2021).

School performance played an important role in the development of the level of aspirations. These results are in line with recent studies (Widlund et al., 2020) and show that obtaining good grades in mathematics is associated with a higher probability of a pattern of high stable aspirations and low stable aspirations when students have low grades. English grades in our study show the same statistically significant effect as mathematics grades for high and low stable patterns. However, even with controlling for grades, the results show important differences in patterns according to sociodemographic variables. On the one hand, migration background and a high level of parental education were particularly associated with different levels of high and intermediate stable aspirations. One possible explanation for these findings is that migrants anticipate discrimination at the lower occupational level that they can avoid with higher education (Tjaden, 2017). Moreover, non-migrant students and low parental education were related to the likelihood of being in the low stable trajectory. On the other hand, the changes in patterns were more likely among non-migrant young people and with those whose parents have compulsory education or less. Therefore, the lower the educational background, the more likely young people were to change aspirations after finishing NMS,

both downwards—as also pointed out by Jackson et al. (2012)—and upwards.

Young migrants from generation 1 were more likely to have high stable aspirations. Although previous research has highlighted the high aspirations of young migrants (Engzell, 2019; Hadjar & Scharf, 2019; Salikutluk, 2016) and less knowledge of the educational system (Kao & Tienda, 1998), our results indicate that young non-migrants were the ones who were more likely to have low stable and decreasing aspiration patterns. This finding is in contrast with our expectation that students with a (first-generation) migration background would adjust their aspirations downwards the longer they are in the educational system.

Furthermore, with regard to the high stability of aspirations of adolescents attending NMS during lower secondary education, social differences were particularly linked to a different level of aspirations and less to the likelihood of misalignment of occupational and educational aspirations. Concerning social inequality, however, this also means that young people's aspirations are locked in. Further research is needed to determine whether adolescents can also realize their aspirations, but it is obvious that even among young people with weaker resources, social differences continue to have a clear impact.

To conclude, our findings are exploratory and show development patterns of aspirations for the selected group of school leavers from the lower track of secondary schools in Vienna, Austria. Thus, the generalisation of findings and transferability to other contexts might be limited. In addition, some of the groups with clear changes in their aspirations had only low case numbers, which limits conclusions about these groups. Still, our results raise important questions for future research. First, the formation of educational and occupational aspirations of students in higher school tracks may differ because these students have more time until they have to make occupational choices. This raises the question of whether forms of misalignment and/or indecision are more prevalent when the transition to upper-secondary education is far away. Second, comparative studies between countries with a comprehensive education system, such as England or the United States, on the one hand, and countries with VET systems that are less intertwined with opportunities to achieve university entrance diploma than in Austria, such as Germany, could provide clarity in the question of aspirations (mis)alignment and indecision. Our results contribute to the debate on the development of aspirations in the transition from lower to upper secondary education and provide insights into the role of academic performance and sociodemographic characteristics of young people in explaining the different patterns of aspirations. Research is needed to explore the development of aspirations from the beginning of lower secondary education on a longitudinal basis in early tracking systems. In addition, there is also a need for further qual-

itative exploration of subgroups or mechanisms behind these patterns.

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Conflict of Interests

The authors declare no conflict of interests.

Supplementary Material

Supplementary material for this article is available online in the format provided by the author (unedited).

References

- Abarda, A., Dakkon, M., Azhari, M., Zaaloul, A., & Khabouze, M. (2020). Latent transition analysis (LTA): A method for identifying differences in longitudinal change among unobserved groups. *Procedia Computer Science*, 170(2018), 1116–1121. <https://doi.org/10.1016/j.procs.2020.03.059>
- Alexander, K., Bozick, R., & Entwisle, D. (2008). Warming up, cooling out, or holding steady? Persistence and change in educational expectations after high school. *Sociology of Education*, 81(4), 371–396. <http://www.jstor.org/stable/20452746>
- Asparouhov, T., & Muthén, B. O. (2013). *Auxiliary variables in mixture modeling: A 3-step approach using Mplus* (Mplus Web Notes, No. 15). <http://shorturl.at/bAD03>
- Basler, A., & Kriesi, I. (2019). Adolescents' development of occupational aspirations in a tracked and vocation-oriented educational system. *Journal of Vocational Behavior*, 115. <https://doi.org/10.1016/j.jvb.2019.103330>
- Baudelot, C., & Establet, R. (2000). *Avoir 30 ans en 1968 et en 1998* [Being 30 years old in 1968 and in 1998]. Le Séuil.
- Beal, S. J., & Crockett, L. J. (2010). Adolescents' occupational and educational aspirations and expectations: Links to high school activities and adult educational attainment. *Developmental Psychology*, 46(1), 258–265. <https://doi.org/10.1037/a0017416>

- Becker, R., & Hecken, A. E. (2009). Why are working-class children diverted from universities? An empirical assessment of the diversion thesis. *European Sociological Review*, 25(2), 233–250. <https://doi.org/10.1093/esr/jcn039>
- Biewen, M., & Tapalaga, M. (2017). Life-cycle educational choices in a system with early tracking and “second chance” options. *Economics of Education Review*, 56, 80–94. <https://doi.org/10.1016/j.econedurev.2016.11.008>
- Bittmann, F., & Schindler, S. (2021). Analysing diversion processes in German secondary education: School-track effects on educational aspirations. *Kolner Zeitschrift Fur Soziologie und Sozialpsychologie*, 73(2), 231–257. <https://doi.org/10.1007/s11577-021-00789-1>
- Bol, T., Ciocca Eller, C., van de Werfhorst, H. G., & DiPrete, T. A. (2019). School-to-work linkages, educational mismatches, and labor market outcomes. *American Sociological Review*, 84(2), 275–307. <https://doi.org/10.1177/0003122419836081>
- Boudon, R. (1974). *Education, opportunity, and social inequality: Changing prospects in western society*. John Wiley & Sons.
- Bourdieu, P. (1973). Cultural reproduction and social reproduction. In R. Brown (Ed.), *Knowledge, education, and cultural change* (pp. 71–84). Tavistock Publications.
- Breen, R., & Goldthorpe, J. H. (1997). Explaining educational differentials. Towards a formal rational action theory. *Rationality and Society*, 9(3), 275–305. <https://doi.org/10.1177/104346397009003002>
- 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>
- Buchmann, C., & Park, H. (2009). Stratification and the formation of expectations in highly differentiated educational systems. *Research in Social Stratification and Mobility*, 27(4), 245–267. <https://doi.org/10.1016/j.rssm.2009.10.003>
- Buchmann, M., & Steinhoff, A. (2017). Social inequality, life course transitions, and adolescent development: Introduction to the special issue. *Journal of Youth and Adolescence*, 46(10), 2083–2090. <https://doi.org/10.1007/s10964-017-0740-2>
- Cefalo, R., Scandurra, R., & Kazepov, Y. (2020). Youth labor market integration in European regions. *Sustainability*, 12(9). <https://doi.org/10.3390/su12093813>
- Collins, L. M., & Lanza, S. T. (2010). *Latent class and latent transition analysis: With applications in the social, behavioral and health sciences*. Wiley.
- 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>
- Engzell, P. (2019). Aspiration squeeze: The struggle of children to positively selected immigrants. *Sociology of Education*, 92(1), 83–103. <https://doi.org/10.1177/0038040718822573>
- Erikson, R., & Goldthorpe, J. H. (1992). *The constant flux: Class mobility in industrial societies*. Clarendon Press.
- Frostick, C., Phillips, G., Renton, A., & Moore, D. (2016). The educational and employment aspirations of adolescents from areas of high deprivation in London. *Journal of Youth and Adolescence*, 45(6), 1126–1140. <https://doi.org/10.1007/s10964-015-0347-4>
- Ganzeboom, H. B. G., De Graaf, P. M., & Treiman, D. J. (1992). A standard international socio-economic index of occupational status. *Social Science Research*, 21(1), 1–56. [https://doi.org/10.1016/0049-089X\(92\)90017-B](https://doi.org/10.1016/0049-089X(92)90017-B)
- Geven, S. (2019). The impact of school tracking on school misconduct: Variations by migration background in England, the Netherlands, and Sweden. *Journal of Ethnic and Migration Studies*, 45(15). <https://doi.org/10.1080/1369183X.2019.1600402>
- Geven, S., & Forster, A. G. (2021). The adaptation of educational expectations in response to ability tracking: Variations by migration background. *British Journal of Sociology*, 72(5). <https://doi.org/10.1111/1468-4446.12886>
- Gottfredson, L. S. (1996). Gottfredson’s theory of circumscription and compromise. In D. Brown (Ed.), *Career choice and development* (pp. 179–232). Wiley.
- Graf, L. (2016). The rise of work-based academic education in Austria, Germany and Switzerland. *Journal of Vocational Education and Training*, 68(1), 1–16. <https://doi.org/10.1080/13636820.2015.1107749>
- Graham, J. W., & Donaldson, S. I. (1993). Evaluating interventions with differential attrition: The importance of nonresponse mechanisms and use of follow-up data. *Journal of Applied Psychology*, 78(1), 119–128. <https://doi.org/10.1037/0021-9010.78.1.119>
- Gutman, L. M., & Schoon, I. (2018). Emotional engagement, educational aspirations, and their association during secondary school. *Journal of Adolescence*, 67, 109–119. <https://doi.org/10.1016/j.adolescence.2018.05.014>
- Haasler, S. R. (2020). The German system of vocational education and training: Challenges of gender, academisation and the integration of low-achieving youth. *Transfer*, 26(1), 57–71. <https://doi.org/10.1177/1024258919898115>
- Hadjar, A., & Scharf, J. (2019). The value of education among immigrants and non-immigrants and how this translates into educational aspirations: A comparison of four European countries. *Journal of Ethnic and Migration Studies*, 45(5), 711–734. <https://doi.org/10.1080/1369183X.2018.1433025>
- Hanson, S. L. (1994). Lost talent: Unrealized educational aspirations and expectations among U.S. youths. *Sociology of Education*, 67(3), 159–183. <https://doi.org/10.2307/2112789>

- Heckhausen, J., & Tomasik, M. J. (2002). Get an apprenticeship before school is out: How German adolescents adjust vocational aspirations when getting close to a developmental deadline. *Journal of Vocational Behavior, 60*(2), 199–219. <https://doi.org/10.1006/jvbe.2001.1864>
- Hegna, K. (2014). Changing educational aspirations in the choice of and transition to post-compulsory schooling—A three-wave longitudinal study of Oslo youth. *Journal of Youth Studies, 17*(5), 592–613. <https://doi.org/10.1080/13676261.2013.853870>
- Jackson, M., Jonsson, J. O., & Rudolphi, F. (2012). Ethnic inequality in choice-driven education systems: A longitudinal study of performance and choice in England and Sweden. *Sociology of Education, 85*(2), 158–178. <https://doi.org/10.1177/0038040711427311>
- Johnson, M. K. (2001). Change in job values during the transition to adulthood. *Work and Occupations, 28*(3), 315–345. <https://doi.org/10.1177/0730888401028003004>
- Johnson, M. K., & Reynolds, J. R. (2013). Educational expectation trajectories and attainment in the transition to adulthood. *Social Science Research, 42*(3), 818–835. <https://doi.org/10.1016/j.ssresearch.2012.12.003>
- Kao, G., & Tienda, M. (1995). Optimism and achievement: The educational performance of immigrant youth. *Social Science Quarterly, 76*, 1–19.
- Kao, G., & Tienda, M. (1998). Educational aspirations of minority youth. *American Journal of Education, 106*(3), 349–384. <https://doi.org/10.1086/444188>
- Kim, S., Klager, C., & Schneider, B. (2019). The effects of alignment of educational expectations and occupational aspirations on labor market outcomes: Evidence from NLSY79. *Journal of Higher Education, 90*(6), 992–1015. <https://doi.org/10.1080/00221546.2019.1615333>
- Lee, B. (2014). The influence of school tracking systems on educational expectations: A comparative study of Austria and Italy. *Comparative Education, 50*(2), 206–228. <https://doi.org/10.1080/03050068.2013.807644>
- Miyamoto, A., & Wicht, A. (2020). Developmental trajectories of the socioeconomic status of occupational aspirations during adolescence. *Journal of Adolescence, 84*, 26–35. <https://doi.org/10.1016/j.adolescence.2020.08.001>
- Nygård, O. (2017). Early tracking and immigrant optimism: A comparative study of educational aspirations among students in disadvantaged schools in Sweden and the Netherlands. *Comparative Migration Studies, 5*(1), 1–18. <https://doi.org/10.1186/s40878-017-0063-1>
- Nylund, K. L., Asparouhov, T., & Muthén, B. O. (2007). Deciding on the number of classes in latent class analysis and growth mixture modeling: A Monte Carlo simulation study. *Structural Equation Modeling: A Multidisciplinary Journal, 14*(4), 535–569. <https://doi.org/10.1080/10705510701575396>
- Paulus, W., & Blossfeld, H.-P. (2007). Schichtspezifische Präferenzen oder sozioökonomisches Entscheidungskalkül? [Class-specific preferences or socioeconomic decision-making?]. *Zeitschrift Für Pädagogik, 53*(4), 491–508. <https://doi.org/10.25656/01>
- Perry, B. L., Martinez, E., Morris, E., Link, T. C., & Leukefeld, C. (2016). Misalignment of career and educational aspirations in middle school: Differences across race, ethnicity, and socioeconomic status. *Social Science, 5*(3), 35–45. <https://doi.org/10.3390/socsci5030035>
- Sabates, R., Harris, A. L., & Staff, J. (2011). Ambition gone awry: The long-term socioeconomic consequences of misaligned and uncertain ambitions in adolescence. *Social Science Quarterly, 92*(4). <https://doi.org/https://doi.org/10.1111/j.1540-6237.2011.00799.x>
- Salikutluk, Z. (2016). Why do immigrant students aim high? Explaining the aspiration–achievement paradox of immigrants in Germany. *European Sociological Review, 32*(5), 581–592. <https://doi.org/https://doi.org/10.1093/esr/jcw004>
- Schels, B., & Abraham, M. (2021). Adaptation to the market? Status differences between target occupations in the application process and realized training occupation of German adolescents. *Journal of Vocational Education and Training*. Advance online publication. <https://doi.org/10.1080/13636820.2021.1955403>
- Schneider, B., & Stevenson, D. (1999). *The ambitious generation: America's teenagers, motivated but directionless*. Yale University Press.
- Sewell, W. H., Haller, A. O., & Portes, A. (1969). The educational and early occupational attainment process. *American Sociological Review, 34*(1), 82–92. <https://doi.org/10.2307/2092789>
- Solga, H., & Kohlrausch, B. (2013). How low-achieving German youth beat the odds and gain access to vocational training: Insights from within-group variation. *European Sociological Review, 29*(5), 1068–1082. <https://doi.org/10.1093/esr/jcs083>
- Statistik Austria. (2016). *Bildung in Zahlen 2014/15—Tabellenband* [Education in figures 2014/15—Table volume]. http://www.statistik.at/wcm/idc/idcplg?IdcService=GET_NATIVE_FILE&RevisionSelectionMethod=LatestReleased&dDocName=107540
- Statistik Austria. (2018). *Schülerinnen und Schüler mit nicht-deutscher Umgangssprache im Schuljahr 2017/18* [Pupils with non-German colloquial language in the school year 2017/18].
- Statistik Austria. (2019). *Schülerinnen und Schüler im Schuljahr 2018/2019 nach Schulstufen* [Pupils in the school year 2018/2019 by school level].
- Statistik Austria. (2021a). *Schülerinnen und Schüler in der 5. Schulstufe* [Pupils in the 5th grade]. https://www.statistik.at/wcm/idc/idcplg?IdcService=GET_NATIVE_FILE&RevisionSelectionMethod=LatestReleased&dDocName=119692

- Statistik Austria. (2021b). *Übertritte von Abgängern der Neuen Mittelschule (8. Schulstufe) in die Sekundarstufe II 2019/2020* [Transitions of Neuen Mittelschule pupils (8th grade) to upper secondary school in 2019/2020]. https://www.statistik.at/wcm/idc/idcplg?IdcService=GET_NATIVE_FILE&RevisionSelectionMethod=LatestReleased&dDocName=119692
- Tjaden, J. D. (2017). Migrant background and access to vocational education in Germany: Self-selection, discrimination, or both? *Zeitschrift Für Soziologie*, 46(2), 107–123. <https://doi.org/doi:10.1515/zfsoz-2017-1007>
- Tjaden, J. D., & Hunkler, C. (2017). The optimism trap: Migrants' educational choices in stratified education systems. *Social Science Research*, 67, 213–228. <https://doi.org/10.1016/j.ssresearch.2017.04.004>
- Vogl, S., Wöhrer, V., & Jesser, A. (2020). Das Forschungsdesign der ersten Welle des Projekts "Wege in die Zukunft" [The research design of the first wave of the Pathways to the Future project]. In J. Flecker, V. Wöhrer, & I. Rieder (Eds.), *Wege in Die Zukunft* (pp.59–86). Vienna University Press. <https://doi.org/10.14220/9783737011457.59>
- Vogtenhuber, S. (2014). The impact of within country heterogeneity in vocational specificity on initial job matches and job status. *Journal of Vocational Behavior*, 85(3), 374–384. <https://doi.org/10.1016/j.jvb.2014.08.012>
- Wicht, A., & Ludwig-Mayerhofer, W. (2014). The impact of neighborhoods and schools on young people's occupational aspirations. *Journal of Vocational Behavior*, 85(3), 298–308. <https://doi.org/10.1016/j.jvb.2014.08.006>
- Widlund, A., Tuominen, H., Tapola, A., & Korhonen, J. (2020). Gendered pathways from academic performance, motivational beliefs, and school burnout to adolescents' educational and occupational aspirations. *Learning and Instruction*, 66. <https://doi.org/10.1016/j.learninstruc.2019.101299>

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