

## STUDIA PAEDAGOGICA VOLUME 27 / NUMBER 4 / YEAR 2022

## SUCCESS AND FAILURE IN UPPER SECONDARY EDUCATION

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# **STUDIA PAEDAGOGICA** VOLUME 27 / NUMBER 4 / YEAR 2022

## SUCCESS AND FAILURE IN UPPER SECONDARY EDUCATION SPECIAL ISSUE

## PETR HLAĎO, PETR NOVOTNÝ, CLAUDIA SCHUCHART Editors

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## **EDITORIAL**

### SUCCESS AND FAILURE IN UPPER SECONDARY EDUCATION

Education is an essential precondition for personal development, the achievement of life and work goals, and a successful and satisfied life in general. Therefore, promoting success and eliminating failure in education is vital. Success and failure in education are two concepts that have been the subject of extensive research and discussion for many years. In the current special issue, *Success and Failure in Upper Secondary Education*, we address fundamental questions concerning the causes, consequences, and solutions for student success and failure in upper secondary education. Because there are different ways for scholars to understand success and failure in education, we have taken a broad approach to exploring this topic.

The first crucial consideration is the success and failure associated with entering upper secondary education, as the career decision at the end of lower secondary education is associated with many external and internal obstacles and risks (Kulcsár et al., 2020) and can have various short- and long-term consequences for an individual. We previously addressed this matter in the special issue *Transitions in Educational Contexts* (Neuenschwander & Hlaďo, 2019). Failure in career decisions can manifest in emotional and social problems, such as social isolation or difficulties establishing new relationships with peers (Haynie & South, 2005). Failure to enter upper secondary education can also negatively affect motivation to study, educational aspirations, academic achievement, and school attendance (Mehana & Reynolds, 2004). In addition, it can lead to alienation from school, resulting in dropout and unemployment (Akos & Galassi, 2004).

If we focus directly on success and failure in upper secondary education, conceptually different views can be identified in the literature. The basis for student success or failure may lie in individual characteristics, family background, social context, and school conditions (Quin, 2017). As Chacón Fuertes and Huertas Hurtado (2017) noted, some individual-level variables play a role, such as self-concept, general and emotional intelligence, achievement motivation, use of learning techniques, and the type of attributions individuals make for the outcomes they achieve. Family background, which can affect educational success and failure, includes the socioeconomic status of parents, family structure, interrelationships among family members, parenting style, parental expectations, and the quality of instrumental and emotional support (Benner et al., 2016). Regarding the social context, academic success and failure are explained by variables such as social inequalities or demographic and cultural characteristics (Needham et al., 2004). School conditions, classroom conditions, and teacher quality are other factors influencing student success and failure in upper secondary education. Causes may include school climate, structures, student body composition, class size, and resources (Hoy, 2012). Student success and failure may even be attributed to teacher professional development (Timperley et al., 2007), teacher pedagogical knowledge (Hill et al., 2005), teacher-student relationships (Bingham & Sidorkin, 2004), and teacher personality, attitudes, competencies, and perceptions (Sahin & Gülmez, 2000). Highly qualified, experienced, and motivated teachers can provide students with the guidance and support they need to succeed academically. Clearly, school success and failure are incredibly complex educational phenomena that are influenced by multiple factors at different levels.

Another concern is the short- and long-term effects of success and failure in education. Those who fail in school run the risk of dropping out, not fitting into the labor market, having a destabilized individual life course, and even becoming ill (Needham et al., 2004). Equally important are the study circumstances, functions, conditions, progression, and completion, including assessments and final examinations. Assessments and final examinations are essential components of the learning process (Amrein & Berliner, 2002; Piopiunik et al., 2014). They provide students with opportunities to demonstrate their knowledge and skills, receive feedback on their performance, and identify areas in which they need to improve. In addition, assessments and final examinations serve as a means of evaluating the effectiveness of teaching and learning and can provide valuable insights into the strengths and weaknesses of educational programs.

We are pleased that many of these topics are covered in this special issue, offering a wealth of new insights to the discussion of success and failure in upper secondary education.

Dominik Dvořák, Jaroslava Simonová, Jan Vyhnálek, and Petr Gal in their study Days After a Choice Is Made: Transition to Professional and Vocational Upper Secondary Schools in Czechia, examine how students experience the transition from lower to upper secondary school and how daily routines, perceptions of curriculum and instruction, and interpersonal relationships change after the transition. The authors provide fruitful qualitative insights into the

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transition and adjustment to upper secondary education in the vocational stream. The knowledge presented in this study can, for example, help teachers to support student success during their educational transition.

The study by Victoria Rolfe and Monica Rosén—*Delays and Dropouts: Identifying Risks of Suboptimal Post-Compulsory Educational Pathways in Sweden* addresses the question of which suboptimal educational pathways students take after completing compulsory education and which sociodemographic characteristics predict the post-compulsory educational pathways of Swedish youth. The results of this quantitative study add to the knowledge about delayed school completion and dropout from upper secondary education by revealing the sociodemographic risks of a suboptimal educational path.

Doris Bühler-Niederberger and Claudia Schuchart contributed to this special issue with a study entitled *Academic Second-Chance Education: Correction* or *Consolidation of Early Selection?* The authors focused on adults who had completed a first school career in various types of schools in the highly stratified German school system and who returned to upper secondary education to obtain their eligibility to study via second-chance education. Bühler-Niederberger and Schuchart developed a theoretical framework based on the analysis of interviews to investigate how normative orientations learned in different types of school might influence adult student learning behavior and, thus, their chances of success in second-chance education. The findings suggest that prior schooling influences success and that second-chance schools should adapt their support systems to the school-type-specific prerequisites of their students.

Failure to graduate presents a barrier to further study or employment. Not completing upper secondary education often entails an increased risk of social exclusion for students and indicates a risk of not fitting into the labor market. The study by Albert Dueggeli, Youth at Risk in Higher Levels of Upper Secondary Education: A Supportive Intervention to Prevent School Failure and Drop Out, addresses how students whose parents have an immigrant background can be supported in upper secondary education to prevent dropout. The author presents the results of a support-oriented intervention, regarding the effects of the intervention on grades, student self-concept, and the motivational aspects of learning. Lenka Hloušková, Klára Záleská, and Tereza Vengřinová contributed to this topic with their study Educational Decision Making of Repeatedly Unsuccessful Czech Vocational Education and Training Examinees Leading to Passing the Matura Exam. The authors focused on the decision-making processes of repeatedly unsuccessful VET examinees. Using biographical narrative interviews with examinees who failed the Matura exam at least twice, they determined how examinees make their decisions regarding the exam and how their decisionmaking paths differ.

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The issue concludes with the emerging researcher section, which includes the review study *Typologies of Early School Leavers from Secondary Education* by Petr Gal. The goal of the study was to provide a comprehensive summary of the empirical evidence on the typologies of school dropout. Petr Gal summarizes common patterns and risk factors associated with dropping out of upper secondary education by examining the different typologies of dropouts. The study can help educators and policymakers develop targeted interventions and support programs to prevent dropout and to support at-risk students.

This special issue of *Studia paedagogica* contains several interesting studies. We hope that the issue will offer new insights and raise new questions that will enrich research and practice. We wish our readers a rewarding read.

Petr Hlado, Petr Novotný, and Claudia Schuchart Editors

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## DAYS AFTER A CHOICE IS MADE: TRANSITION TO PROFESSIONAL AND VOCATIONAL UPPER SECONDARY SCHOOLS IN CZECHIA

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#### ABSTRACT

Researchers in the Czech Republic, as well as internationally, have traditionally studied the factors that contribute to the choice of upper secondary tracks and programs. Much less is known about the day-to-day experiences of the students in different tracks, particularly in professional/vocational tracks, and the possible mechanisms that produce the positive or negative outcomes of their schooling. We present the results of a prospective qualitative study of 22 students we followed from their last year of lower secondary school and through their first and second years in different tracks and schools. Data obtained in three waves of interviews were subjected to thematic analysis. Two major themes cutting across domains of daily routines, social relations, and the respondents' perception of curriculum/learning are described: school choice and professional/vocational specialization. The key findings are several important differences between the post-transitional experience of students in technical/professional and vocational programs. The study provides important insights into adolescent adjustment in various tracks of secondary schools in the post-socialist context.

#### **KEYWORDS**

upper secondary school; technical and vocational education; transition; qualitative longitudinal study; Czechia

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#### Introduction

A large share of Czech adolescents (around 70%) enter professional or vocational tracks of upper secondary schools. This structure of education is highly controversial. While employer organizations support the present dominant role of technical and vocational education and training (TVET), many researchers have pointed out that students in the vocational track are characterized by lower socioeconomic status and worse academic achievement than students from other tracks (Katrňák, 2004; Straková, 2015; Veselý, 2006). Great attention has been paid to the factors contributing to the choice of the track and qualification in upper secondary school, as well as the postsecondary education or employment of the graduates. Another traditional research topic in international literature is early school leaving (ESL). As the rate of ESL (previously very low) began to increase in Czechia, the focus on at-risk/unsuccessful upper secondary students also strengthened (Hloušková, 2014; Šlapalová & Hlaďo, 2020; and this special issue).

Much less is known about the day-to-day experiences of the "average" students in different tracks, and the possible mechanisms that produce the negative or positive outcomes of their schooling. In this study, we present and compare the results of a prospective qualitative longitudinal study of 22 students we followed from their last year of comprehensive lower secondary school and through their transition to different upper secondary tracks and programs.

#### 1 Concept of transition and its framing

Transition is a widely used concept, but its more precise conceptualization is often lacking. It is possible to understand the entire life course as a continuous process of development and aging. In their research, Salmela-Aro and Upadyaya (2014) presented the opposite view, according to which transitional/liminal phases and more stable post-transitional phases can be distinguished in an educational trajectory. Longitudinal studies investigating transition often simply compare data obtained in the last year (grade) of a lower school level<sup>1</sup> with the data collected in the first year of a new, upper-level school and talk about pre- and post-transition phases.

<sup>&</sup>lt;sup>1</sup> It would be interesting to analyze whether this period falls into a "stable phase" or whether the final year is a more liminal time, because of the need to choose the next school or as a result of preparation for high-stakes exams.

Thus, the transition phase can be considered to start with the entry into the last year of a lower level, or when one starts to talk and think about the transition and related choices at school and in the family. Similarly, it can be considered completed after the first days at a new school, or, alternatively, upon successful socialization in a new environment or by failed adaptation and transfer to another track or school, or even by leaving education (Hlado & Šlapalová, 2018; Horčička, 2022). The transition is a normative event, but its beginning and end can vary greatly from person to person. Researchers who focus on understanding the antecedents of transition-related problems have therefore emphasized the importance of pre-transition events, especially in relation to the choice of school, but also more distant events such as the experience of the previous transition to lower secondary school (de Moor & Branje, 2022). On the other hand, monitoring the student for a longer period of time than just the first year makes it possible to assess both the stability of the changes brought about by the transition and their delayed effects (Benner et al., 2021) and possible evolutions in how students perceive and evaluate these changes (Wentzel et al., 2019). Our previous research (Dvořák et al., 2020) showed that over half of the transfers from the technical/professional (T/P) track to the vocational (VET) track and two-thirds of transfers within the T/P track took place in the first year of upper secondary school. If a change of track is seen as a signal of unsuccessful adjustment, it would indicate that post-transition processes take place mainly in the first year; on the other hand, the proportion of departures from the T/P to the VET track, even in later years, is still considerable, although it is not clear whether this indicates the ongoing process of transition to a new school, or whether it is due to the onset of other changes, e.g., those associated with adolescence. Therefore, in our study, we understand the transition as a process determined by a series of previous events, the consequences of which can manifest themselves even at a greater distance.<sup>2</sup>

#### 1.1 Theoretical framing

Research on transitions has often been framed by ecological or developmental theories.

In an ecological approach (e.g., the person-environment interaction theory; Symonds & Galton, 2014), transition is understood as a change in a student's role, environment, or both. The stage-environment fit theory is frequently

<sup>&</sup>lt;sup>2</sup> Many authors have studied the programs facilitating the transition to (upper) secondary education or evaluate their effectiveness (Test et al., 2009; van Rens et al., 2018); but there has been a lack of clarity in the definition of the transitional phase, as these interventions can last from one or a few weeks to years-long programs covering the entire upper secondary level (Donaldson et al., 2022).

used to study the transition to secondary school (Jindal-Snape et al., 2021), as it focuses on the match (or the mismatch) between the developmental needs of adolescents and the structure of the secondary school environment. It is not a theory of transition as such, but it explains negative or positive experiences in the environment to which the student was transitioning. A possible source of problems is a lack of "fit" between the needs resulting from an adolescent's developmental stage and their environment. Adolescence is characterized by a need to exercise autonomy. If the transition to a new school is developmentally regressive, i.e., the environment of the new level of school is perceived as less friendly and less caring or teachers treat students in a more authoritarian way, then the transition can lead to a decrease in motivation and the deterioration of educational results and emotional wellbeing. An optimal school for adolescents creates conditions for autonomy, relatedness, and competence (Eccles et al., 1993).

The life-course theory (Benner et al., 2021; Blossfeld, 2018; Cairns et al., 1996; Elder et al., 2003; in the Czech context Chaloupková, 2009) combines sociological/ecological and developmental psychological approaches and thus enables the connection of the micro-perspective of individual students and the macro-perspective of the system/context, as well as the effects of transitions, in two key areas: academic results and well-being. The educational attainment of a student can be seen as their trajectory through a culturally prescribed series of educational transitions (an educational pathway); at a particular stage, the student can focus on the immediate next transition or on the expected ultimate transition in the entire educational trajectory (Pallas, 2003).

In the life-course theory, actors are understood as agentic beings who construct their own lives through choices (cf. also Kalalahti & Varjo, 2022). Specifically, the transition is preceded by decision making on the further course of a student's education and career (Hlad'o, 2010). In this process, Czech students and their families choose the track (type of program), field of study/qualification pursued, and in some contexts also the specific school. The choice of the track and qualification has been studied by a number of authors (for an overview for the Czech context see Hlado, 2013). Here, the second principle of the life-course theory is also at work: steps students take are enabled or constrained by the sociocultural context of the specific place and time in which the student comes of age. The structure of the opportunities (which crystallize in the form of educational institutions) from which a student can choose differs between North America and Central Europe and even within a single country, for example, urban/rural and central/peripheral spaces (Dvořák et al., 2021). Therefore, the next subsection addresses the institutional context in some detail. This principle also accounts for the unique historical events of the time in which individuals experience transitions.

Macrosocial changes affect human development and this influence is even transmitted to subsequent generations. In our case, this historical context is mainly the (still unfinished) transformation to a democratic society and market economy, which affected Czech TVET very significantly, as did the global COVID-19 pandemic.

According to Pallas, "the educational trajectories ought not to be studied in isolation from other social institutions and from the other social roles [...], because such roles are intertwined in complex ways" (2003, p. 170). Jindal-Snape et al. (2020) described parallel transitions in different domains (academic, social...) and different contexts (e.g., an adolescent transitioning from compulsory school to VET and at the same time from their family to a boarding facility) using the concept of multiple and multi-dimensional transitions (MMT). Horizontal transitions sometimes denote the transitions between different environments that the student attends simultaneously (Balduzzi et al., 2019). Pietarinen et al. (2010) emphasized the horizontal moves between social and cultural contexts within one school/class; such moves are often imperceptible to an external observer, but can be perceived as very significant by the students themselves. In a narrower sense, these are transitions between different educational institutions, e.g., between the school and a boarding facility; a broader sense could include the daily or weekly movement between home and school, including the commuting process.<sup>3</sup>

Here, the principle of linked and interdependent lives of relatives, peers, and teachers also applies. For example, the experience of transition is strongly influenced by the stability of the social convoys, which is related to the organization of education, i.e., the extent to which the student is among the same or, conversely, new and unknown peers after the transition, and how many friendly ties are maintained. A change of social group can be beneficial for students who were less successful in the previous level of education (Benner, 2011), as they have an opportunity to "reinvent" themselves. On the other hand, previously successful students are under pressure to confirm their identity.

Finally, the contexts and outcomes of transition "vary according to their timing in a person's life" (Elder et al., 2003, p. 12). Specifically, adjustment to a new school can proceed differently when it is a repeated start after (unsuccessful) studies at another upper secondary school or track and the student is also older than his or her classmates as a result.

<sup>&</sup>lt;sup>3</sup> In yet another meaning, horizontal transitions occur at non-normative points and between different schools of the same type or between tracks of upper secondary education (e.g., from general to vocational upper secondary school; Dvořák et al., 2020; OECD, 2018).

1.2 Context of transition to upper secondary school in different systems Entry to upper secondary education (alternatively also known as higher secondary, senior secondary, high school, Sekundarstufe II...) is one of the most important normative transitions in the educational path for the vast majority of students in developed countries. Some features of this transition are relatively universal as a result of the biopsychological characteristics of adolescence, but at the same time there is great variability in the institutional contexts created by the form of national education systems. This applies both to the lower level from which the students are transitioning and to the next level they enter.

As regards the pre-transition context, post-socialist countries such as Czechia have often maintained a comprehensive school (základní škola [basic or elementary school]) combining primary and lower secondary school (first through ninth grades) at which all or most students receive their compulsory education. A similar model exists in Nordic countries (Pietarinen, 2000). Therefore, the transition from primary to lower secondary school might be perceived as relatively less significant for most of the age cohort, as the majority of students continue with their peers in a very similar social group, in the same building, and in the same geographical location.<sup>4</sup> By contrast, the transition from a combined comprehensive school to upper secondary education brings about simultaneous change in more domains. In the United Kingdom, on the other hand, the transition from lower to upper secondary education (in England, from Key Stage 3 to Key Stage 4) is less prominent than entry to lower secondary school and hence the transition from primary to secondary school, as well as post-16 transitions, receives significantly more attention than the passage from lower to upper secondary school; in the United States, different models of secondary education exist side by side (middle school or junior high, K-8 or K-12; Donaldson et al., 2022; Taverner et al., 2001).

The transition process is also influenced by the structure of the upper secondary education itself. In North America, upper secondary education also tends to be provided in a comprehensive school (with a possibly more or less permeable setting or streaming). Nevertheless, the choice of school can play a significant role (Sirer et al., 2015). In post-socialist countries, as well as in German-speaking countries, upper secondary students are permanently split into several tracks (academic or vocational). Even where

<sup>&</sup>lt;sup>4</sup> However, significant differences may exist within the system. For example, there is a difference between urban and rural schools in that students in small rural schools tend to make more transitions between schools (Kvalsund, 2000).

there is strong VET, significant differences exist between how the vocational programs and institutions are organized (Nylund et al., 2018). In Western European countries with developed VET, students enter upper secondary school after having gone through tracked lower secondary education (e.g., Sekundarstufe I in Germany) or a comprehensive school (e.g., Finland). In Germany, the dual apprenticeship model with a strong role played by employers prevails, while in Czechia, VET has switched to an exclusively school-based model (Dvořák & Gal, 2022). In some countries (Denmark, Ireland), there is also an optional year on the way from lower to upper secondary school. In German-speaking countries, there is an entire system of transition/bridging courses (Brahm et al., 2014).

In Czechia, there are two main tracks of TVET: the technical/professional (T/P) track and the vocational (VET) track. While these are often considered similar to each other as compared with the academic (general) track, there are in fact important differences between the T/P and VET tracks in terms of admission requirements, course of study, and impact on the possible further educational and career path. At entry, applicants to the T/P track have to sit national standardized entry tests identical with the tests for the academic track, and T/P schools often apply additional enrolment criteria. If accepted, students in the T/P track are expected to cover core general education subjects to pass the same upper secondary final exam (maturita, Abitur) as students in the academic track, and they also take demanding exams in professional subjects. Last but not least, successful graduates of the T/P track can apply directly to universities or other post-secondary institutions. Graduates of VET obtain a vocational certificate. If they want to continue to post-secondary schools, they have to complete another two years of study, the success rate of which is, however, low in practice. Thus, Czech VET is often a dead-end educational trajectory.5

#### 2 Previous research

Although educational transitions are a traditionally studied topic, institutional contexts are fundamentally different across countries and findings from other systems cannot be automatically transferred to other locations. Furthermore, review studies sometimes do not distinguish between the transition to lower secondary and upper (senior) secondary level (Jindal-Snape et al., 2020).

<sup>5</sup> Currently, few students take programs featuring characteristics of both the T/P and VET tracks.

Benner (2011) provided a review of studies focused exclusively on the transition to high school, i.e., from the eighth to ninth grade (middle school to high school) or from the ninth to tenth grade (from junior high school), but the review was limited to the United States. Longitudinal studies of the transition to upper secondary school that collect data at three or more time points are relatively few, despite the fact that the effects of the transition in different areas also differ according to the point in time after entering the new school when data is collected (Lohaus et al., 2004).

Not surprisingly, researchers from European countries with developed VET (German-speaking countries, the Netherlands, the Nordic countries) have paid more attention specifically to the transition from lower secondary school to vocational education (e.g., Backes & Hadjar, 2017; Blossfeld, 2018).<sup>6</sup> However, the transition to VET is sometimes conceptualized as only a partial step on the school-to-work trajectory (Osborne & Circelli, 2018). This then leads to the consequence that the actual experience of secondary school takes a back seat compared to the motivation for choosing a field and the success in entering the labor market after school.

A recent review study by Jindal-Snape et al. (2020) found the following main areas of research: how actors perceive the transition, what effects the transition has on cognitive and non-cognitive outcomes, and which factors influence the course, perception, and effects of the transition. From the perspective of the student's experience, anticipated or current issues can be divided into the following areas: physical/material school environment, organizational/logistical challenges, social relations (peers, teachers and other school staff, and family), and the academic/curricular area (Crosnoe, 2011; Tilleczek, 2007; Topping, 2011).

Topping (2011) noted that transition research based on the perspective of teachers focuses more on curriculum continuity or benefits or educational results, while students perceive more sensitively the social and emotional aspects of the transitions (see also Weller, 2007). Similarly, Jindal-Snape and Miller (2008) pointed out that different stakeholders may attach different importance to different stressors: adults pay attention to the impact of major changes, while children may be more aware of minor but frequently recurring conflicts with teachers and peers.

Research highlights the variability of student responses to transition (Symonds & Galton, 2014). Boys may have more difficulties in academic matters when transferring; girls report more problems with forming relationships

<sup>&</sup>lt;sup>6</sup> In Germany, many recent studies have used research based on the National Educational Panel Study (NEPS) or similar quantitative longitudinal data.

in a new group. Previous transition experiences can also be important. Some authors focus on students with special educational needs (Forlin, 2013; Hannah & Topping, 2013; Hughes et al., 2013). Minority ethnicity has often been seen as a disadvantage during the transition to secondary and post-compulsory education, when knowledge of the language of instruction can be a key factor (Becker & Klein, 2021), but some studies from Western Europe have contradicted this prevailing view (Hustinx, 2002; Tjaden & Scharenberg, 2017). In any case, the process of choice and transition to upper secondary school for students with a minority or migration background is associated with paradoxes (Kalalahti et al., 2017) that can take different forms in relation to individual ethnic groups and in different national education systems. Studies of (upper) secondary transition have rarely been comparative; only a few discuss the influence of the structure of the educational system. The vast majority of studies in international literature have been conducted in a Western context. In the post-socialist space, Darmody (2008) studied transitions in Estonia, but mainly covered students heading to the academic track.

In terms of the (proximal) effects of the transition, studies have mainly focused on the effects on both academic performance/achievement and the well-being of students. Especially in systems in which secondary education is stratified, authors have often focused on distal effects, such as how the transition contributes to the reproduction of inequalities.

The vast majority of works have focused on the negative factors and effects associated with transitions (Jindal-Snape et al., 2020, 2021), or relative negatives associated with the inclusion of a student in a lower/VET track: compositional effects (for a critical review see Thrupp et al., 2002) and institutional effects (students in lower tracks have relatively worse learning environments – curriculum, teacher qualifications, instructional quality – than their peers in academic tracks – Maaz et al., 2008; van de Werfhorst & Mijs, 2010). Bleidorn (2012), however, asserted that normative life passages could trigger the maturation of youngsters when the demands of their new role call for consistent behavioral changes that might subsequently lead to positive personality change.

The decline in school popularity in the later years of compulsory education is a very general phenomenon known from a number of countries and from a number of differently designed studies (Cosma et al., 2020).<sup>7</sup> Therefore it may be important to look in some detail at the works that have indicated the

<sup>&</sup>lt;sup>7</sup> In the Czech environment, even compared to culturally similar countries, the popularity of secondary school is very low, and this is mainly due to the negative attitudes of boys and students with the worst results (Federičová & Münich, 2015).

opposite development after transition. A longitudinal quantitative follow-up of Finnish students showed that after the transition to upper secondary school and then after starting a job, negative attitudes (lack of interest, a sense of futility, inertia) started to decrease again, while motivation measured as attainment value increased. It is noteworthy that when entering upper secondary school, there was again a greater decrease in negative attitudes among vocational school students (Symonds et al., 2019). Symonds et al. (2016) compared changes in mental health in English adolescents after the transition from compulsory education. The greatest deterioration affected adolescents who were not in education, training, or employment. Interestingly, young people transitioning to apprenticeships, vocational college, or full-time work experienced gains in mental health. Using longitudinal data from Finland, Salmela-Aro (2017) also drew attention to the "dark side" of the environment in academically oriented schools, which can lead to school burnout among their students. These studies somewhat correct the traditional view of the "hierarchy" of three possible educational paths after the end of compulsory schooling.

A mixed longitudinal study with a design very similar to our research project was conducted by Niittylahti et al. (2019). In addition to a quantitative study, they conducted qualitative interviews with 17 students in the first year of the vocational program. The research pointed out the importance of friendship for students and the difference in how students perceived teachers' expectations: in compulsory school, teachers had the same expectations of everyone (that they were all academically gifted), but in the vocational program, teachers did not expect this (they accepted the students as they were). Nießen et al. (2021) found that the subjective well-being of German adolescents did not depend so much on the objective socioeconomic status of the profession they were preparing for, but on whether it corresponded to their desired position.

#### **3 Research questions**

The aim of this study is to describe how Czech students experience the transition from lower secondary school to TVET. Using the life-course theory as outlined above, we are more concerned with capturing a complex set of influences at the micro and macro level and links between domains identified by previous research in different systems than with their detailed analysis. Our research questions are:

How do daily routines, perceptions of the curriculum and instruction, and interpersonal relationships change after the transition to TVET?

How is the transition experience of students of T/P and VET tracks similar and how is it different?

#### 4 Data and methods

This research is a part of a prospective qualitative longitudinal study designed to explore the effects of tracking and specialization in secondary school from the perspectives of young people and to generate understandings of how their aspirations and realities are enabled or constrained by the structure of the Czech school system and broader contexts.

#### 4.1 The participants and data collection

In 2018, 29 students in the ninth grade (aged 15 or 16 years) were recruited through purposive sampling: 16 students heading to the VET track, 10 to the professional/technical track, 2 to the academic track, and one to a mixed program (academic/professional). In the Czech Republic, girls attend the academic upper secondary track more often than boys do and at the same time aspire to tertiary education. Therefore, our sample of students of vocational and professional schools featured a higher proportion of boys (65%).

Participants were recruited by three mechanisms. 1) We approached some respondents through four lower secondary comprehensive schools. These students transitioned to different upper secondary tracks and schools. In this way, we obtained a diverse group of students in terms of achievement and ethnicity (including members of the Roma minority and immigrants from Ukraine), but it proved difficult to keep in touch with some of them after their transition to upper secondary school. 2) Recruitment through one large upper secondary school with VET programs produced a relatively more homogeneous group of students coming from various geographical locations and from lower secondary schools, but all heading to the vocational track (different trade/craft fields such as bricklaying and mechanics). Given the support provided to our study by the vocational school administration, it was easier to maintain contact with the participants (only one student dropped out of the original group). 3) Finally, on the basis of availability, we included three students from selective academic lower secondary schools who were considering transferring to a professional track. Such a "downward" move is not very frequent in the Czech system (Dvořák et al., 2020).

Geographically, we focused on two areas: one half of the respondents came from the capital city, Prague, and its wider surroundings, i.e. urban or suburban areas characterized by high demand for the academic track and the capacity (supply) of vocational schools exceeding the demand. The second location was peripheral North Bohemia, an area where socioeconomic problems are concentrated and the demand for upper secondary education is directed mainly to TVET programs (Dvořák et al., 2021).

Subsequently, three waves of interviews took place with the respondents. The first wave of data collection took place mainly in June 2018, during the participants' last days of lower secondary school. The second wave of interviews took place approximately one year later, when the students were about to finish the first year of their upper secondary studies. Eighteen respondents from the original sample were willing to continue the research in the second year. A specific feature of the project was the impact of the coronavirus pandemic, which limited the possibility of personal contact with respondents during the third wave of data collection, and which also fundamentally modified the school education (i.e. the phenomenon under investigation) and, to a large extent, the students' lives as well as the work of the researchers. In the third wave, when the students were in the second year of their studies, 21 students took part in the interviews. Thus, 17 students participated in all three waves; 5 students participated in just two interviews, and 7 students dropped out after the first wave (Table 1). We believe that the longitudinal nature of the research overall led to unwanted censoring of the participants, as more "conscientious" students with a more stable family background were willing to take part in the second or third wave (e.g., after the first interview, we lost contact with those students from ethnic minorities or with immigrant backgrounds who were heading to the VET track).

We used two methods to elicit student experiences: individual in-depth interviews and group interviews. The two methods are not equivalent, but we respected the wishes of the students, who sometimes preferred one form of interview to the other, as well as the logistical constraints of the schools. The third interviews mainly took place online because of COVID-19. The interviews were conducted by various members of the research team using a semi-structured interview guide. The guide covered all the key domains identified in the literature review. The guide for the second and third interviews was always individually adapted using the information provided by the respondent in the previous interviews. All interviews were recorded and transcribed verbatim.

Name	Cardan	77 1	E' 11/0 1'C	D 1	Interview		
(pseudonym)	Gender	Ifack	Field/Qualification	Kesidence	1st	2nd	3rd
Alice	F	T/P	nursing N		G	G	G
Aranka	F	T/P	art/design	N	Ι	_	Ι
Beata	F	Mixed	general/social	Р	Ι	_	Ι
Bolek	М	VET	electrician	С	Ι	G	Ι
Eda	М	VET	locksmith/mechanic C		G	G	Ι
Filip	М	А	general/academic N		G	G	G
Florian	М	VET	electrician C		G	G	Ι
Hynek	М	VET	electrician C		G	G	Ι
Kamil	М	T/P	art/glass engraving	N	G	G	G
Klára	F	А	general/academic	N	G	G	G
Lumír	М	VET	electrician	Р	Ι	G	Ι
Marko	М	T/P	agriculture/farming	N	G	-	G
Matyáš	М	VET	electrician C		Ι	G	Ι
Nina	F	T/P	art/media P		Ι	-	Ι
Oliver	М	VET	food/catering	Р	G	Ι	-
Pavel	М	VET	machinery/farming	С	G	Ι	G
Petr	М	VET	bricklaying	С	G	G	G
Svatopluk	М	T/P	mech. engineering	N	G	G	G
Štěpán	М	T/P	civil engineering	С	Ι	Ι	Ι
Tonka	F	T/P	nursing	N	G	G	G
Zdenek	М	T/P	locksmith/mechanic	С	Ι	G	Ι
Zlata	F	VET	hairdressing	N	G	G	G

 Table 1

 Participants who took part in at least two interviews

Notes: A = academic track, T/P = technical/professional track, VET = vocational track, C = Central Bohemia (more or less suburbanized area around Prague), N = peripheral borderland in North Bohemia, P = Prague, G = group interview, I = individual interview

In this study, we present a thematic analysis (Braun & Clarke, 2012) of data obtained from the 22 students who participated in at least two interviews (one interview before the transfer and one interview while studying at the new school). We did not perform targeted inter-individual comparisons in the longitudinal data. The thematic analysis does not replace the detailed open coding of the data; it builds upon it. In the first stage, we read the transcripts and coded them with initial codes that were later refined. In the second phase, we proceeded to the processes of categorization and conceptualization in order to identify patterns and themes (Saldaña, 2016). Although themes are usually characteristic of certain domains, they are not an identical match. The structure of the themes was discussed among the authors, who took into account their theoretical background as well as experiences on the basis of different entries into the research terrain.

#### 4.2 Researcher positionality and ethical issues

Our motivation for the research was the shared conviction of the authors about the need for a better understanding of the situation of Czech students in TVET tracks. However, the individual members of the team of authors differ in their attitudes towards vocational programs in particular. Some of us focus on the contribution of VET to maintaining and reinforcing inequalities in educational outcomes and life chances; others appreciate the contribution of VET to the well-being of some students and higher completion rates of upper secondary education. We believe that the diversity of attitudes and the confrontation of the researchers' opinions have increased the quality of the data and its analysis. The fact that all the researchers went through an upper secondary academic track followed by tertiary study may have complicated their understanding of the world of students who choose different educational paths and have different aspirations. In retrospect, we see that it would be beneficial to use the voices of the adolescents themselves more in the design phase of the research.

Ethical principles, especially the rights of the research participants, were respected in the project. We obtained the consent of the parents or guardians of the students. Before each interview, the assent of each student was obtained again. In particular, we wanted to leave the decision as to whether to continue the research up to the students themselves. The students received a small financial reward for their participation. Negotiating the introductory consent with the parents was sometimes an opportunity to gain additional insights, as the parents sometimes wanted to talk to us about their child's choice and their own attitudes to that choice.

#### **5** Results

In line with the previous research reviewed above, we examined three main areas of predicted change: spatiotemporal regimes and everyday logistics, academic/curricular concerns, and the social domain – relationships with classmates/peers and adults (teachers). The thematic analysis yielded several significant issues or strands that affect all three basic areas (Table 2). This mapping is, of course, a simplification, as there are more complex links between the topics. For example, going to a boarding facility (logistics/ space-time) may be a way of establishing new social relationships with adults (family) and peers. In this section, we present the first two main topics in rich detail. The next three topics could either be logically integrated into these two main circuits or present challenges to further data analysis and research.

Theme/Domain	Daily routines/ Logistics/Space- time	Academic/ Curriculum and instruction	Social/Relationships
Effects of school choice	Commuting/moving to boarding facility	Set of choices for students with different academic achievement	Profound change of social convoy
Professional/ vocational subjects/ Practice	Different classification and framing: more autonomy for VET students	Different effects in different tracks: vocational/ professional	More homogeneous peer group/New heterogeneous school staff: trainers
(Post-socialist) transformation of school system	Emergence of private schools/ Uneven quality of schools leading to need for school choice	Supply of too many programs/ qualifications leading to narrow specialization	Mobility/attrition of school staff
COVID-19	From topography to topology of education provision	Reduction (or even absence) of workshop training during lockdown	New challenges to teacher-student relationships
Marginalized/ minority/ migrant students	Students in foster care move to new homes	Need for Czech language instruction for immigrants	Inclusion vs. isolation of immigrants

Table 2Themes related to transition to TVET programs in upper secondary school

#### 5.1 School choice and its ramifications

As mentioned above, much attention is traditionally paid in the literature to the choice of track and program (field of study, qualification) of upper secondary schools. However, our respondents also actively chose between different schools offering similar or identical programs. Somewhat paradoxically, students with worse previous academic results and lower aspirations who wish to join VET programs can choose from a wider range of choices. The consequences of the active schools choice are new spatiotemporal regimes and a significantly altered social environment.

#### 5.1.1 School choice at work

In most regions of Czechia, the demand for academic track places exceeds their supply; the opposite is true for vocational programs.<sup>8</sup> In recent decades, schools in most parts of Czechia have had difficulties recruiting students for many traditional VET track programs for mechanics or construction trades, despite demand on the labor market. These programs are often chosen by students with lower achievement in compulsory school. In order to avoid closing the program (or the entire school), schools develop a series of marketing activities aimed specifically at lower-performing, rural, or minority students. Thus, students who do not aspire to the academic track (or to prestigious professional programs such as applied art) often have a large set of schools to choose from, albeit in the least prestigious track.

Academic programs seem to be of more or less comparable quality across the country (Kostelecký et al., 2018),<sup>9</sup> so academic track students often attend the closest school. That was exactly the case for Klára and Filip, the only students from our study heading for the academic track (they were classmates and close friends in compulsory school and stayed together after the transition, which could also have played a role in their decision). But there are vast differences (by any measure – facilities, attainment, reputation) among the TVET secondary schools. Thus, our vocational students<sup>10</sup> often chose a school from among several similar TVET options that was further from their place of residence.

Our participants reported different tactics within the school choice mechanism with a fixed number of applications (two in the Czech case). Lumír preferred a specific school, so he submitted both applications to one school, but to two programs leading to similar qualifications. More often, however, students submitted each of their two applications to a different school, which they saw as a strategy to increase their chances of being accepted. In the event of their being admitted to both schools, they then chose the one they preferred.

Sometimes students mentioned pull factors, such as the quality of facilities/ workshops for professional subjects. (Students often visit VET schools when they are in their last years of lower secondary school during "open days"

<sup>&</sup>lt;sup>8</sup> North Bohemia, where one group of our respondents came from, is an exception, where the supply/demand ratio is the opposite for academic and vocational schools.

<sup>&</sup>lt;sup>9</sup> A more nuanced view shows that private academic schools tend to be at both extremes – either the best ones or the worst ones.

<sup>&</sup>lt;sup>10</sup> Previous research has shown that Czech parents, especially from lower socioeconomic groups, leave a lot of room for field and school choice to their children (Katrňák, 2004).

with talks and tours of school facilities.) School quality as such was mentioned less often, as by Zdenek:

I kind of chose this school; I sought out some information about it and I believed that I might enjoy it there. I found out that it had a good reputation, one would probably learn there, that they would teach me something of value for my work, more than at the other schools [that are nearer my home]. (I1, Zdenek)

A school's partnership with a major enterprise and the possibility of obtaining an apprenticeship contract (bringing the relative certainty of future employment) or company scholarship was another important factor. Preferential scholarships are provided only to students in selected TVET disciplines, never to students in the academic track.

Some of the topics described above – such as the supply of education in traditional craft fields and large differences in the quality of schools and programs leading to an active choice of school – can be considered as a consequence of the transformation of the former state-controlled education system to the conditions of a market economy (Dvořák & Gal, 2022). The entry of new providers of education – private and religious founders – since the 1990s further strengthened the formal and informal differences within schools, and especially among them (Triventi et al., 2020). The transition to upper secondary school can therefore now take place from a public to a private school (Svatopluk) or vice versa (Nina), or between mainstream and alternative schools (Beata). All these teens talked about the differences in school cultures of private/public (mainstream/alternative) institutions and the greater ease or difficulty of adapting to a new culture after the transition.

The choice mechanisms represent an interesting phenomenon, but we will deal with the consequences of school choice for students' daily life after the transition to upper secondary school.

# 5.1.2 New spatial and temporal reality as a consequence of choice of school and program

The transition to upper secondary school usually means the necessity of commuting<sup>11</sup> to a more distant school or moving to a boarding facility. The distribution of the distance from home to school, however, differs among tracks. Dvořák et al. (2020) estimated that for Czech vocational students,

<sup>&</sup>lt;sup>11</sup> In the Czechia, there are practically no school buses (as known, for example, from North America) and a driver's license for a private car can only be obtained after reaching the age of 18. There is a functional public transport network, which at the time of our research was very inexpensive for students because of subsidies.

the median distance between home and school was 14.3 km, and for academic track students it was only 6.8 km.12 Petr and Pavel, twins and classmates in lower secondary school, pursued different vocational qualifications and each transitioned to different schools that were almost 60 km<sup>13</sup> away. Neither public nor private Czech academic secondary schools are boarding schools; the professional and vocational upper secondary schools often provide boarding facilities, in some cases even free of charge. TVET students may therefore choose a specialist school located a significant distance from their home and not have the need to commute daily.<sup>14</sup> This was the case for two boys, Kamil and Marko, and a girl, Zlata, from a peripheral community in North Bohemia. Marko purposefully strove for a qualification in the field of agriculture, as his relatives operated a farm and working in agriculture appeared to be an important part of his identity. The nearest TVET school with agriculture programs was located 55 km<sup>15</sup> from his home, with a journey time by public transport that was close to two hours and involved two transfers. The boarding facility was thus a logical choice. Kamil - pursuing a very specific glass engraving qualification – also moved to a boarding facility next to the specialized art school.

For some adolescents, the choice of a relatively remote secondary school providing accommodation can serve as a significant step towards separation from their primary family and towards adulthood, yet without the need to run their own household (Eurofound, 2014). That might have been the case for Zlata, who was from the same municipality as Marko. Zlata chose a hairdressing program that was available at a large TVET school close to her home, but she preferred to enlist in the same program at another school in a more distant city.

Marko and Zlata did not report problems with life at the boarding facility. Kamil, however, had trouble pursuing his second interest – athletics – in the environment of artistically oriented peers in the dorm, and even in the third interview reported that he had "not adapted yet."

The majority of the participants in our study commuted daily. This was the case with all the students from Prague. All the students from suburbs or small towns in Central Bohemia continued to live with their families (and

<sup>&</sup>lt;sup>12</sup> 9 and 4 miles, respectively.

<sup>&</sup>lt;sup>13</sup> 37 miles, distance by road.

<sup>&</sup>lt;sup>14</sup> Nationally, about 9% of upper secondary students live in an official boarding facility. Some students live in rented flats with friends or a partner. Sharing accommodation with a partner since the COVID-19 lockdown was mentioned in the last interviews by Hynek and Štěpán.

<sup>&</sup>lt;sup>15</sup> 34 miles, distance by road.

pets, as one noted), despite the need to get up as early as at 4 or 5 a.m. daily – on average, they spent about three or four hours more commuting than their urban classmates (despite the availability of boarding). The reasons for not moving to a boarding facility were the higher costs associated with boarding facilities or the desire to stay in contact with the family. In some cases, the boarding alternative was disapproved of by parents who were concerned about losing control over their adolescent children and possible academic problems or involvement in risky activities (as reported by Petr and Pavel).

Thus, with the transition to upper secondary school, there was a significant change in the daily routines of the students. As the adolescent need for longer sleep is a popular topic in the literature (e.g., Minges & Redeker, 2016), we were surprised that the respondents did not comment significantly negatively on the necessity of getting up early and commuting, even though many of them also had part-time jobs. One possible explanation is that students from smaller communities were already used to commuting to their previous lower secondary schools, as well as the fact that in some cases there was no school or only a primary school (up to fifth grade) in their village. VET school students often come from blue-collar families and may be used to this time rhythm. Students may also factor commuting into their choice of school in advance.

When the participants were in their second and third years of upper secondary study, school closures and distance learning brought significant changes to their daily routine. When we conducted Interview 3 with Eda during lockdown, his school teachers were communicating with students only asynchronously through email.

Researcher: Is learning much more difficult for you now?

Eda: Well, sure it is, except that I don't have to get up at five or six [a.m.] every day. In training weeks, I got up at five, and normally during school instruction, I got up at six. Now, dad wakes me up at eight every day. Otherwise, I would always sleep until ten. (I3)

Distance education – even if the disadvantages still prevail – thus has the potential to create a new topology of space, where the geographical distance of the chosen school suddenly does not play a role. With asynchronous communication, the students' temporal rhythms collapsed as well.

But the lockdown offered some other advantages for students who already had their emergent career paths, for which the school sometimes provided them with improved skills. During the pandemic, the lockdown of service outlets enhanced the opportunities for Zlata's (unofficial) job: "Now I'm enjoying doing people's hair at their homes, because I'm making a good living. [...] Yes, actually, I was visiting people's homes and cutting their hair the entire time that there was corona around." (I3, Zlata) Zdenek regularly helped in his father's shop and Štěpán already ran his own firm specializing in arboriculture<sup>16</sup> and woodwork. In addition, many students had unskilled part-time jobs in supermarkets or restaurants (when not closed during lockdown). Online teaching, which in some cases was almost non-existent, at least initially, and the new time rhythm provided the students with a welcome space for their work activities, and also for their personal life and interests.

#### 5.1.3 New classmates

The very fragmented supply of study programs offered by competing schools and the actively exercised school choice cause, especially for TVET students, the disintegration of their existing social convoy of classmates and the transition to a completely new social group.

Changes in the composition of their peer groups were experienced differently by the respondents, depending on their past educational path. Many Czech students – especially in cities – complete their entire compulsory education in a very stable social group. Students are not reassigned across classes during school attendance, as looping is traditionally applied. The student group in the homeroom class, in which most of the instruction takes place, often remains practically the same for all nine grades. This was the case for Lumír, from a large city school, who was afraid of losing the classmates with whom he had shared his school life for nine years as they gradually got to know each other better. It bothered him that he did not know anyone at the new school after the transition. "If I only knew a few people there, for example, if two or three people from the previous school were to transition there with me..." (I3) However, his school organized a sports week for new students with a number of team-building activities at the beginning of the first year, which Lumír viewed as helpful.

In contrast, for Matyáš, a boy from a small village, the previous transition to lower secondary school had already meant a move to a new large urban school:

And there it was like they just took us there, and we [as graduates of a rural primary school] were scattered into different homeroom groups. Actually, me and just one girl went to one group, and that was all. And now she made some friends there, [the other kids] already had various acquaintances there, and I had to get involved somehow. (I3)

<sup>&</sup>lt;sup>16</sup> Arboriculture (tree surgery) is the management of individual trees focused on safety issues and the plant's health.

Matyáš was thus more comfortable with the fact that in the upper secondary school everyone is in the same starting position, all relationships being created from scratch: "It seems so much better to me now. Because we've actually all known each other here just since the first year, when everyone was about 15 years old." (I3) This was confirmed by Marko (I3) as no one knew any of their classmates in his new school "so everyone got to know each other the same way; everyone was in the same position, so it was cool."

If parents intervened in school choice, they sometimes cited the expected composition of the student body as a push factor, besides concerns about the low quality of education provided by TVET schools near their place of residence. Petr's mother explained that she wanted her son to study in Prague. The other schools offering the bricklaying program were, according to her, "maybe closer, but the junkies... it is terrible [here]. I'm not saying that it can't happen in Prague, too, but for that reason it's better to keep an eye on them like this" (field notes).

At the time of the research, we as researchers were not clearly aware of the significance of the then "frozen" conflict in Ukraine. Nevertheless, especially in VET schools in the capital, there were already many students from migrant backgrounds. Our respondents repeatedly described their Ukrainian classmates as a closed group that did not communicate with their Czech peers. On the other hand, the Ukrainian students' professional skills were appreciated by the students in construction programs: migrant teens learn a lot on the job as they help their parents, who in the Czechia often work in blue-collar jobs. TVET programs can thus successfully prepare students from a migrant background for the labor market, but less so for integration into Czech society, above all because of their limited knowledge of the language, although we encountered both the teaching of Czech as a foreign language and extra-curricular activities designed to support the inclusion of students with a different mother tongue.

#### 5.2 Effects of professional/vocational specialization

Most Czech students transfer to TVET programs. This brings a significant change to the curriculum, but also to the organization of instruction. The transition from a comprehensive general school to a tracked and specialized program also means a qualitative change in the composition of the peer group, who may be more homogeneous in terms of abilities or interests. In contrast, the teaching staff is more diverse now, with the VET trainers representing a new group of adult models.

#### 5.2.1 Curriculum

In both the T/P and VET tracks, subjects from three domains are mandatory: 1) general education subjects (Czech as a first language/language of instruction;

English as a foreign language with some degree of specialization; mathematics; civics; PE); 2) specialist subjects providing theory and technical/ professional knowledge for the qualification being pursued; and 3) workshop and workplace practical training. This curriculum had a very different effect on our respondents depending on the track.

Some students in the T/P track (such as Svatopluk) struggled with academic demands after the transition. Marko transferred after some time from a professional to a vocational program in agriculture, while Tonka repeated a year in her professional nursing program. Students in the vocational track, on the other hand, reflected on the substantially watered-down general education curriculum. Bolek perceived the academic subjects in the VET track as "vokolní" [marginal or peripheral]; professional subjects and practice took center stage. VET students often had the [apparently justified] opinion that the same content as at the previous level of education was just repeated in these subjects. Eda was dismissive (I3) of the citizenship education: "It doesn't have to happen here at all." Overall, the lower level of requirements could have contributed to the positive outcome that those VET students who maintained contact with us until the end of the research all successfully completed their studies. Pavel reported happily about academic achievement in his VET school: "Well, here we're all good at learning now and we're happy about it" (I3).

#### 5.2.2 Practical training

Between the themes of the curriculum and the rhythms of the day/school is situated the practical training (usually called "practice" or "practicum") – either in school facilities/workshops or in partner companies. Practice usually starts around 7 a.m., so on practice days especially, students who commute have to get up very early. Nevertheless, for most of them, practice is their favorite part of school education, as Bolek stated: "I would simply no longer be able just to sit at a desk and study each day all day long – not any more" (I3).

From a temporal point of view, practice also differs from ordinary school teaching (at least in the prevailing form in Czech schools) in terms of what Bernstein (1973) calls framing. This includes the layout of tasks within the school day, the pace of work, and breaks that are not dictated by a bell or a teacher's instructions but are left to the responsibility of the student.

We come in the morning before 7 a.m. The master [takes attendance] and assigns work to everyone. The master just puts in the task, and we hand over the finished work to him at the end of the day. For example, when someone has completed the task earlier, he can produce something according to his choice or assist the master working on some contract as needed. But if you've already finished your task for the day, the master also assigns you the task for the next day and so you can start the new task and have it half-ready for the next day. (I2, Pavel) Such weak framing seems to be a better match for the adolescents' developmental need for autonomy.

Students of the T/P and, even more so, of the VET tracks also have various opportunities to earn their own financial income or contribute to the family budget during their in-company practice or in part-time jobs. They use their emerging skills and at the same time it can be a significant source of self-confidence. As VET students move from the school workshop to an actual workplace in a company, the way to a smaller or larger financial reward for work opens up for them. Eda (I3) stated that then he enjoyed training much more since he received a salary.

Of all the domains of the entire education system, practical training in vocational education was probably the one that was most affected by the lockdowns during the COVID-19 pandemic. Štěpán complained about the lack of practice (to which significantly less time is allocated in the technical/ professional track curriculum), which, however, was also compounded by the lockdowns: "It's really very sad... for the entire first half of the year [2020] we had two 2-hour sessions [of practice] and that was actually all" (I3, Štěpán).

5.2.3 Teaching staff: VET Trainers and professional subject teachers The students' statements about their teachers in upper secondary schools were highly variable, spanning a number of specific complaints as well as praise, but also a relatively mature attitude: "Simply, you don't choose your teacher, so it may happen that I won't be satisfied with a particular teacher, but you can manage to live with all of them" (I3, Matyáš). Students also perceived a certain trade-off between when the teacher was strict and effective at the same time or acted more leniently towards students (which sometimes meant less academic pressure). Higher requirements were generally applied to students in professional/vocational subjects.

COVID-19 closures were once again a decisive test of educational leadership and teacher-student communication. In Czech schools, there is a tradition of weak instructional leadership and monitoring of teachers' work by school management, which backfired during the crisis; students perceived big differences between the approaches of individual teachers. Difficulties with the transition to online teaching could also be related to the relatively high age of VET teachers. Struggling youngsters who felt threatened with failing their studies perceived the new situation as particularly unfavorable.

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During practice, students meet a new group of adults – specialized VET trainers (instructors). In the Central European environment, these trainers are traditionally addressed as master trainers or "masters."<sup>17</sup> Some students expected VET trainers/masters to connect with them more closely than other teachers: "The master should be such a supportive person for the students. If I say it like that, like a friend, right?" (I3, Zdenek). Unfortunately, our respondents repeatedly reported a high trainer turnover rate (attrition), with three or four masters coming and going in one school year. Therefore, it was not possible to establish the expected student-adult relationship. The staff turnover also had a negative impact on the training, as the students re-learned the same skills several times from scratch under each trainer and the progress of instruction was minimal. High mobility was a problem that was frequently mentioned not only among VET trainers, but also among other teachers.

Problems with teacher attrition are the result of the long-term underfunding of Czech education in general. Especially in large cities, there is a shortage of some craft professions (especially construction and engineering trades) on the labor market. Therefore, it is very difficult for schools to recruit and retain quality specialists for the positions of VET trainers.

#### 5.2.4 Qualitative change in peer groups

The existence of a fragmented supply of highly specialized TVET programs leads – as we described – to the disintegration of the original social convoy from compulsory school, but at the same time to the emergence of new and more homogeneous groups of peers.

Some students appreciated being able to share their (future) professional interests with new friends. In Kamil's art school, almost all the classmates talked about glass or art. "And I'll join them too, because the glass itself is beautiful, and if you add some decoration or something to it, it's great" (I3, Kamil). Smaller peer groups were formed at Marko's school: "Out of maybe twenty people [in my class], there are only three of us who talk to each other mostly about crop production. [...] The others discuss what they enjoy the most. For some it's horses, for others it's engines and machines" (I3, Marko). The shared interests and hobby activities of TVET students are contrasted with academic track students, who are described as not knowing what they want to do in their future life and therefore having nothing to talk about with each other (I1, Nina). TVET is simply not just a matter of instruction, be it theory or skills training: joining the professional community and acquiring a professional identity play a key role.

<sup>&</sup>lt;sup>17</sup> The Czech expression is *mistr* (from the German *der Meister*) meaning a master or expert.

On the other hand, Zlata perceived her new social environment in the hairdressing program as much more limiting than the heterogeneous group in her previous school: "Like me, I don't talk to [new classmates] much, it's not even possible to talk to them properly. Because they mostly discuss gossip, you could say. Well, it was much better at the lower secondary. The crew was much better [at the comprehensive school]." And even after two years, Bolek also showed a slightly troubled attitude to his new classmates in the vocational track:

"[In our village] I have known the other boys since childhood. [But in the new school] I don't know them, I don't know what they can do, and I don't know just what they have done. Like most guys smoke. I'm one of the few who don't smoke. There are four of us in the class who don't smoke. [...] But the boys from [my previous] comprehensive school still don't smoke even now." (I3)

These statements remind us that the reality of some VET schools is complex and has its darker sides. The concentration of lower-achieving and minority students in the VET track reduces academic pressure (a reversed big-fishlittle-pond effect), but environments with specific values and cultures bring in new social pressures.

#### **6** Discussion

Our study brings rich qualitative findings about the transition and adaptation to upper secondary education in the context of a tracked school system in a post-socialist country. The insights presented here contribute to the interpretation of the results of earlier quantitative longitudinal studies and complement the findings from other types of educational systems.

Vocational students are generally considered to be the most disadvantaged group of post-compulsory students (other than those not in education or training at all). VET students often had a mainly negative experience of lower secondary education as they graduated from their comprehensive school with an explicit or implicit sense of futility (Simonová et al., 2021). Our conclusions are in good agreement with quantitative studies that pointed to the recovery of student engagement or general well-being in the VET tracks of upper secondary schools (Salmela-Aro, 2017; Symonds et al., 2016). We describe some of the possible mechanisms that are compatible with the stage-environment fit theory (Eccles et al., 1993): at least some VET students appreciated the opportunity for a fresh start in a new social group. A significantly different curriculum and instruction placing great emphasis on professional subjects and practical training allow students to apply their real-life skills and experiences and provide them with greater autonomy and
an opportunity to meet new adult role models and also earn a certain amount of their own financial income. This may also explain the findings of Straková et al. (2021) that Czech students of various upper secondary tracks have a similarly optimistic attitude about the future.

It turns out that the choice of a particular school has a significant impact on the future daily life of students, because it determines whether the students live at home or in a boarding school during their late adolescent years, or how much time they spend commuting, but also in what physical and social environment they spend their school days (Dovemark & Holm, 2017). Similarly to what Condliffe et al. (2015) found in an urban environment in the United States, students take a very active role in the choice of upper secondary school, but unlike in the Condliffe study, Czech students with a poor academic background can choose from a relatively wide range of choices (choice set), at least in terms of the number of programs within the VET track and schools where they can study. On the other hand, the frequent active choice of a (distant) school indicates the perceived variability of school quality in the TVET sector. In addition to discomfort, commuting to school or living in a boarding facility also brings a greater degree of freedom away from social control in the family and place of residence.

The life-course framework proved useful when it focused our attention on the historical context of student transitions, represented by the "neverending" post-socialist transformation of the education and economic system, but also by the COVID-19 pandemic. At the same time, our results contribute to earlier findings that question the assumption of the life-course theory that greater similarity or consistency between lower and upper secondary school will have a favorable impact on the educational career of students (Benner, 2011). In a significant number of cases, lower secondary school does not create an environment corresponding to the needs of the developmental stage of (younger) adolescence. The new pattern of curriculum and instruction/ training in T/P and VET programs can therefore, on the contrary, disrupt previous negative attitudes to education and facilitate positive developmental processes.

In particular, we want to draw attention to the technical/professional track, the most popular choice of Czech compulsory school graduates, which has so far been little studied compared to the VET (apprenticeship) and academic tracks. The T/P track could combine the advantages of both the academic and VET tracks, but – as our research suggested – specific risks are involved. We shall be careful in this comparison, too, because we do not actually have enough information about "elite" academic track upper secondary schools in Czechia or other post-socialist countries either.

#### 6.1 Limitations of the present study

We focused mainly on the changes caused by the transition and on the properties of the new environment that are perceived as positive. We do not want to idealize VET; nor do we deny that a significant number of VET students face serious problems while still at school, change their field of study, or drop out. The longitudinal design that was used might have resulted in the more "stable" teens remaining in the sample. A certain signal of such censoring of the research group may be the fact that the respondents who remained in the sample generally completed secondary school successfully, or at least remained in education.

In addition, our research population suffered from the attrition of students from marginalized groups. At the beginning, we managed to recruit two Roma students in foster care (specifically in a residential children's home). Both were supposed to continue their studies in the VET track in another city; after finishing compulsory school, they moved to another residential home. Unfortunately, we were not able to contact their new legal guardians and obtain their consent to further interviews.

Another group that is significantly overrepresented in the VET track is students of Ukrainian ethnicity, who had formed a significant and growing minority group in Czechia even before 2022, when another large wave of immigration was triggered by the new phase of Russian aggression against Ukraine. We lost contact with one student of Ukrainian origin who completed the first interview. It is obvious that this topic needs to be further investigated, also in connection with the war in Ukraine and possible other waves of migration to the formerly relatively ethnically homogeneous Czechia. We know little about how well Ukrainian or other minority adolescents manage to create the relationships with adults and peers that are needed for successful integration (Benner et al., 2017). Our sample did not include students from the shortest (two-year) and least demanding VET programs that provide only incomplete qualifications and that tend to be attended by migrants and other at-risk groups.

The opportunistic way respondents were selected also led to a similarly opportunistic use of individual or group interviews from the beginning of the study. In addition, data collection was significantly complicated in 2020 by the first wave of the COVID-19 pandemic, when some of the interviews had to be conducted online without much preparation. Given that our study is primarily a heuristic entry into a little-researched field, we believe that the validity of the main findings was not compromised by some eclecticism in the data collection. We are also aware that our respondents almost always avoided talking about anti-social behaviors such as bullying or drug trafficking in their schools. The method of thematic analysis that was used made it possible to identify some key issues and patterns that need further detailed analysis, including the use of the longitudinal nature of the data and the addition of further contextual information. At the same time, it would be desirable to follow our respondents further during their transition to post-secondary education or the labor market.

#### Conclusion

Our study provides a rich description of the transition to Czech upper secondary education and the post-transition experience of students in the T/P and VET tracks based on three waves of longitudinal qualitative data. Applying the life-course theoretical framework, we focused on: a) the agentic choices of individuals and the ramifications of those choices; b) the influence of previous individual experiences (e.g., the transition from primary to lower secondary school) on anticipation and perception of entry to the new school; c) the simultaneous study of transition in different domains (daily routines, academic/curriculum; relations with teachers and peers); d) links between the lives of the participants (classmates) and their disintegration as a result of transition (change in social convoys); and e) the specifics of the posttransition environment resulting from the type and location of the students' place of residence and the unique historical circumstances between 2018 and 2020. Our key finding is the differences in post-transitory experiences between the T/P and VET track students. Dichotomous conceptualizations of upper secondary schooling based on the polarity of academic versus TVET education (Nylund et al., 2018) can obscure the specific features of the T/P track, but also the vast variety of qualifications within the VET track, as well as the differences between individual upper secondary schools.

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## DELAYS AND DROPOUTS: IDENTIFYING RISKS OF SUBOPTIMAL POST-COMPULSORY EDUCATIONAL PATHWAYS IN SWEDEN

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#### ABSTRACT

Successful completion of upper secondary education is increasingly vital for participation in the labor market. Rates of school dropout in Sweden are below the EU average but remain a concern for policymakers. This quantitative study used the Swedish register covering 22 birth cohorts to establish the pathways available for students following compulsory school graduation and to identify the socio-demographic risks of taking a suboptimal pathway. The results showed that immigrant students arriving after the beginning of compulsory schooling and students from low-education households had the most elevated risks of engaging with upper secondary school in a suboptimal way, indicating sustained inequalities in the Swedish school system.

#### **KEYWORDS**

compulsory school; upper secondary school; dropout; multinomial logistic regression

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#### Introduction

The point at which a student exits formal education matters, with completion of upper secondary education considered an essential prerequisite for entering the workforce (OECD, 2020). The strong relationship between an individual's realized level of education and income potential has long been acknowledged (e.g., Houthakker, 1959), with inequality in earnings increasing with increased inequalities in education (Chiswick, 1971; Gregorio & Lee, 2002). In addition to the ramifications of an individual's education level on their own economic future, the effects of education level are intergenerational, with effects of parental education observed in a range of child outcomes including education, health, income, and cognitive skills (e.g., Black et al., 2005). Given the well-established relationship between education level and life outcomes, this study aims to investigate possible risk factors predicting low education level in the Swedish context.

The research literature on high school non-completion is predominantly situated in the U.S. context. A number of factors, such as socioeconomic status, gender, low parental education, and ethnic minority background, have been established as predictors of high school non-completion by longitudinal studies conducted in the United States (e.g., Jimerson et al., 2000; Rumberger, 1987). Methods for establishing dropout rates vary and can be based on the percentage of students who prematurely leave education in a given year or the proportion in a range of years who left school prematurely (Christle et al., 2007). A further complication of counting how many students drop out of school is the frequent failure to capture data on students who leave at a very young age (i.e., before high school, see Hayes et al., 2002), or who are offered education through prison facilities (Smink & Schargel, 2004). The question of how to account for students who achieve an alternative terminal high school qualification after dropping out from mainstream school (such as the general educational development test [GED] in the United States), is also a challenge for establishing dropout rates (compare Greene & Winters, 2002; Kaufman & Bradbury, 1992).

The earliest point at which an individual can leave education within local statutory frameworks is commonly at the end of lower secondary education. Sweden, like its Nordic neighbors, has a low level of school dropout, with less than 15% of students failing to complete upper secondary school (Andrei et al., 2011), which is below the EU average. School dropout among Swedish youth is lower in girls than boys (World Bank, 2020). However, the historically low levels of school dropout conceal the risk of students engaging with the educational system in suboptimal ways.

#### 1 The Swedish school system 1994–2021

In Sweden, all students must attend compulsory school through the end of the ninth grade (ages 6–16). At the post-16 level, Swedish upper secondary school is legally optional for young people but is a de facto requirement for successful entry into the workforce. In Sweden, upper secondary education, also known as gymnasium, is provided free of charge and is open for enrollment to all students under 20 years of age who have completed compulsory schooling (Bäckman et al., 2011). Municipal adult education is available in Sweden to those over 18 (SFS 2011:1108, 2011) and can be used to obtain high school qualifications where none exist, make up for missing or incomplete grades, or add additional courses to enable a student to change career track.<sup>1</sup>

The current structure of upper secondary education includes 18 national upper secondary programs (six academic and twelve vocational).<sup>2</sup> Additionally, there are six nationally recruiting high school programs in highly specialized disciplines (e.g., professional dance training, aeronautical engineering, marine engineering, Sami [indigenous] industries) and four introductory programs<sup>3</sup> for students who do not qualify for the national programs (Skolverket, 2021b, 2021c). The upper secondary programs are similar in that all are school-based, and within each program students complete a number of courses totaling 2,500 points, split across four categories: high school common courses, program common courses, program specialization courses, and optional specialization (see for example Skolverket 2021a, 2021d). However, admittance to the academic programs, which facilitate university entry, has traditionally been strongly predicted by students' social background, gender, and ethnicity (e.g., Svensson, 2006).

<sup>&</sup>lt;sup>1</sup> For example, an individual who studied in the humanities program, while having sufficient high school credit to enter university, might need to take additional courses in mathematics and natural science through municipal adult education to apply for a nursing degree.

<sup>&</sup>lt;sup>2</sup> The academic programs are arts, economics, humanities, natural science, social sciences, and technology. The vocational programs are: children and leisure, building and construction, electricity and energy, vehicle and transport, trade and administration, craft, hotel and tourism, industrial engineering, nature management, restaurant and food, plumbing and real estate, and treatment and care. The nationally recruiting programs are in aeronautical engineering, marine engineering, maritime education, train engineering, Sami [indigenous] industries, professional dancer, high school engineer (further education in the form of a fourth technical year) (Skolverket, 2021b).

<sup>&</sup>lt;sup>3</sup> Program-oriented choice, vocational introduction, individual alternative, language introduction (Skolverket, 2021c).

The Swedish school system has become increasingly marketized since the introduction of a package of school reforms in the early 1990s. These reforms included the decentralization of education to the municipal level, opening the operation of schools to private actors operating on a for-profit basis (Lundahl, 2002; Lundahl et al., 2013), and the introduction of school choice, particularly in compulsory schools. School choice in Sweden has led to a shift away from students automatically attending their local school, with funding now following individual students within and between municipalities to the school of their choice. Nevertheless, independent schools in Sweden must still follow nationally imposed rules regarding student recruitment. All schools are required to be open to all and transparent in their application process (SFS 2010:800, 2010). Compulsory schools are comprehensive and may only use approved criteria for student selection when they are over-subscribed (Skolverket, 2016), which precludes academic selection or 'cream-skimming' (Põder et al., 2017). Further, student opportunity to exercise school choice is constrained by the geographic availability of schools across the country and can often be "conditional on slots being available after those residing closest to the school had made their choices" (Böhlmark & Lindahl, 2007, p. 6). The exercise of school choice has had mixed effects on student outcomes, with the benefit in terms of increased performance only experienced by children from immigrant families in deprived areas selecting out of attending the local school (Trumberg & Urban, 2021).

Admittance to upper secondary school is competitive, with students recruited to programs on the basis of their final compulsory school grades. Upper secondary schools operate within Sweden's marketized school framework, and students as consumers have the choice to apply to providers outside their localities, although student mobility is influenced by socioeconomic background and prior achievement (Fjellman, 2019).

Swedish schools follow a national curriculum, set by Skolverket. The curriculum has undergone periodic reforms, the most pertinent of which for this study are those which were introduced in 1994 and 2011. The implementation of curricula reforms is rarely without obstacles (e.g., Schwarz & Cavener, 1994), and they should be regarded as needing to be settled in time. One of the changes Sweden saw concurrent to the implementation of the 1994 curriculum was the shift from norm-referenced to criterion-referenced grades (Wikström, 2006), fundamentally altering the way of working with assessment in Swedish schools. The curriculum in Sweden introduces expectations for a school's mission and values, statements of which apply to all actors and subjects within the school. The curriculum also outlines subject-specific syllabi guiding teachers' planning and assessment (Skolverket, 1994, 2018b).

The current<sup>4</sup> (2011) curriculum has a results-oriented focus, compared to the preceding (1994) curriculum's open competence-oriented focus (Wahlström & Sundberg, 2015).

For much of the 20th century, post-compulsory education was fragmented between provider and program types. The contemporary model of upper secondary education in Sweden was codified through the integration of academic and vocational programs into a single school form under the 1971 upper secondary school reform (Mellén, 2021). Students who completed upper secondary education under the 1994 curriculum met the general education requirements for university entry, regardless of whether they studied in the academic or vocational programs. However, the introduction of the 1994 curriculum, which provided all graduates with the possibility to enroll in university, is paradoxically associated with an increase in the proportion of students who had been characterized as low achievers at the end of compulsory school enrolling in upper secondary school (Holmlund et al., 2019). The introduction of the 1994 curriculum also saw a decline in the proportion of students who successfully completed upper secondary school (Holmlund et al., 2019; Svensson, 2006), and an increase in the number of students taking longer than expected to graduate; both trends are concentrated among low achievers (Holmlund et al., 2019).

A key aspect of the 2011 reforms at the upper secondary level occurred in the vocational programs. These programs became less theoretical than their earlier iterations, with a reduction in the general academics required to graduate. The goal of this revision of the vocational curriculum was to retain student interest and increase completion rates, although the need to de-academize these programs to increase completion has been questioned (e.g., Nylund, 2013). Consequently, students completing vocational programs under the 2011 curriculum are no longer eligible for university studies, unlike their earlier counterparts. As previously mentioned, the provision of municipal adult education can compensate for choosing a vocational program and being ineligible for tertiary education despite graduating from upper secondary school (SFS 2011:1108, 2011) but availing oneself of this opportunity delays entry to university and is often undertaken alongside employment.

<sup>&</sup>lt;sup>4</sup> The 2022 curriculum was introduced in September 2022.

#### 2 Socio-demographic determinants of educational outcomes

Several contextual factors associated with school dropout have been established in the literature (see, e.g., Jimerson et al., 2000; Rumberger, 1987). The present study is located in the Swedish context; as a consequence, the sociodemographic characteristics investigated herein are socioeconomic status and migration background.

Socioeconomic status has long been understood as one of the strongest predictors of student achievement (e.g., Coleman et al., 1966; Sirin, 2005). The predicative capability of socioeconomic status holds across national contexts, and studies using data from international educational assessments such as PISA and TIMSS have evidenced persistent relationships between student socioeconomic background and achievement in Sweden (e.g., Rolfe et al., 2021). While multiple approaches to measuring socioeconomic status exist in large-scale quantitative educational research (see Rolfe, 2021), one measure that has frequently been used as a proxy for the construct is the level of parental education (e.g., Schiller et al., 2002; Schlicht et al., 2010). In a meta-analysis of the relationship between measures of cultural capital and student achievement, Tan (2017) found that parental education, an example of cultural capital that is institutionalized and valued by the community, was the strongest predictor of student achievement, supporting earlier findings (e.g., Sirin, 2005; Yang, 2003) regarding the predictive importance of this measure. Across developed nations including Sweden, the long-term trend has been for education levels to increase, with an ever-growing proportion of adults attending tertiary education (OECD, 2016; Skolverket, 2009). However, despite the increases in parental education levels and the transition to a highly educated knowledge economy, the correlation between parental education and student outcomes in Sweden has held over time (Skolverket, 2012).

Sweden has a long tradition of welcoming immigrants and refugees. Between 1990 and 2020, the foreign-born population in Sweden grew from 9.2% to 19.7% of the population, representing an increase of 1,256,286 people (SCB, 2021). This trend has been mirrored in the growth of students with an immigration background in Swedish schools (Skolverket, 2009) and an increase in the proportion of students eligible for mother-tongue instruction (Skolverket, 2018a, 2018c). These students have diverse educational needs and a one-size-fits-all solution to integrating them is not applicable across all local contexts (e.g., Taguma et al., 2010).

The size of the contribution of various nations to the growth in Sweden's foreign-born population has changed over time. In the 1970s, the first and fifth most common countries of origin were Finland and Denmark.

The Balkan conflicts of the 1990s led to an increase in the population from this region. By the 2010s, the growth of the foreign-born population in Sweden reflected sustained humanitarian crises (e.g., Syria, Afghanistan, and Eritrea) (SCB, 2021). Research both in Sweden (Böhlmark, 2008; Elmeroth, 2006) and internationally (Cahan et al., 2001), has demonstrated that students who immigrate to Sweden at a young age (before they are 9 years old) adjust well to Swedish school. While Swedish students outperform students with a migration background when considered as a whole in the ninth grade, when we separate the foreign-born population by age at arrival, the achievement gap between Swedish student's performance and students who moved to Sweden in their teenage years is particularly pronounced (Skolverket, 2009). Further, high levels of school dropout have been noted among immigrant students in Sweden (Taguma et al., 2010).

In addition to the changing overall demographics of the Swedish population in terms of educational and migration backgrounds, Swedish schools have witnessed an increase in segregation by both socioeconomic and immigration background. Socioeconomic segregation in housing has been widely observed since the 1970s, while residential segregation between immigrant and nativeborn Swedes has been evident since the 1990s (Skolverket, 2009). Social segregation as a consequence of housing segregation in Sweden has resulted in within- and between-school differences in student achievement (SCB, 2007; Yang, 2003). Despite the expectation that the introduction of school choice in the educational reforms of the early 1990s might mitigate the historic effects of housing segregation on student achievement (Skolverket, 2003), between-school differences in achievement increased throughout the 1990s and 2000s (Björklund, 2005). The segregated Swedish school market (Fjellman, 2019) can perhaps be understood as a consequence of both the reforms of the 1990s and the importance of peer effects, which have long been recognized as an important indicator of student performance, surpassing the influence of teacher resources and quality (e.g., Coleman et al., 1966).

A further demographic source of unequal outcomes is student gender. In Sweden, girls outperform boys in compulsory schools, with these performance inequalities persisting over time and appearing larger for course grades than national test scores. Girls continue to outperform boys in terms of grades in upper secondary school (Holmlund et al., 2019). These gender differences in grades are in line with international trends, particularly in the case of mathematics (see, e.g., Dwyer & Johnson, 1997; Kenney-Benson et al., 2006). In addition to outperforming boys academically, previous research has also suggested that girls are less likely to drop out than boys (e.g., World Bank, 2020).

#### **3 Research questions**

From our review of the literature, various factors need to be included in the investigation of school dropout and delayed graduation in the Swedish context. Previous research suggested that boys are more likely to drop out than girls (e.g., World Bank, 2020), that immigrant students, particularly those who migrate at older ages, have poorer outcomes overall and are more likely to leave school prior to graduation (e.g., Taguma et al., 2010), and that parental education correlates with student outcomes (e.g., Gustafsson & Yang Hansen, 2018). Given the persistent importance of these factors in explaining student outcomes, this study aims to answer the following research questions:

- 1. Which suboptimal educational pathways do students follow after graduating compulsory school?
- 2. Which socio-demographic characteristics predict post-compulsory educational pathways for Swedish teenagers?
- 3. Does the risk of suboptimal post-secondary school engagement vary between Sweden's 1994 and 2011 curricula?

#### 4 Methods

#### 4.1 Data source

This analysis used data from the Gothenburg Educational Longitudinal Database (GOLD). GOLD combines data from Statistics Sweden and multiple sources including the National Agency for Education, the National Archives, and the National Agency for Higher Education Services (University of Gothenburg, 2020). The data was compiled by Statistics Sweden and provided anonymized to the researchers. The analysis used data pertaining to students from the birth cohorts 1979–2000, who completed compulsory school between 1994 and 2015. To be eligible for inclusion in the GOLD dataset, students must be entered into the Swedish Population Register maintained by the Tax Authority before their 16th birthday. Children born in Sweden are registered at birth, and those moving to Sweden are registered upon arrival. Children who arrive in Sweden as unaccompanied minors or after age 16 are not included in the dataset.

#### 4.2 Educational pathways and grouping

The dataset was split into two groups. The first group (LP94) was comprised of 16 cohorts totaling 1,747,656 students who were born between 1979 and 1994. This group was eligible for upper secondary education under the 1994 curriculum. The second group (LP11) was comprised of six cohorts containing a total of 593,659 students who were born between 1995 and 2000 and who

attended upper secondary school under the 2011 curriculum. Due to the aforementioned challenges of defining school dropouts (see Christle et al., 2007; Greene & Winters, 2002; Hayes et al., 2002; Kaufman & Bradbury, 1992) and the age restrictions on attending upper secondary school despite the possibilities for lifelong community-based learning in Sweden (Bäckman et al., 2011; SFS 2011:1108, 2011), this study conceives upper secondary school dropouts to be those individuals who do not complete an upper secondary program within four years of starting upper secondary school.

Data from several variables was examined to create a hierarchy of educational pathways. The students were grouped according to the pathway they took after completing compulsory school. Two items in the dataset were used to establish whether students graduated from compulsory school and upper secondary school. Completion of compulsory school on time was established by comparing graduation year with birth year, and students graduating after the age of 15 were deemed late graduates. The taking of a "gap year" before starting upper secondary school was observed by comparing the year of compulsory school graduation to the semester in which students were first registered as attending upper secondary school. Yearly registrations were evaluated to establish whether students attended any upper secondary school, whether they attended for three sequential years, and whether students changed programs at any time point. The following four pathways were subsequently identified:

**Early dropouts.** These students completed compulsory school but never attended upper secondary school. Students who dropped out of the education system after graduating from compulsory school were the smallest group in our study, accounting for 0.7% of students in the LP94 cohorts and 0.5% of students in the LP11 cohorts.

Upper secondary school dropouts. These students completed compulsory school and attended at least one year of upper secondary school, but never graduated from upper secondary school. In our study, 15% of students included in the LP94 cohorts and 12% of students in the LP11 were identified as upper secondary school dropouts.

**Delayed upper secondary school graduates.** These students graduated compulsory school and upper secondary school, but completed their schooling after age 20. They may have repeated a year in compulsory school in the correct year for their birth cohort, proceeded directly to upper secondary school, and graduated from their program of study after more than 3 years. This group represented 18% of students under LP94 and 16% under LP11.

**Perfect participants.** These students graduated compulsory school in the correct year for their birth cohort, proceeded directly to upper secondary school, and graduated from their program of study after 3 years. The majority of included students fell into this group: 66% of students across the LP94 cohorts and 71% across the LP11 cohorts. Descriptive statistics by educational

pathway and cohort group are presented in Appendix A, and the proportion of students in each pathway is shown in Figures 1 and 2.

The very small number of students who were missing compulsory school data were excluded from the analysis, as we could not discern whether they were system-missing cases for which data had not been gathered or entered into GOLD, or whether they dropped out of school early (i.e., individuals were missing achievement and compulsory school data for modelling). When the educational pathways of students in Sweden are examined by student immigration background, the proportion of students within each educational pathway has remained relatively stable over time (see Appendix B), although there are a few noticeable years where there are fluctuations and increased proportions of students in suboptimal pathways.



Figure 1

Proportion of students in each educational pathway, LP94 (N=1,747,656)



Figure 2 Proportion of students in each educational pathway, LP11 (N=593,659)

#### 4.3 Independent variables

To conduct our analysis, we utilized variables from the GOLD dataset representing individual student background, compulsory school achievement, and school characteristics.

#### 4.3.1 Student background

Three components of student background were considered in this analysis: student gender, parental education level, and student immigration background. To indicate gender, student sex at age 16 was coded 0=girl and 1=boy. Parental education was indicated at the student level, with dummy variables created to represent the response options to the six-category parental education variable (PE6) provided in the dataset. Immigration background was derived from a categorical variable indicating the age of arrival for foreignborn students, with dummy variables representing each of the response options. The dummy variables denoting student background are summarized in Table 1.

Boy	Boy
PED_1	Not stated/unspecified education shorter than 7 years
PED_2	Pre-secondary education
PED_3	Upper secondary vocational education, 2–3 years and 2-year theoretical education
PED_4	High school preparatory education, 3 years or postsecondary education <2 years
PED_5	Higher education 2-3 years
PED_6	Higher education ≥4 years
CSPS	Child Swedish, parent Swedish
CSPI	Child Swedish, parent immigrant
CIPS	Child immigrant, parent Swedish
CIPI 0-6 years	Child immigrant, parent immigrant arrived age 0–6
CIPI 7–12 years	Child immigrant, parent immigrant arrived age 7–12
CIPI 13-16 years	Child immigrant, parent immigrant arrived age 13–16

 Table 1

 Dummy variables at the individual level, where 1 indicates group membership

#### 4.3.2 Compulsory school achievement

Student achievement at the end of compulsory school was identified through individual merit scores. The merit score is the sum of a student's 16 highest subject grades attained in ninth grade. Each subject is graded out of 20, so the maximum merit rating possible is 320. Grades are determined by teachers; since 1994, these grades have been determined using criterion referencing (Wikström, 2006).

#### 4.3.3 School characteristics

To identify the socioeconomic profiles of schools, a new ID variable was created to distinguish between schools and the multiple time points. The 6-category parental education variable PE6 was aggregated to school level by calculating the arithmetic mean of student responses. The immigration makeup of each school was operationalized by calculating the arithmetic mean of a dichotomous variable indicating whether a student was born in Sweden or not (0=born in Sweden, 1=born abroad). Student merit ratings were aggregated to school level to give an attainment profile at the compulsory school level. Descriptive statistics are presented in Appendix A.

#### 4.3.4 Analysis Plan

Data handling was conducted using SPSS v 27, while modelling was conducted using Mplus v8 (Muthén & Muthén, 1998–2017). Educational pathways after compulsory school are coded "early dropouts"=0, "upper secondary school dropouts"=1, "delayed upper secondary school graduates "=2, and "perfect participants"=3. The order in which these outcomes are presented appears to be hierarchically ordered in as far as students are required to meet an increasing number of conditions to qualify for group membership, but this is an artifice of convenience to the research process rather than an inherent quality of the data. The existence of such a nominal outcome requires that multinomial logistic regression be adopted as a modelling strategy.

In multinomial logistic regression, the log odds of the available outcomes are modelled as a linear combination of the predictor variables, enabling researchers to identify which indicators increase or decrease the risk of individuals deviating from a reference outcome. The model is expressed mathematically thus:

$$logit(p) = \log\left(\frac{p}{1-p}\right) = a + b_1 * x_1 + \dots + b_k * x_k$$
(1)

Or 
$$p = \frac{\exp(a+b_1*x_1+\dots+b_k*x_k)}{1+\exp(a+b_1*x_1+\dots+b_k*x_k)}$$
 (2)

In this equation, p is the probability that a case is in a particular category, exp is the exponential, a is the constant of the equation, and b is the coefficient of the predictor or independent variables. Mplus by default uses the outcome with the highest value, in this case perfect participation, as the reference category in the model. The solution computed allows us to see the probability of a student being in one of the three suboptimal education pathways (early dropouts, upper secondary school dropouts, or delayed upper secondary school graduates) rather than being a perfect participant. The estimator used in the analysis was MLR (maximum likelihood with robust standard errors) to account for the non-normality in the distribution of individuals to the categorical outcomes in the model.

A two-level model (Model 1) was specified separately for the two curricula. At the student level, gender, immigration background, parental education, and achievement in compulsory school (merit score), while at the school level, the proportion of immigrant students, the average parental education level, and the average merit score were all regressed on group membership to examine which individual factors predict pathway and indicate risk for suboptimal educational trajectories. The coding of individual level parental education and immigration background as dummy variables allows the parental education level "higher education  $\geq$  4 years" and the immigration status "child Swedish, parent Swedish" to be used as the baseline categories in the model. Thus, the ratio of the probability of a student not being in these categories provides us with the relative risk for their inclusion in the various educational pathways. In a second stage, Model 2 extended Model 1, integrating interactions between sex and parental education and sex and immigration background at the individual level to Model 2.

Mplus generates logistic regression odds ratio (OR) results for each nominal group in the model, which includes an estimate, standard error, and lower and upper limits for a 95% confidence interval (CI) for the estimate. To establish the odds risk ratio of students entering one of the suboptimal tracks rather than being a perfect participant when accounting for each covariate of the model, the exponential of the estimate and the upper and lower CI values were calculated. These are presented in Table 3, in the columns labelled 'OR' and 'CI'. By examining these values, we are able to determine which student socio-demographic characteristics carry the biggest risks for entering a suboptimal educational pathway following graduation from compulsory school.

The odds ratio expresses the odds of an individual being in the specified suboptimal education pathway divided by the odds of that individual being a perfect participant. Where OR=1, this suggests that there is no risk of suboptimal educational pathway associated with the risk factor. When  $OR\neq1$ , the risk factor is associated with the specified educational pathway. Instances where the confidence interval crosses 1 should be considered non-significant. Additionally, in cases where the confidence interval is excessively broad, the OR can be regarded as unreliable as it indicates a low level of precision in the OR (Szumilas, 2010). A method for evaluating the size of odds ratios proposed by Chen et al. (2010) maps odds ratios to Cohen's *d*. Chen et al.

(2010) suggested that odds ratios of 1.68, 3.47, and 6.71 are equivalent to Cohen's *d* effect sizes of 0.2 (small), 0.5 (medium), and 0.8 (large).

Model fit was assessed by examining the log-likelihood of the models using a G-test (Hosmer Jr et al., 2013). We calculated minus twice the change of the log-likelihood relative to the previous model to find G, and then righttailed the probability of the chi-squared distribution of G with the difference in degrees of freedom between the models. This enabled us to establish whether the introduction of the interactions in Model 2 had significantly improved Model 1 (see Appendix C).

#### 5 Results

As outlined in the analysis plan, we ran a series of pairs of multinomial logistic regressions, introducing covariates in a stepwise order. When deciding which of these models to present in detail, we first compared the goodness of fit between subsequent models (see Appendix C). Given the significant improvements made by the addition of covariates, it was deemed pertinent to limit the scope of the presentation and discussion of the results to Model 2.

The model presented in this section, Model 2, integrated 12 individual level predictors and three school-level predictors. At the individual level, we included sex and compulsory school achievement, while student immigration background and parental education were dichotomized into five variables each. We used the immigration status "child born in Sweden, parents born in Sweden" and the parental education level "higher education  $\geq$  4 years" as reference groups, and thus those are excluded from the model. At the school level, we considered the proportion of students born outside Sweden, the average parental education, and average achievement (see Appendix D for unstandardized regression coefficients). Positive estimates indicate increased odds of entering a pathway, while negative estimates indicate decreased odds. Interactions between sex and parental education and sex and immigration background at the individual level were also specified.

Among the early dropouts in the LP94 cohorts, students with an immigration background who came to Sweden between the ages of 7 and 12 had a 1.30 increase in the relative log odds of being in this group compared to the Swedish children of Swedish parents. Students with the least educated parents, who had less than 7 years of formal education, had a 0.84 increase in the relative log odds of being early dropouts compared to their peers from highly educated families. For both the upper secondary school dropout and delayed upper secondary school graduate groups, students who migrated to Sweden as teenagers (ages 13–16) had large increased log odds of falling into these pathways (0.79 and 1.80 respectively). Students with poorly educated

parents had increased log odds of being in these suboptimal pathways, as with the early dropouts.

The patterns of indicators that significantly increase the log odds of students following the different suboptimal pathways are not so clear cut among the students who attended school under LP11. Interestingly, while very low parental education levels universally increase the log odds of being an upper secondary school dropout, it is a non-significant predictor of early dropout of delayed graduation. Increased levels of parental education were associated with decreased log odds of suboptimal outcomes in the majority of scenarios for the LP11 group; however, the decrease in the log odds was particularly marked for early dropouts.

A striking communality across all outcomes and both curriculum groups was the ameliorating effect of the covariate PED\_3 on group membership, which saw the largest decrease in the log odds of group membership when compared to the other parental education levels. This variable indicates that the highest level of parental education is upper secondary school vocational education, 2–3 years, and 2-year theoretical education. Of particular interest when reading the unstandardized regression coefficients was the counter-intuitive inverse relationship between an individual being a boy and entering a suboptimal educational pathway. When the interactions between being a boy and parental education level and being a boy and migration background are examined, the expected increased log odds of falling into a suboptimal educational pathway appears, with the exception of teen and pre-teen migrant boys in the LP94 group.

Attending a school with a high proportion of foreign-born classmates is associated with increased log odds of entering a suboptimal educational pathway for all pathways under both the 1994 and 2011 curricula. However, these relative log odds were notably higher for students classed as early dropouts or upper secondary school dropouts in the LP11 group. Interestingly, while the influence of this variable on the log odds of group membership diminishes as the pathway is more "successful" in students under LP11, this is not the case in the LP94 schools. For the earlier curriculum group, an increase in the proportion of immigrant students in a school increases the log odds of being in the group upper secondary school dropouts more than the other two groups.

The results of fitting the logistic regression model for Model 2 are presented in Table 2. We have selected examples from this section of the results to elucidate based on their correspondence to those highlighted from the unstandardized model output and the size of these odds ratios as discussed in the analysis plan (i.e., 1.68 (small), 3.47 (medium), and 6.71 (large), see Chen et al. (2010).

				1004					2011		
		Esti-	Ц	Odds	050/0	C I	Esti-	Ц У	Odds	050/0	C 1
		mate		ratio	0/07		mate	.1.0	ratio	0/0/	
					Lower	Upper				Lower	Upper
					2.5%	2.5%				$2.5^{0/0}$	$2.5^{0/0}$
	Boy	87.0	0.08	2.18	1.89	2.60	0.44	0.06	1.56	1.41	1.77
	CSPI	1.49	0.10	4.46	3.70	5.50	1.08	0.10	2.95	2.46	3.67
	CIPS	1.94	0.27	6.95	4.38	12.76	1.33	0.38	3.77	2.13	1.27
	CIPI 0-6 years	2.02	0.17	7.54	5.57	1.77	1.38	0.23	3.99	2.73	6.71
	CIPI 7–12 years	3.41	0.28	3.18	18.25	54.44	1.99	0.25	7.28	4.74	12.58
	CIPI 13-16 years	2.44	0.28	11.43	7.04	2.91	1.47	0.21	4.36	3.06	6.97
	PED_1	2.31	0.34	1.12	5.67	21.91	0.87	0.23	2.39	1.68	4.27
	PED_2	0.89	0.08	2.44	2.12	2.88	0.55	0.06	1.73	1.55	1.97
	PED_3	0.58	0.05	1.79	1.64	1.99	0.28	0.03	1.32	1.26	1.42
	PED_4	0.59	0.06	1.80	1.62	2.03	0.36	0.04	1.43	1.33	1.57
	PED_5	0.60	0.06	1.82	1.64	2.05	0.35	0.04	1.43	1.32	1.56
Early dropouts	Compulsory school achievement	26.0	0.00	2.64	2.64	2.64	0.97	0.00	2.63	2.62	2.63
	Boy*PED_1	0.98	0.20	2.65	1.91	4.34	2.80	1.00	16.36	4.02	275.61
	Boy*PED_2	1.67	0.19	5.33	3.81	8.12	2.21	0.34	9.15	5.13	2.05
	Boy*PED_3	1.57	0.17	4.79	3.54	6.99	2.21	0.33	9.14	5.25	19.20
	Boy*PED_4	1.21	0.15	3.36	2.58	4.71	1.89	0.31	6.63	3.96	13.49
	Boy*PED_5	1.27	0.16	3.57	2.71	5.06	1.67	0.28	5.33	3.34	1.20
	Boy*CSPI	0.88	0.07	2.40	2.11	2.79	0.95	0.12	2.59	2.12	3.34
	Boy*CIPS	0.91	0.18	2.49	1.87	3.79	0.43	0.19	1.53	1.19	2.82
	Boy*CIPI 0-6 years	0.57	0.07	1.77	1.57	2.04	1.03	0.22	2.81	1.97	4.80
	Boy*CIPI 7–12 years	0.68	0.07	1.98	1.74	2.32	0.92	0.15	2.51	1.97	3.50
	Boy*CIPI 13-16 years	0.76	0.12	2.14	1.76	2.79	0.64	0.13	1.89	1.54	2.57
	Constant	0.23	0.22				0.93	0.30			

Table 2 Results of fitting the logistic regression model – Model 2

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				1994					2011		
		Esti- mate	S.E.	Odds ratio	95%	C.I.	Esti- mate	S.E.	Odds ratio	95%	C.I.
					Lower 2.5%	Upper 2.5%				Lower 2.5%	Upper 2.5%
	Boy	0.76	0.02	2.13	2.06	2.21	0.61	0.02	1.85	1.78	1.93
	CSPI	0.94	0.02	2.57	2.48	2.66	0.77	0.02	2.17	2.08	2.26
	CIPS	1.19	0.05	3.29	3.01	3.62	1.49	0.10	4.42	3.66	5.50
	CIPI 0-6 years	1.11	0.03	3.03	2.87	3.21	0.97	0.05	2.64	2.41	2.90
	CIPI 7-12 years	2.02	0.05	7.54	6.82	8.37	1.68	0.06	5.37	4.79	6.06
	CIPI 13-16 years	2.20	0.11	8.99	7.35	11.20	2.37	0.13	1.66	8.41	13.89
	PED_1	1.53	0.10	4.61	3.87	5.62	1.38	0.16	3.96	3.02	5.56
	PED_2	1.08	0.02	2.96	2.83	3.09	0.97	0.03	2.64	2.49	2.82
	PED_3	0.85	0.02	2.33	2.26	2.41	0.68	0.02	1.98	1.91	2.06
	PED_4	0.83	0.02	2.29	2.22	2.37	0.70	0.02	2.00	1.93	2.09
	PED_5	0.86	0.02	2.37	2.30	2.46	0.75	0.02	2.11	2.02	2.21
Upper secondary school dropouts	Compulsory school achievement	0.97	0.00	2.65	2.65	2.65	0.97	0.00	2.64	2.64	2.64
support at oboarts	Boy*PED_1	1.11	0.09	3.02	2.55	3.70	1.62	0.24	5.04	3.34	8.73
	Boy*PED_2	1.16	0.03	3.20	3.01	3.41	1.23	0.05	3.40	3.08	3.80
	Boy*PED_3	1.09	0.03	2.97	2.82	3.13	1.17	0.04	3.23	2.97	3.53
	Boy*PED_4	1.07	0.03	2.90	2.75	3.07	1.14	0.05	3.12	2.86	3.43
	Boy*PED_5	1.06	0.03	2.88	2.73	3.05	1.14	0.05	3.12	2.86	3.43
	Boy*CSPI	1.25	0.03	3.48	3.29	3.68	1.44	0.05	4.22	3.85	4.65
	Boy*CIPS	1.42	0.07	4.12	3.59	4.79	1.11	0.10	3.03	2.52	3.79
	Boy*CIPI 0-6 years	1.25	0.04	3.50	3.24	3.81	1.33	0.09	3.78	3.23	4.51
	Boy*CIPI 7–12 years	1.26	0.04	3.54	3.26	3.85	1.29	0.06	3.64	3.25	4.11
	Boy*CIPI 13–16 years	1.26	0.08	3.53	3.04	4.19	1.35	0.09	3.85	3.24	4.68
	Constant	2.20	0.08				2.60	0.09			

	95% C.I.	wer Upper 3% 2.5%	38 1.99	74 2.96	17 5.77	72 4.49	90 26.68	0.16 753.70	51 3.94	36 2.57	02 2.02	95 2.06	17 2.31	58 2.68	76 9.55	39 4.00	42 3.90	15 3.59	01 3.26	34 3.78	39 4.12	23 4.07	10 3.69	39 3.85	-
:011	)dds atio	Lov 2.5	1.93 1.8	2.84 2.7	1.87 4.3	1.07 3.7	2.35 18.	9.89 246	3.08 2.5	2.46 2.3	1.97 1.9	2.00 1.9	2.24 2.3	2.68 2.6	5.64 3.7	3.67 3.3	3.65 3.4	3.36 3.2	3.08 2.9	3.55 3.3	3.40 2.8	3.60 3.2	3.37 3.3	3.30 2.8	_
2	S.E.		0.01	0.02 2	0.08 4	0.05 4	0.09 2	0.29 41	0.11 3	0.02 2	0.01	0.01 2	0.02 2	0.00 2	0.24 5	0.04	0.03 3	0.03 3	0.03 3	0.03 3	0.09	0.06 3	0.04	0.07 3	
	Esti- mate		0.66	1.05	1.58	1.40	3.11	6.04	1.12	0.90	0.68	0.69	0.81	0.98	1.73	1.30	1.29	1.21	1.13	1.27	1.23	1.28	1.22	1.20	
	C.I.	Upper 2.5%	2.22	3.52	3.88	3.92	27.94	72.54	3.44	2.21	2.00	2.11	2.30	2.68	3.88	3.70	3.47	3.19	3.04	3.20	4.02	3.48	3.35	3.71	
	95%	Lower 2.5%	2.13	3.30	3.34	3.55	21.61	279.78	2.73	2.12	1.94	2.03	2.21	2.68	2.77	3.37	3.22	2.95	2.84	2.97	3.27	3.10	2.97	2.88	
1994	Odds ratio		2.17	3.40	3.59	3.73	24.51	44.54	3.05	2.17	1.97	2.07	2.25	2.68	3.24	3.53	3.34	3.07	2.94	3.08	3.62	3.28	3.15	3.25	
	S.E.		0.01	0.02	0.04	0.03	0.07	0.24	0.06	0.01	0.01	0.01	0.01	0.00	0.09	0.02	0.02	0.02	0.02	0.02	0.05	0.03	0.03	0.07	
	Esti- mate		0.78	1.22	1.28	1.32	3.20	6.09	1.11	0.77	0.68	0.73	0.81	0.99	1.18	1.26	1.21	1.12	1.08	1.12	1.29	1.19	1.15	1.18	1 1
			Boy	CSPI	CIPS	CIPI 0-6 years	CIPI 7–12 years	CIPI 13-16 years	PED_1	PED_2	PED_3	PED_4	PED_5	Compulsory school achievement	Boy*PED_1	Boy*PED_2	Boy*PED_3	Boy*PED_4	Boy*PED_5	Boy*CSPI	Boy*CIPS	Boy*CIPI 0-6 years	Boy*CIPI 7-12 years	Boy*CIPI 13-16 years	
													Delayed upper	secondary school	graduates										

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The strongest relative risks of being an early dropout from education under LP94 related to migratory background, with migrating to Sweden as a teen, a small child, and being the foreign-born child of Swedish parents all having much stronger odds of being an early dropout. Of the interaction effects included in the LP94 model, boys with parents educated to pre-secondary or vocational upper secondary level had moderate risks of being early dropouts. When examining the relative risks for the LP11 model, the strongest risks were associated with being a boy with parents educated to pre-secondary or vocational upper secondary level, followed by migrating to Sweden as a pre-teen. Interestingly, while being a boy with parents educated to pre-secondary or vocational upper secondary level had stronger relative risks of having this least optimal outcome for both curricula, the risk was medium for the earlier cohorts and large for the more recent cohorts.

For upper secondary school dropouts, the risk of dropping out amongst the LP94 cohorts was strongest for teenage and pre-teen migrants to Sweden in both groups, with a moderate risk associated with having low-educated parents. For the younger cohorts who attended upper secondary school under LP11, there was a moderate risk for pre-teen migrants and a moderate risk for boys with very low-educated parents to follow this pathway.

The relative risk of following the delayed upper secondary school graduate showed the most congruence between the two curricula. The variable with the strongest relative risk for indicating group membership under both LP94 and LP11, migrating to Sweden between 13 and 16 years old, must be disregarded due to the extremely broad confidence intervals, per Szumilas (2010), 279.78<OR<720.54 and 246.16<OR<753.70 respectively. For both LP94 and LP11, there was a very large risk of delayed graduation for pre-teen migrants to Sweden, with moderate risks for those who migrated at a young age or who were born outside of Sweden to Swedish parents. Boys with parents educated to pre-secondary level had a similar moderate relative risk of delayed graduation for both cohorts.

#### 6 Discussion and conclusions

In line with previous European research (e.g., Andrei et al., 2011), we observed that overall dropout from school in Sweden was low, with approximately 15% of students failing to graduate upper secondary school across our cohorts. The study aimed to explore three related questions. The first objective was to classify the suboptimal pathways students can follow after graduating from compulsory school in Sweden. Second, we sought to identify which socio-demographic characteristics predict post-compulsory educational pathways for Swedish teenagers. Third, we asked whether the risk of not completing upper secondary school varied between the iterations of Sweden's school curricula.

Sweden's high overall participation rate in upper secondary education and its diverse catalogue of formalized programs (Skolverket, 2021b) at this level obscures the small but concerning segment of this age group who either drop out of education or experience delays in navigating the system. Examining the available population data concerning registration within schools and programs across 22 years enabled us to identify four distinct educational pathways amongst Swedish youth post-16. These groups - early dropouts, upper secondary school dropouts, delayed upper secondary school graduates, and perfect participants - were defined on the basis of individual student histories of engagement with the upper secondary school system following graduation from compulsory school. While the majority of students, 67% of our overall population, graduated from upper secondary school on time and without changing programs and are thus classified as perfect participants, the 15% of students who dropped out either at the end of compulsory school or during their upper secondary tenure represent a cause for concern. With educational level strongly linked to an individual's future earning power (e.g., Houthakker, 1959) and having intergenerational effects that echo across diverse outcomes (e.g., Black et al., 2005), dropping out of school prior to completing upper secondary school is highly likely to negatively impact both the future of these students and that of their own future children.

A child's immigration background is a strong predictor of them following a suboptimal pathway. Interestingly, late arrival to Sweden (between ages 13 and 16) is the strongest predictor of dropping out of or delaying graduation from upper secondary school, but early dropout from education (i.e. immediately after compulsory school) is predicted most strongly by arriving in Sweden between the ages of 7 and 12. These findings are in line with earlier research indicating lower outcomes for immigrant students generally, and higher levels of dropout in these subpopulations (Böhlmark, 2008; Elmeroth, 2006; Taguma et al., 2010). However, the increased risk of entering a pathway in which a student begins upper secondary school and then is either delayed in graduating or drops out for students arriving in Sweden between the ages of 7 and 12 is troubling. This suggests that these students, who are in school before starting the final phase of compulsory schooling, are being overlooked and could be viewed as a manifestation of "a dilemma, where [school districts] would prefer to have earlier, shorter, more intensive programming for newcomers, particularly young children" (Taguma et al., 2010, p. 55) which would serve as an early inoculation against later difficulties but are also faced with the needs of older newcomers.

Additional predictors of entering a suboptimal pathway include attending a school with a high proportion of students born outside of Sweden and low levels of parental education. The increased relative log odds of being in a suboptimal group that are predicted by an increased proportion of foreignborn students in a student's compulsory school point to the persistent existence of peer effects on student outcomes. The increased levels of residential segregation by ethnic background that have been observed across Sweden since the 1990s (Skolverket, 2009) are thus linked by the results of the present study to long-term educational outcomes and engagement with the school system.

The risk of following a suboptimal educational pathway after compulsory school associated with student gender diverged from the outcomes suggested by previous research. While prior research has suggested that girls are less likely to drop out than boys (e.g., World Bank, 2020), for each pathway in both the 1994 and 2011 curricula, male students had decreased log odds of entering the pathway for being a perfect participant than female students did. However, when the interaction terms that combined being a boy with parental education and being a boy with migration background, the log odds of being an upper secondary school dropout or a delayed graduate increased. While academic achievement, a measure that favors girls at all stages of education in Sweden (see, i.e., Holmlund et al., 2019) ameliorates the odds of entering a suboptimal pathway, the log odds of this covariate were generally smaller than those associated with the interaction terms including gender. It might be speculated that the confluence of gender, achievement, and social background makes the discernment of the risks associated with these indicators individually difficult to parse, and perhaps points to the necessity of further studies in this field.

The intergenerational consequence of education level (e.g., Black et al., 2005) manifests in how low parental education significantly predicts entry to all suboptimal educational pathways and the sustained importance of this background variable on predicting outcomes in Sweden (Skolverket, 2012); completion of upper secondary education (either vocational or academic) can ameliorate the younger generation's risk of taking a suboptimal educational pathway. The common alleviating effect size of parental graduation from vocational or academic upper secondary education on a student being an upper secondary school dropout or a delayed upper secondary school graduate in the LP11 group may relate to the trend towards increased levels of parental education in Sweden (Skolverket, 2009); however, further research is needed to fully explore and explain this observation.

The risk of suboptimal post-secondary school engagement, established by examining odds ratios, shows some variation between the iterations of Sweden's school curricula. The odds ratios of students being early dropouts were higher for students under LP94 than LP11, but this is reversed for students dropping out of or delaying graduation from upper school – the students attending under LP11 had a stronger relative risk of being in a suboptimal pathway.

A finding of this study that we cannot as yet offer an empirical explanation for relates to the risks associated with the immigrant children of Swedish parents in the LP94 cohorts. It is not possible from our data to establish who these children, who have a moderately elevated risk of being a delayed upper secondary school graduate, are. The designation could include both international adoptees and the children of returning Swedish emigrants, and the data available to us does not indicate the age at which they arrived in Sweden. Adoptees may have faced integration problems similar to their immigrant peers, while the children of former Swedish expatriates may arrive in Sweden to find themselves "out of step" with the cycle of Swedish schools and thus repeating a year or needing language development.

The results of this study have contributed to the state of knowledge around delayed graduation and dropout from upper secondary school in Sweden in three key ways. First, a framework for identifying differing suboptimal pathways through the post-compulsory stage of education for students completing compulsory school between 1994 and 2015 has been formulated based on data collected as part of the wider GOLD study. Second, the odds of entering a suboptimal pathway associated with common socio-demographic characteristics have been estimated and compared between curricula. Third, the findings highlight the hard-to-disaggregate effects of the demographic changes in Sweden that have occurred concurrent to changes in the curriculum.

#### 7 Limitations and future directions

A limitation of this research is that the number of cohorts available under the two curricula, LP94 and LP11, is unequal. LP94 was implemented for a 16-year period in Sweden, while LP11 will have run for only 11 years by the time it is replaced in autumn 2022, and only six birth cohorts were available to us. Given the settling-in problems that can be faced during the initial implementation of a new curriculum (see Schwarz & Cavener, 1994), it is not unreasonable to assume that the data available for this analysis cannot fully illustrate differences between LP94 and LP11. The scope of this study was identifying risks for entering suboptimal education pathways and establishing differences in these risks between curricula. A natural line of further enquiry stemming from the research presented in this article concerns the students who attend upper secondary school but engaged with it in suboptimal ways, as our findings indicate that approximately a third of Swedish teenagers either drop out from or have delayed processing through upper secondary school. In future research, we intend to examine the educational decisions made by the upper secondary school dropouts and delayed upper secondary school graduates throughout their upper secondary school careers and how these actions might predict outcomes.

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## Appendix A

				LP	94ª							
	Early d	ropouts	Upper se school d	econdary ropouts	Delayed secondar grad	l upper y school uates	Per partic	fect ipants				
	Mean	SD	Mean	SD	Mean	SD	Mean	SD				
Individual level v	ariables											
Boy	0.61	0.49	0.57	0.50	0.53	0.50	0.49	0.50				
CSPS	0.70	0.46	0.78	0.42	0.78	0.42	0.89	0.32				
CSPS	0.13	0.34	0.09	0.29	0.09	0.28	0.06	0.24				
CIPS	0.02	0.12	0.01	0.12	0.01	0.12	0.01	0.10				
CIPI 0-6 years	0.05	0.21	0.04	0.19	0.04	0.19	0.02	0.15				
CIPI 7–12 years	0.07	0.25	0.05	0.22	0.06	0.23	0.01	0.12				
CIPI 13-16 years	0.04	0.19	0.03	0.17	0.03	0.17	0.00	0.05				
PE6_1	0.03	0.17	0.01	0.12	0.01	0.10	0.00	0.04				
PE6_2	0.30	0.46	0.22	0.42	0.14	0.35	0.09	0.29				
PE6_3	0.39	0.49	0.41	0.49	0.33	0.47	0.32	0.47				
PE6_4	0.11	0.31	0.14	0.35	0.17	0.37	0.18	0.39				
PE6_5	0.12	0.32	0.16	0.37	0.23	0.42	0.26	0.44				
PE6_6	0.05	0.22	0.06	0.24	0.12	0.33	0.14	0.35				
Compulsory school achievement	112.98	77.73	139.62	67.37	189.97	62.96	224.27	46.92				
School level varia	ables	bles										
Proportion of immigrant students	0.12	0.14	0.10	0.12	0.09	0.11	0.07	0.08				
Parental education	2.72	0.47	2.79	0.44	2.90	0.46	2.91	0.44				
Compulsory school achievement	195.72	29.72	199.88	22.44	205.12	2.32	207.83 17.44					
NB* N=1/4/656 b	N=59365	9										

## Descriptive statistics by educational pathway and cohort group
		LP11 <sup>b</sup>										
	Early d	ropouts	Upper se school d	econdary Iropouts	Delayed secondar grad	d upper y school uates	Perfect participants					
	Mean	SD	Mean	SD	Mean	SD	Mean	SD				
Individual level v	ariables											
Boy	0.58	0.49	0.57	0.50	0.53	0.50	0.50	0.50				
CSPS	0.61	0.49	0.64	0.48	0.65	0.48	0.84	0.37				
CSPS	0.16	0.37	0.13	0.33	0.13	0.34	0.11	0.31				
CIPS	0.01	0.09	0.01	0.11	0.01	0.11	0.01	0.09				
CIPI 0-6 years	0.05	0.21	0.03	0.17	0.04	0.19	0.02	0.14				
CIPI 7–12 years	0.10	0.30	0.08	0.28	0.10	0.30	0.02	0.15				
CIPI 13-16 years	0.08	0.27	0.11	0.31	0.07	0.25	0.01	0.07				
PE6_1	0.03	0.16	0.03	0.17	0.02	0.12	0.00	0.03				
PE6_2	0.30	0.46	0.23	0.42	0.16	0.37	0.06	0.23				
PE6_3	0.29	0.45	0.32	0.47	0.26	0.44	0.25	0.44				
PE6_4	0.16	0.36	0.17	0.37	0.18	0.39	0.22	0.41				
PE6_5	0.14	0.34	0.17	0.38	0.23	0.42	0.28	0.45				
PE6_6	0.10	0.30	0.09	0.28	0.15	0.35	0.19	0.39				
Compulsory school achievement	101.15	92.19	129.29	76.37	192.03	63.33	233.97	44.56				
School level varia	ables											
Proportion of immigrant students	0.19	0.19	0.17	0.18	0.15	0.16	0.11	0.10				
Parental education	2.87	0.59	2.90	0.52	3.02	0.52	3.13	0.48				
Compulsory school achievement	194.96	42.15	201.92	31.49	209.74	26.13	216.54	21.62				
NB a N=1747656 b	N=59365	9										

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Proportion of students in each year following each educational pathway by student immigration status

		[					[													Γ					
	Perfect partici- pants		56.8%	57.7%	$57.6^{0/0}$	52.8%	52.5%	51.6%	51.6%	56.5%	66.7%	60.5%	58.0%	58.6%	53.9%	58.8%	54.7%	56.1%		54.0%	58.7%	60.2%	64.6%	62.6%	/00 07
S	Delayed upper secondary school graduates		18.0%	16.0%	15.8%	17.3%	20.6%	21.4%	28.7%	32.2%	23.5%	27.4%	27.9%	26.2%	31.3%	29.2%	28.8%	28.9%		28.6%	24.1%	21.6%	21.5%	20.3%	1/ 20/
CII	Upper secondary school dropouts	-	24.2%	25.5%	25.7%	29.0%	26.1%	25.4%	18.7%	10.4%	8.4%	11.5%	13.1%	14.3%	13.5%	11.3%	16.1%	14.5%		17.2%	16.9%	17.8%	13.3%	16.5%	20.00/
	Early dropouts		1.0%	0.8%	0.9%	0.9%	0.9%	1.6%	1.1%	0.9%	1.3%	0.5%	1.0%	0.9%	1.2%	0.7%	0.4%	$0.5^{0/6}$		0.3%	0.3%	0.3%	0.5%	0.7%	0 50/
	Perfect partici- pants		52.6%	53.1%	54.5%	48.7%	49.6%	50.5%	47.5%	53.3%	62.4%	62.6%	62.2%	61.5%	59.6%	61.5%	62.5%	65.8%		65.5%	67.5%	68.8%	68.7%	66.9%	70 E07
Ы	Delayed upper secondary school graduates		13.9%	$13.6^{0/0}$	13.0%	15.8%	16.3%	17.3%	28.7%	32.2%	23.8%	21.8%	21.9%	22.8%	24.8%	25.4%	24.4%	21.6%		19.7%	18.3%	17.6%	17.9%	19.0%	14 00/-
CS	Upper secondary school dropouts	LP94	31.9%	31.8%	30.6%	33.6%	32.2%	30.5%	22.2%	12.8%	12.3%	14.2%	14.6%	14.6%	14.7%	12.3%	12.6%	12.0%	LP11	14.2%	13.7%	12.8%	12.6%	13.3%	14 10/-
	Early dropouts		1.7%	$1.5^{0/0}$	1.9%	1.9%	1.9%	1.7%	1.6%	1.7%	1.5%	1.4%	1.3%	1.0%	0.8%	0.7%	$0.6^{0}$	$0.6^{0/0}$		0.6%	0.5%	0.8%	0.8%	0.8%	0.707
	Perfect partici- pants		68.8%	66.3%	68.0%	62.7%	63.4%	64.5%	60.6%	66.6%	73.6%	73.2%	73.0%	71.8%	70.5%	71.8%	72.4%	73.5%		74.4%	75.7%	76.8%	76.7%	76.2%	79 10/2
S	Delayed upper secondary school graduates		11.4%	11.4%	11.4%	14.0%	13.6%	14.4%	23.1%	24.7%	17.7%	17.0%	16.2%	17.5%	19.3%	18.5%	18.1%	17.0%		15.0%	14.2%	13.3%	13.4%	13.4%	10 60%
CSI	Upper secondary school dropouts		19.2%	21.8%	19.9%	22.7%	22.3%	20.2%	15.6%	8.1%	8.0%	9.2%	10.2%	10.1%	9.8%	9.3%	9.3%	9.2%		10.3%	9.8%	9.5%	9.5%	9.9%	10.8%
	Early dropouts		0.6%	0.5%	$0.6^{0/0}$	0.6%	0.6%	0.8%	0.7%	0.7%	0.6%	0.5%	0.6%	0.6%	0.4%	0.4%	0.3%	0.3%		0.4%	0.3%	0.4%	0.4%	0.4%	0 50%
	Year of birth		1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994		1995	1996	1997	1998	1999	2000

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	Perfect partici- pants		16.5%	25.0%	20.5%	12.4%	11.0%	13.4%	9.5%	13.2%	17.5%	14.9%	13.2%	$13.7^{0/0}$	14.9%	14.4%	11.3%	11.3%		12.1%	11.8%	10.4%	11.5%	11.3%	13.0%
5 YEARS	Delayed upper secondary school graduates		40.0%	33.0%	26.5%	32.2%	35.7%	42.3%	52.2%	52.3%	49.7%	48.8%	50.6%	$51.6^{0/0}$	48.3%	49.0%	48.5%	44.9%		45.5%	47.6%	46.4%	44.5%	39.9%	23.7%
CIPI 13-1	Upper secondary school dropouts		41.8%	40.6%	50.3%	51.3%	49.6%	41.2%	35.5%	32.3%	30.9%	33.9%	34.0%	32.4%	35.4%	35.1%	38.5%	42.0%		40.7%	38.8%	41.3%	42.8%	47.7%	61.9%
	Early dropouts		1.7%	1.4%	2.7%	4.1%	3.8%	3.0%	2.8%	2.2%	2.0%	2.5%	2.2%	$2.2^{0/6}$	1.4%	1.6%	1.7%	1.9%		1.7%	1.8%	1.9%	1.2%	1.1%	1.3%
	Perfect partici- pants		32.6%	32.6%	35.7%	31.5%	34.5%	34.6%	33.0%	40.7%	39.7%	35.2%	35.6%	32.9%	31.3%	34.9%	35.2%	35.0%		35.2%	34.4%	37.1%	40.1%	36.6%	38.6%
YEARS	Delayed upper secondary school graduates		26.9%	27.7%	24.8%	28.3%	27.7%	$31.0^{0/0}$	43.1%	42.2%	40.1%	44.2%	43.8%	45.9%	48.1%	44.5%	45.6%	43.0%		38.7%	$41.4^{0/0}$	39.4%	37.5%	40.5%	29.2%
<b>CIPI 7–12</b>	Upper secondary school dropouts	LP94	38.5%	38.0%	38.5%	38.7%	36.1%	32.4%	22.7%	15.3%	18.2%	18.7%	18.7%	19.7%	19.2%	19.1%	17.9%	20.9%	LP11	25.0%	23.1%	22.1%	21.1%	21.6%	30.9%
	Early dropouts		2.0%	1.7%	1.0%	1.5%	1.7%	2.0%	1.2%	1.8%	2.0%	1.9%	1.9%	1.5%	1.4%	1.5%	1.3%	1.1%		1.0%	1.1%	1.4%	1.3%	1.3%	1.3%
	Perfect partici- pants		48.1%	45.9%	47.9%	41.2%	43.8%	43.5%	44.5%	50.9%	58.9%	60.9%	63.9%	$62.6^{0/0}$	61.4%	60.1%	56.9%	54.6%		55.3%	57.1%	61.6%	61.6%	59.4%	64.6%
YEARS	Delayed upper secondary school graduates		16.7%	16.9%	16.2%	20.1%	19.4%	20.3%	31.0%	34.7%	27.6%	24.2%	21.8%	22.4%	24.7%	26.7%	28.8%	28.7%		27.5%	25.6%	$22.6^{0/0}$	23.5%	24.9%	19.1%
CIPI 0-6	Upper secondary school dropouts		33.7%	35.7%	34.2%	37.6%	35.4%	34.5%	23.2%	13.4%	12.4%	13.9%	13.1%	13.9%	13.2%	12.0%	13.4%	15.7%		16.1%	16.2%	$14.6^{0/0}$	14.0%	14.8%	15.6%
	Early dropouts		1.5%	1.4%	1.7%	1.1%	1.4%	$1.6^{0/0}$	1.3%	1.0%	1.2%	1.0%	1.2%	1.1%	0.8%	1.2%	0.9%	0.9%		1.1%	1.1%	1.1%	0.9%	0.8%	0.7%
	Year of birth		1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994		1995	1996	1997	1998	1999	2000

## VICTORIA ROLFE, MONICA ROSÉN

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# Appendix C

	G	Δdf	Р
model 2 v 1			
1994	711.26	30	<.000
2011	480.35	30	<.000

Assessment of model fit between successive models

# Appendix D

	Model 1							
		1994			2011			
	Farly	USS	Delayed	Farly	USS	Delayed		
	dropouts	dropouts	USS	dropouts	dropouts	USS		
	1	1	graduates	1	1	graduates		
Student level								
Boy	0.01	-0.17*	-0.10*	-0.28*	-0.28*	-0.20*		
CSPI	0.31*	0.06*	0.26*	0.05	-0.06***	0.17*		
CIPS	0.59*	0.35*	0.37*	-0.14	0.45*	0.56*		
CIPI 0-6 years	0.38*	.023*	0.36*	0.34***	0.12*	0.45*		
CIPI 7–12 years	1.00*	0.83*	1.23*	0.64*	0.66*	1.23*		
CIPI 13-16 years	0.72*	0.91*	1.89*	0.17	1.03*	1.90*		
PED_1	0.88*	0.48*	0.19*	0.36***	0.62*	0.44*		
PED_2	0.18**	0.16*	-0.14*	-0.18***	0.08*	0.03		
PED_3	-0.27*	-0.12*	-0.29*	-0.83*	-0.29*	-0.26*		
PED_4	-0.43*	-0.15*	-0.26*	-0.68*	-0.29*	-0.26*		
PED_5	-0.38*	-0.12*	-0.17*	-0.77*	-0.22*	-0.16*		
Compulsory school	-0.03*	-0.03*	-0.01*	-0.04*	-0.03*	-0.02*		
achievement	-0.03*	-0.03*	-0.01**	-0.04**	-0.03*	-0.02*		
Boy*PED_1								
Boy*PED_2								
Boy*PED_3								
Boy*PED_4								
Boy*PED_5								
Boy*CSPI								
Boy*CIPS								
Boy*CIPI 0-6 years								
Boy*CIPI 7-12 years								
Boy*CIPI 13-16 years								
School level								
Proportion of								
immigrant students	1.14*	1.49*	1.19*	2.61*	2.38*	1.5/*		
Parental education	-0.23*	-0.12*	0.11*	0.22***	-0.01	0.04***		
Compulsory school achievement	0.01*	0.01*	0.00*	0.00***	0.01*	0.00*		
Intercepts								
Education pathway	0.09	2.14*	0.45*	0.67***	2.48*	0.80*		
Number of free		19			19	·		
parameters	40 48							
Loglikelihood	-1067529.01 -35484.36							
NB: * P=.000, **P<.001.	***P<.05							

Unstandardized model outputs – Model 1 and Model 2

	Model 2								
		1994			2011				
	Early dropouts	USS dropouts	Delayed USS	Early dropouts	USS dropouts	Delayed USS			
	1	1	graduates	1	1	graduates			
Student level	1	1	1			1			
Boy	-0.23***	-0.28*	-0.26*	-0.81*	-0.49*	-0.42*			
CSPI	0.40*	-0.06***	0.20*	0.08	-0.26*	0.04***			
CIPS	0.66*	0.17*	0.25*	0.28	0.40*	0.46*			
CIPI 0-6 years	0.70*	0.10*	0.27*	0.32***	-0.03	0.34*			
CIPI 7–12 years	1.23*	0.70*	1.16*	0.69*	0.52*	1.13*			
CIPI 13-16 years	0.89*	0.79*	1.81*	0.39***	0.86*	1.80*			
PED_1	0.84*	0.43*	0.11***	-0.14	0.32***	0.12			
PED_2	-0.12	0.08*	-0.26*	-0.60*	-0.03	-0.11*			
PED_3	-0.54*	-0.17*	-0.39*	-1.27*	-0.38*	-0.39*			
PED_4	-0.53*	-0.19*	-0.32*	-1.02*	-0.36*	-0.37*			
PED_5	-0.52*	-0.15*	-0.21*	-1.04*	-0.29*	-0.22*			
Compulsory school achievement	-0.03*	-0.03*	-0.01*	-0.04*	-0.03*	-0.02*			
Boy*PED_1	-0.02	0.10	0.16***	1.03***	0.48**	0.55*			
Boy*PED_2	0.52*	0.15*	0.23*	0.80*	0.20*	0.26*			
Boy*PED_3	0.45*	0.08**	0.19*	0.80*	0.16*	0.26*			
Boy*PED_4	0.19	0.06***	0.11*	0.64*	0.13**	0.19*			
Boy*PED_5	0.24	0.06***	0.07*	0.52***	0.13**	0.12*			
Boy*CSPI	-0.13	0.22*	0.12*	-0.05	0.36*	0.24*			
Boy*CIPS	-0.09	0.35*	0.25*	-0.86	0.10	0.20***			
Boy*CIPI 0-6 years	-0.57*	0.23*	0.17*	0.03	0.28*	0.25*			
Boy*CIPI 7–12 years	-0.38*	0.23*	0.14*	-0.08	0.26*	0.20*			
Boy*CIPI 13-16 years	-0.27	0.23*	0.16***	-0.45***	0.30*	0.18***			
School level	1	1	1	1	1	1			
Proportion of immigrant students	1.15*	1.49*	1.19*	2.63*	2.40*	1.58*			
Parental education	-0.22*	-0.12*	0.11*	0.22***	-0.01	0.04***			
Compulsory school achievement	0.01*	0.01*	0.00*	0.00***	0.01*	0.00*			
Intercepts			1						
Education pathway	0.23	2.20*	0.53*	0.93***	2.60*	0.92*			
Number of free parameters	78 78								
Loglikelihood	-1067173.38 -354600.19								
NB: * P = 000 **P < 001	***P< 05								

# STUDIA PAEDAGOGICA

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# ACADEMIC SECOND-CHANCE EDUCATION: CORRECTION OR CONSOLIDATION OF EARLY SELECTION?

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#### ABSTRACT

This article develops a theoretical approach by arguing that success in academic secondchance education leading to the eligibility to study is (besides academic achievement) influenced by normative orientations relevant to success acquired during compulsory secondary education. More precisely, we argue that in the highly stratified German school system at secondary level I (years 5 to 10), school-type specific socialization contexts lead to the development of school-type specific normative orientations relevant to success. This contributes to creating unequal starting points for academic second-chance education. Based on this assumption, we develop a theoretical grid using the contrastive analysis of ten interviews with students in their first semester of second-chance education. The results show that existing normative orientations are only partially related to the school type that was previously attended. This raises questions concerning the extent to which there is a normative school socialization effect. However, this study is a first step in using a classic approach of the sociology of education to empirically explore the effects of stratification, which has not been done before.

#### **KEYWORDS**

second-chance education; school career; socialization; stratification; academic success

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#### Introduction

Germany has one of the most stratified school systems in the world (Bol & van de Werfhorst, 2013). After four years of primary school, students move on to an academic or a non-academic secondary school type. As a result of this early transition point, social and ethnic inequalities are particularly evident in the student population at academic school types such as Gymnasium, which leads directly to the eligibility to study. The opportunity to take alternative pathways to the eligibility to study is therefore a necessity in order to correct disadvantageous decisions at primary school and to do justice to later individual developments unforeseen at the first transition point. This article focuses on one of these options - academic second-chance education (academic SCE). In the German context, we focus on the Zweiten Bildungsweg [second-chance education] (Harney, 2018, see Figure 1) which offers adults the opportunity to catch up on the eligibility to study. High drop-out rates of around 50% show that a large proportion of students fail to meet the requirements of academic SCE, among them many students who previously attended a non-academic type of school with low requirements (Schuchart & Schimke, 2021). In this article we explore the role that previous school type affiliations might play in success in later educational stages.

The problem of an early stratifying education school system is not only the creation of inequalities in the student participation at academic school types but also the creation of school-type specific learning and socialization contexts. This can be seen in a school-type specific cognitive development, which has been quite well documented empirically (Becker et al., 2022; Pfost et al., 2010). A school-type- specific development of normative orientations toward academic performance, which can then influence success in school can also be assumed, but this has only been empirically documented in a rudimentary form and especially with regard to how such orientations are established (Grecu, 2019; König et al., 2011; Maschke & Stecher, 2006, 2010). It can be assumed that early stratification can contribute to creating unequal starting points for later educational stages by shaping normative orientations.

This leads to the question that is the focus of this article: Is there a relationship between normative orientations of SCE students and their previous school-type affiliation? There has not yet been empirical research on this question so far. In this contribution, we attempt to close this research gap in order to develop a theoretical grid of school-type-specific normative orientations using a qualitative case study. In the following, academic SCE in Germany is described in more detail (1.1). This is followed by the development of a theoretical approach to describe school-type specific socialization contexts (1.2). We look for evidence that supports our theoretical considerations using data that we present in (2), analyze in (3) and discuss in (4).





Figure 1 Pathways to the eligibility to study

# 1 Theoretical and empirical background

#### 1.1 Academic SCE

In Germany, in lower secondary education (years 5 through 10), early selection takes place based on achievement into distinct secondary school types that lead directly to the eligibility to study, such as the Gymnasium and the comprehensive school, and school types that do not, such as the lower secondary school (*Hauptschule*) and the intermediate secondary school (*Realschule*, see Figure 1). For pupils who drop out of school or obtain a non-academic qualification in lower or intermediate secondary education, there are various options to obtain the eligibility to study. For instance, they can move on to vocationally oriented schools in upper secondary education (Orr & Hovdhaugen, 2014, see Figure 1). Adults who did not make use of these "first chances" to obtain the eligibility to study have the opportunity to upgrade their school qualification via institutions of academic SCE (Harney, 2018; Harney et al., 2007).

In the 2020/21 school year, 22,671 learners in Germany participated in second-chance education leading to the eligibility to study; 1.9% of all eligibilities to study in general education (as opposed to vocationally oriented education, see Figure 1)1 were obtained via second-chance education (Statistisches Bundesamt, 2021). This article focuses on academic SCE in North Rhine-Westphalia (NRW), the federal state with the highest proportion of students in SCE nationwide (Statistisches Bundesamt 2018). Adults who are at least 18 years old and can document at least two years of occupational activity, family care, or unemployment or who have completed vocational training can catch up on the entrance qualification for a university of applied sciences (Fachhochschulreife, four semesters) or the general university entrance qualification (Abitur, six semesters) at evening school (Abendgymnasium) or by attending daytime courses at a Kolleg. These students may have done their compulsory schooling at a non-academic school type (e.g., Hauptschule or Realschule) or may have dropped out of upper secondary education at an academic school type (e.g., Gymnasium, see Figure 1).

The organization of academic SCE is the same as in academic tracks at upper secondary education level in compulsory education such as the Gymnasium, and learners are taught the same curriculum and have to take the same standardized exams. As in upper secondary education of Gymnasiums, students are not taught in fixed classes but instead attend courses at appropriate levels. There is no class-teacher principle but instead a subject-

<sup>&</sup>lt;sup>1</sup> In Germany, academic second-chance education, like Gymnasiums and comprehensive schools, is part of general education.

teacher principle. However, there are considerable differences regarding the learner body. The selection of students for the Gymnasium is based on ability and learning behavior at primary school, whereas access to second-chance education depends neither on a certain grade average nor on the acquisition of a certain school-leaving qualification.

As a result of the increasing social pressure to achieve the eligibility to study that has accompanied educational expansion, academic SCE faces the problem of a student body with disadvantaged prerequisites. Koch (2018) referred to a change in the group of potential students in academic SCE from "gifted but disadvantaged adults" to "adults with deficits." This implies a relationship of conflict between the institution and its students: The students, who are often particularly dependent on help and support due to their educational biographies, are confronted with a highly demanding educational program that is organized in a similar way to the academic school type (Gymnasium) which limits structurally the extent to which students are provided with help and support.

#### 1.2 Theoretical background

1.2.1 Effects of school and differences in school structure Schools have cognitive and normative effects. Cognitive effects are achievements that are related to purely subject-specific knowledge. In addition, schools generate normative orientations. This socialization by schools was, for a long time, even emphasized as their most important social function in the sociological tradition of dealing with educational institutions (e.g., Dreeben, 1968; Parsons, 1959). Sociologists argued that the school - unlike the family - generates normative dispositions in students through its structure, which prepare them adequately for the demands of society. Normative effects are the focus of this article. We aim to justify the assumption that these effects are school-type specific. For the purposes of this article, we start with the theoretical framework developed by Dreeben (1968). Building on Parsons (1959), Dreeben (1968) described the following so called "universalistic-specific" normative orientations that are acquired in school: independence, individual performance orientation, universalism, and specificity. These four orientations mean that students learn to "(1) act by themselves (unless collaborative effort is called for) and take personal responsibility for one's conduct and accountability for its consequences; (2) perform tasks actively and master the environment according to certain quality standards; (3) recognize the right of others to treat them as members of categories, on the basis of (4) a few discrete characteristics, rather than on the full constellation of them that represent the whole person" (Dreeben, 1968, p. 63). Orientations with respect to the whole person and their ascriptive (not independently acquired) characteristics, which apply in community contexts such as families or groups of friends, would be undesirable and

problematic in the school context. Due to the structural characteristics of schools (homogeneous age groups, one teacher for 30 students, grading according to performance), the norms described are required and thus generated as an individual disposition.

In our study, this theoretical approach is removed from its structuralfunctionalist context and used as a dimensional heuristic to conceptualize (variable) normative orientations of school types and their relevance in academic SCE. It is then not so much their significance for later participation in society that is of interest here, but rather their significance for success in educational institutions: the normative expectations of the students and the extent to which these correspond to the normative expectations and practices of their teachers. This can be linked to theoretical and empirical studies of contemporary educational research. For example, Wernet (2003) and Helsper (2004) found, on the basis of qualitative studies, that despite the superordinate validity of universalistic-specific norms in pedagogical situations, diffuse expectations oriented toward the whole person and that person's ascriptive characteristics are emphasized by students; we refer to these as "particularistic." Pedagogical action is thus repeatedly exposed to demands that are described as "contradictory" (Helsper, 2010) and which therefore cannot be solved, only dealt with. According to Helsper (2012), among students a high level of need for acceptance as a person is related to a low level of ability to engage in a universalist-specific relationship with their teachers. Helsper identified such needs predominantly among students from lower social strata, who are particularly likely to attend the school type with the lowest achievement requirements (= Hauptschule). Teachers can choose to take into account the particularistic-diffuse aspects of their relationship with a student by perceiving the individual student, at least to some extent, as a whole person – and not primarily as a student – by addressing family problems, for example. There is a "match" when a teacher's actions meet a pupil's need for acceptance as a person. Quantitative evidence can be found in studies showing that Hauptschule students, in contrast to Gymnasium students, are more likely to report receiving help from teachers and having better emotional relationships with them (Baumert et al., 2004; König et al., 2011; Kunter et al., 2005). Following this line of argument, the shift away from the universalistic norms of school would be primarily due to the needs of a rather problematic student body (see also Willis, 2011; Grecu, 2019; Solga & Wagner, 2016).

However, there are also clear indications that school-type-specific normative demands are not only linked to students and their needs, but that they too are generated by the school type's self-image. The (institutionally generated) sorting of students into secondary school types is based not only on their subject-related performance but also on their degree of independence, achievement motivation, and willingness to make an effort (Anders et al., 2010; Stubbe et al., 2017) or, in other words, on their ability to participate in an academic institution oriented toward independence, performance, orientation, universalism, and specificity. The logic of these primary school selection criteria is in accordance with school-type-specific socialization contexts, which are not only committed to adaptation to a specific student body (selected for them) but also reflect historical traditions of a school type's self-image, the professional profiles of teachers, and social functions (Kunter et al., 2005). The results of research, according to which teaching at a Hauptschule, in contrast to teaching at a Gymnasium, is characterized by an orientation towards teamwork, the needs of the students, an individualized reference norm regarding feedback, and by teachers taking responsibility for their students' learning processes (Baumert et al., 2004) must also be understood as leading to school-type-specific socialization of the students. There are even indications that independence is negatively valued under these conditions: Straehler-Pohl and Pais (2014) showed that for a Hauptschule in Berlin that the correct completion of multiplication tasks was not evaluated as an accomplishment but as rebellious behavior if it was done with too high a degree of independence. Breidenstein and Zaborowski (2013) identified a school-type-specific grading practice: report grades were largely justified by teachers at a non-academic secondary school on the basis of non-subject criteria. Their conclusion was that unlike in the Gymnasium, grading has taken the character of social disciplining. Therefore, when students at a Hauptschule claimed in a survey that they wanted a good relationship with their teachers in order to "get through school well" (unlike Gymnasium students, who tended to focus on good exam preparation and their own performance (Maschke & Stecher, 2006, 2010), they were presumably also reacting to a knowledge of what was tolerated, desired, and rewarded by their teachers.

#### 1.2.2 Summary and research question

What do these observations mean for success in academic SCE? In the following, we convert the findings of the previous section into assumptions that can guide our research: Academic SCE has a clear academic profile in terms of cognitive performance requirements and normative orientations. While the cognitive requirements must be oriented toward the qualification to be awarded – the eligibility to study – and the central examination requirements, the normative expectations might also correspond to the degree of independence, universalism, etc. required by an academic institution such as the Gymnasium. Therefore, the normative orientations acquired in non-academic school types might not fully correspond to the normative expectations of academic SCE, and this might influence the success in SCE.

The school-type-specific cognitive and normative endowment of students in SCE can - among others - be seen in their grading. Grading is to be seen as a "social practice" in which a number of factors, including student behavior, normative orientations, and classroom procedures are evaluated (Filer, 2000; Lintorf, 2012). For second-chance education, it can be shown that - controlling for indicators of achievement<sup>2</sup> – previous school-type affiliation strongly influences grades in main subjects at the end of the first semester of academic SCE, and, indirectly, grade development in the following years (Schuchart & Schimke, 2021). Former Gymnasium students have an advantage over students from other school types. This supports the assumptions that a) high normative expectations of independence, universalism, etc. also exist in academic SCE (Schuchart & Bühler-Niederberger, 2020), and b) the students' ability to respond to these expectations is influenced by their previous school type affiliation. Against this background, we therefore ask: Can school-type-specific normative orientations be identified among students in academic SCE? Can they be described using the theoretical approach presented here or does this need modification? Our aim here is to develop a dimensional grid of school-type-specific normative orientations.

#### 2 Data and methods

#### 2.1 Data collection

In the first half of the 2017/18 school year, interviews were conducted with 43 students in their first semester at an academic SCE school in NRW who had volunteered. Interviews included questions about their past and present schools and teaching experiences, their school problems, behavior, and coping strategies, their motives for attending SCE, their social background, and any related commitments. The interviews lasted about 45 minutes (the duration of one school lesson) and the interviewees received 10 euros as compensation.

#### 2.2 Procedure

Ten interviews were selected. These were all with students in their first semester. Three were female; the mean age was 23 years. Regarding the highest school-leaving qualification of the parents of these students: three of the parents had an eligibility to study, three had an intermediate certificate (Realschulabschluss), and two parents had a lower secondary certificate

<sup>&</sup>lt;sup>2</sup> Grades achieved in standardized final examinations and qualifications at the end of compulsory schooling.

(Hauptschulabschluss); two students did not answer this question. We selected students who had completed their compulsory schooling at a Gymnasium (6 students) or a Hauptschule (4 students). We chose students from these two school types because, according to studies on academic achievement as well as on teaching and school culture, these are the school types with the greatest differences regarding achievement, classroom practices and teacher attitudes (e.g., Baumert et al., 2004; Kunter et al., 2005; PISA, 2018). Our study is thus an in-depth contrastive analysis that aims to investigate and define more precisely dimensions according to which former Hauptschule students can be distinguished from former Gymnasium students. Extending the analysis to the middle category of intermediate school (= Realschule) students is not reasonable because qualitative analysis is not suitable for mapping gradual differences between types.

Methodologically, the analysis largely follows the approach of Barton and Lazarsfeld (1955) on the evaluation of qualitative data. This approach emphasizes typification and typologies, in terms of systematic classifications, as relevant strategies for qualitative data analysis. For the elaboration of theoretical concepts – as dimensions of classification – the principles of pragmatic sociology are used: the interplay between deductive and inductive procedures in the elaboration of such concepts, starting from sensitizing theoretical templates (Strauss & Corbin, 1996). For the final in-depth examination of deviations from the hypostasized contexts, the ideas of analytical induction are used (Bühler-Niederberger, 1985; 2012). In the qualitative coding process, quality is not checked via the determination of an interrater reliability but via a theory-oriented interpretation agreed jointly by the members of the research team; this process can be called discursive validation (Corbin & Strauss, 1990).

Essentially, three steps of the evaluation can be distinguished:

**Step 1 – Theoretically guided typification**: First – on the basis of striking statements found in the material – somewhat sweeping "types" were sought. Thus, in contrast to the usual practice in qualitative methodology, we did not attempt in this first step to organize the empirical material according to thematic areas, but rather sought a very pictorial and holistic characterization of the individual interviewees, contouring "the former Gymnasium student" in contrast to "the former Hauptschule student." We chose a former Gymnasium student, Kenneth, who made clear statements in regard to his orientation toward performance, and compared him with the former Hauptschule student Bethina, who seemed particularly vague in regard to any responsibility for performance and to her goals, in order to achieve a first typification. It should then become possible to assign the other members of the respective group to these types, and the next steps would systematically

examine the extent to which this might be possible. Theoretically, our search for these types was guided by the basic content of Dreeben's (1968) four dimensions (see also Parsons, 1959), i.e., the normative demand for universalism and performance-orientation that must apply to all interactions in the classroom. The types to be identified should express an orientation toward these dimensions or their rejection or disregard.

Step 2 – Systematic classification: In step 1, the types were formed unsystematically: They were not based on a fixed set of precisely defined dimensions. Such a set was only found and defined in the second step. For this purpose, the information for all ten selected interviewees was first arranged according to thematic areas. The selection of interview statements on the areas and the interpretation of the statements was again theoretically sensitized by Dreeben's categories: Anything that was related to these categories or significantly contradicted them was considered relevant material. Using this selection of statements, the researchers defined their own theoretical categories, which had to meet the criteria of (a) summarizing the broadest possible range of interviewees' statements into abstract concepts (hence, not "wasting" interesting material), (b) distinguishing the different expressions of these concepts as clearly as possible, and (c) being clearly relatable to the theory developed by Dreeben and Parsons. The typification that had preceded this step was helpful in that it drew attention to suitable more precise definitions of the concepts, connecting empirical material and theoretical guiding concepts. For example, on the basis of the typification, it had already proved useful to define Dreeben's dimension "independence" as "agency" for our target group, i.e., not only as working independently in the classroom but as taking complete responsibility for the own learning success. This new definition proved to be more open and appropriate to our age group. In accordance with the already long and often broken educational biographies of our target group, "agency" also included self-critically coming to terms with the own failures.

**Step 3 – Dealing with the exceptions**: Apart from the two students presented as ideal-typical, namely Kenneth and Bethina, the students all showed slight to stronger deviations from an orientation right at the universalistic end or at the opposite end. The two more strongly deviant students, the former Gymnasium student Anu and the former Hauptschule student Cem, were therefore subjected to a more detailed analysis in search of characteristics that could provide an explanation for their deviation. This explanation was then re-examined for the whole group, the main result of this being that the limitations of the model became apparent.

#### **3 Results**

# 3.1 Two types of students – prototypes and deviations

The self-critical lone fighter: Kenneth failed at the Gymnasium after the tenth grade. In the interview, he said about that time at the Gymnasium: "As far as lessons and such were concerned, I was really only active in the subjects that I also enjoyed." He had, as he said, "massively high absenteeism". As far as his current school attendance is concerned, he believes that he has to be "really interested" to do well in a subject. "However, I now try to get involved in everything and to continue my education everywhere (...) simply out of my own interest. And to participate" - that's how he outlined his recipe for succeeding this time. And to emphasize that he alone bears the responsibility, he refuses to let friends who are good at his problem subjects help him with his work for school; he would only do so "in the worst case of emergency". If things don't work out now, he doesn't blame the teachers, they "do their duty". He said of the teacher of his worst subject that he is "neutral" towards her; she "doesn't do anything wrong", she "explains clearly" and "has nice diagrams." Inability is "my fault," he said, because he doesn't always fulfil the high demands he makes on himself: "It's meeting these demands where I fail." He was then and is now the legislator and judge of his behavior. He was anything but a model student in his earlier school career and is still not a model student today, but he takes sole responsibility for his success and failure. He is a lone fighter who struggles not least with himself. His grades are good, he keeps an eye on them, they are between 1 and 2 but have gone down somewhat recently because he has not always been present. He sees himself in the banking profession later on and says that he could benefit from the numerous training courses that banks offer their employees; the prerequisite, however, is a general university entrance qualification eligibility to study.

*It's "the others" that count:* Bethina attended tenth grade at a Hauptschule, but "that was this puberty phase and I had already changed schools so many times (...), and it was all a bit too much for me. (...) And I come from a very big family; there are seven of us at home." She left without a qualification. She caught up on her lower secondary and then her intermediate school certificate (Hauptschulabschluss and mittlerer Schulabschluss) at a vocationally oriented school and an evening school. Like Kenneth, she was frequently absent back then: "Because (.) my friends wanted it that way too." She is currently absent a lot too, which is "a bit" related to her private life – the big family. She spoke of being overtaxed by the expectations of independence. Of the teacher in her worst subject, she said: "Maybe he thinks 'they have to sit down and learn by themselves' and then I actually do sit down and then I find it very difficult." The teacher could "maybe be friendlier, or smile." In order to improve, she wants to be in a tutoring group "with a teacher

who teaches us a bit (...) who is friendlier." When asked about her interests, she said: "Well, I'm one of those people – I seem to have gotten to know myself or realized much too late just what I want to do." She wants to earn the general university entrance qualification because of her family: "That's also a little bit because of my family, (...) the idea was put into my head even when I was little that I absolutely have to get my Abitur [qualification at the end of secondary school." Afterward, she says she would like to go "into the social sector," but she does not know what she really wants to do there or even whether she needs a general eligibility to study. In the interview, she spoke about poor grades once but immediately changed the subject, referring to moods and fluctuations – "you have days like that" – but on the whole, she believes she can succeed, and then for the only time in the interview she actually referred to herself as an agent, albeit not very rationally: "because my body tells me so."

Kenneth and Bethina represent the two types - the former Gymnasium student focused on his own interests and performance, including working on himself and his learning behavior, and the former Hauptschule student oriented toward a need for personal attention and influenced by others. If one derives the type "former Gymnasium student" and "former Hauptschule student" from the orientations in the interviewees, one must admit, however, that there are students in both groups who represent these types only to a certain extent. For example, the former Gymnasium student Anu, who spoke vaguely of being interested in some subjects but did not really refer to plans for the future except that she wanted to be able to "get better grades this time and thus be more successful with applications." She saw the reason for her earlier failure in the fact that she was always an outsider at her Gymnasium. Now however, she stated, she works hard in school. She puts "a lot of pressure on myself (...) Because I think to myself, I want to make it and if I want to make it, I want to make it well." However, she still cannot quite take responsibility for her performance: "In terms of willpower definitely, but in terms of nerves, I don't know," she said. She gets emotional and intellectual support from frequent meetings with fellow students, and as far as learning for school is concerned, she said, "I like to stick with others." She does not, however, expect any personal support from teachers.

Among the former Hauptschule students, Cem clearly differed from Bethina who served as a model for the typification. Cem said that he did not have to go to Hauptschule because of his grades, that it had been his parents' decision and "maybe due to ignorance, maybe due to laziness." Like Anu, he did not see any reasons in his own actions for his previous rather broken school biography, but now he sees his current performance as his own fault. Although he described himself as somewhat "lazy (...) or rather moody," he said that now he tries to counteract this and, for example, to do homework immediately after school before he goes to his room, to give laziness no chance. His grades are good now and he keeps an eye on them. He does not mention an interest in particular subjects, but he has a clear goal: he wants to become a forester and describes how he imagines that. When asked to state his expectations of teachers, he shows the respect for elders that he must also show his father by saying that he should not expect older people to change to please him. On the other hand, he thinks it is right "that they (the teachers) sometimes (...) talk to us about personal matters (.). that they have a personal relationship with the students." Unfortunately, this would not be the case for all teachers.

#### 3.2 The systematic classification

Based on the insights from the typification, the statements of the ten interviewees were first arranged into six thematic areas: (a) dealing with demands in previously attended schools, (b) dealing with current demands as well as strategies to achieve good performance, (c) dealing with quality standards and feedback, (d) expectations of teachers, (e) academic interests, and (f) biographical horizon (see also Table A1).<sup>3</sup> In this re-run through the entire material, four theoretical categories were identified that clearly relate to Dreeben's categories, but that also match our material and maximally distinguish students with different school biographical experiences; this last requirement – as was already apparent in the formation of the types – could only partially be achieved.

The first category is *agency*, and it refers to the perception of learning success as a result of individual achievement and also to dealing with this perception. This comes close to what Dreeben called "independence" – the expectation that students solve their tasks independently. But of course, in keeping with the age of the students, it refers to a much broader kind of independence, namely taking responsibility for one's own academic success or failure. Dreeben's notion of performance orientation as adhering to academic standards and trying to achieve the best grades possible is also reflected in this. The accounts given by Kenneth, Bethina, Anu, and Cem when talking about and interpreting their student behavior illustrated manifestations of such agency. For example, we classify the distinctly self-critical interpretations of failure as a consequence of a lack of interest (Kenneth, former Gymnasium student; mentioned above) or of opposition – "(...) I did pretty much everything you shouldn't do, just like that and on principle. I know I was just seeing

<sup>3</sup> Assignments of the material to thematic areas and concepts can be found (each with sample items) in the Appendix A.



Figure 2a Individual degrees of normative orientations of former Gymnasium students



Figure 2b Individual degrees of normative orientations of former Hauptschule students

how far I could go." (Peter, former Gymnasium student) - as showing a high degree of agency (cf. Figure 2a). In contrast, we assign the interpretation of failure as something that is due to puberty or a big family, as former Hauptschule student Bethina (cf. Figure 2b) did, to the opposite pole, since causes were named that could not have been changed even with the strongest will in the world. Similarly, student strategies such as "showing interest in everything" in order to learn really well (Kenneth, former Gymnasium student) or "started reading science journals and (....) noticed that I am actually really good at these subjects" (Eva, former Gymnasium student) are interpreted as an expression of such independent agency. We concluded that this type of agency was at a medium level of expression when, for example, it was rejected as an interpretation of the previous school biography, but adopted for the learning process at the time of the interview, or when a student stated that they were never absent, always concentrated, and usually got good grades, but when they did not manage to do so, they simply "cheated" (Bangkok, former Gymnasium student). It was – as these remarks have already indicated - mainly the interview passages in thematic areas a-c (Table A1) that contained statements about agency.

We refer to the second category as universalism/specificity, and it combines the two categories mentioned separately by Dreeben since the two dimensions were mostly addressed together in the students' statements. This means that students accepted being judged by teachers based on their academic performance and, in principle, only according to that performance, each student being one among many who were all treated equally. This seems to be one of the most difficult demands that schools place on their students. Only Kenneth (former Gymnasium student) fully accepted it. Eva, who otherwise also stood out among the former Gymnasium students with her universalistic orientation, already made certain concessions here. She did not expect any special treatment, but she did complain about a teacher who predicted her grade would be a 5 (F) if she continued to perform poorly. Such an orientation was classified as a medium expression of the category. We classified the expression of universalism/specificity as low if an interviewee stated that they "conveyed a certain image of myself" in order to improve their grades or sometimes asked a teacher if they "dislike me" (Fabi, former Gymnasium student) or even expected a "personal bond" with teachers (Cem, former Hauptschule student).

The third category is *interest* and refers to academic interest; the category here is thus congruent with the thematic area and does not require any special explanation. We add it to Dreeben's categories (or to be precise: the categories that are still recognizably inspired by Dreeben) because students also mentioned interests, for example, as a basis for agency and as a source of motivation that made them independent of whatever else happens.

We have already pointed out the relevance of "interest" for Kenneth and Eva (the former Gymnasium students). In contrast, some interviewees did not address interest at all and indicated that they were motivated in other ways. The former Gymnasium student Peter displayed a high level of agency at the time of the interview, but he complained that he found it difficult: "The day sometimes just has no flavor. You know, it's just so dull, you just come here and sit in class because you just have this long-term goal (...) other days, you have fun like just that, then it's like when you were in school like before, you know, like a place you go to for social contact...."

Finally, the fourth category is *biographical horizon*, which aligns with the thematic area and has a similar status in the theoretical structure to interest. We assume that this orientation also ultimately has a motivational content. The biographical horizon can be a very clear one, as for Eva, the former Gymnasium student who made calculations with her grades in order to determine whether they were good enough to study medicine. Alternately, it can be barely visible, as for Bethina (former Hauptschule student), who spoke only vaguely of the "social sector" without knowing what she would like to do there or even whether she needed a general university entrance qualification at all.

#### 3.3 Dealing with exceptions

The classification shows a clear trend (Figure 2a/b): Overall, the former Gymnasium students were clearly more universalistically oriented, they also mentioned interests more frequently and their biographical horizon was clearer. None of the former Hauptschule students scored highly in the agency category. Considering the small number of cases - which were, however, subjected to an elaborate analysis - it is hardly possible to draw any clear conclusions. However, the classification does provide a theoretical framework that could be useful for further analyses. The clearest exceptions to the characteristics assumed for a group are again found in Anu (former Gymnasium student) and Cem (former Hauptschule student). Anu said she never felt comfortable at the Gymnasium; Cem, on the other hand, claimed that he only attended the Hauptschule because of his parents' ignorance or laziness. It is possible to say that each of them was misplaced at their former schools. This raises the question of whether and to what extent the identified characteristics are school-type-specific socialization effects or alternatively - if one wants to see the students less deterministically and more as actors - a school-type-specific choice of strategies of "doing the job of a student" (Perrenoud, 2010). Or is it rather a matter of individual characteristics that then lead to a decision for a certain school type (matching or complementary to the characteristics) - the right student for the right school? This is discussed in more detail below.

#### **4** Discussion

In our study, we wanted to develop a grid of students' normative orientations based on a theoretical approach to explain the influence of stratification in secondary education I (years 5 through 10) on success in academic SCE, and we assumed normative school-type effects as being central to this influence. We assumed that academic SCE has its own normative structure, which connects to the learners' orientations acquired in their previous school biography. A first result of our study is that the normative orientations described by Dreeben could be identified - in a manner appropriate to the age and circumstances of our students, and therefore somewhat modified when these students spoke about their orientation toward school. They were supplemented by the categories interest and biographical horizon. Former Hauptschule students reported less agency, universalism, and interest in school subjects and had biographical goals that were less clear than those of former Gymnasium students. Following our theoretical approach, this should affect their prospects for success in academic SCE. Since our qualitative study focused on first-year students, we were not able to link their subsequent success or failure to their normative orientations.

However, a comparison of the groups with the greatest differences former Gymnasium and former Hauptschule students - showed only a partial relationship between previous school type and the categories. In particular, a more detailed analysis of the exceptions raised the question whether it is really a school socialization effect that accounts for the pattern. The two students who deviated significantly from the pattern described themselves as misplaced at the secondary school they had chosen, in one case a Gymnasium, in the other a Hauptschule. This raises the question whether the "typical orientation" of former Gymnasium students and of Hauptschule students in the other cases is based on the socialization effect of their school or whether it is more likely that the students attending this type of school have already brought an individual orientation with them in the sense of a match between the orientation of the student and that of the institution as a result of selection by both sides. Finally, a third conjecture is that the socialization effect of the institution takes place only when there is a certain degree of correspondence with individual preconditions. These are questions that cannot be answered here because material relevant to these issues was not collected, but they can at least be seen as a critical limitation of the thesis that there is a normative school socialization effect here. The development of the set of categories presented here can serve as a starting point for future investigations into the question of the existence, development, and possibly the connectivity of school-type-specific normative orientations. Furthermore, this theoretical grid should be used in quantitative studies, which would

make it possible to include intermediate school types and to analyze gradual differences in normative orientations of students with different school biographies.

The normative orientations that we found reflect, among other things, the interpretation of and attitudes toward performance in individual school subjects. The more independent a student is, the more they accept that teachers treat them as a student and thus their learning progress and achievements are the focus of interest, and the more they take an interest in subjects and their own life planning, the more successful they should also be in academic SCE. The extent to which normative orientations influence a student's performance and a teacher's assessment is not something that can be determined on the basis of our research. A further question concerns the extent to which normative orientations influence life chances beyond school, such as placement in the labor market. A study by Heckmann et al. (2006) showed that normative orientations related to the duration of school experience played a significant role in labor market opportunities even where there were no differences in the performance and cognitive prerequisites (see also Protsch & Solga, 2015). If the assumptions and preliminary findings on school-typespecific socialization effects sketched here are confirmed in further studies, this would be evidence of multiple disadvantages for students in less demanding educational pathways of a school system with early stratification. Not only would they be disadvantaged with regard to the opportunities for upgrading their school-leaving qualifications and profiting from them in the labor market, but in addition their acquired attitudes could make it difficult for them to succeed in finding jobs and could limit their job mobility.

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# Appendix A

Examples of the extent of	the normative orientations
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Theoretical concept (level of expression)	Statements from the thematic area:	Examples of allocated statements:					
Agency (1) Level of expression: – high – average – low (the "average" level is the result of a combination	a) dealing with expectations of the previous school (retrospective evaluation)	<i>high</i> : "And then I was just lazy. And over time, my grades became worse. And if I had studied, I would have made it. But then you don't pay attention in class and don't have enough knowledge and then you mess up () the exam" <i>low</i> : "Well, that was this phase in puberty () and I'm from a very big family."					
of statements that were classified as "high" and "low"; for a person, for an area, or for two areas)	b) current dealing with expectations/ strategies, to achieve better performance	<i>high</i> : "began to read economy magazines and () realized that I'm actually quite good at these subjects." <i>low</i> : comments on her absence from over 50% of the lessons: "Well, it's not good if you miss class, I realized". On being asked how school could help deal with this: "Well, they made it mandatory for me to bring a doctors certificate, that definitely helps."					
	c) coping with expectations and feedback via grades	<i>high</i> : Talking about grades and grade point average: "I just have to invest more time. The only thing that bothers me is that should I choose medicine, maths could really destroy my grade point average. I need to pay a bit of attention to that." <i>low</i> : Answering about bad grades: "I'm just never really sure, but I have a good feeling () because my body tells me that."					

Universality and Specificity (2) Level of expression: – high – average – low (the level "average" is the result of a combination of statements that were classified as "high" and "low"; for a person, for an area or for two areas)	a) Current dealing with expectations/ strategies, to achieve better performance	<i>high</i> : "The inability is my fault () It's meeting these demands where I fail." <i>low</i> : "If you're not that good in school but are on good terms with the teacher, sit up straight and just give a certain impression, you can get a better grade."					
	b) coping with expectations and feedback via grades	<i>high</i> : "I participated well in lessons. But then I thought I could do the same in the exam and prepared for it () and then I messed it up." <i>low</i> : "I just really can't paint very well and painted a portrait at home, for five or six hours. I really put a lot of effort into it () he still gave me a C. I have to admit I was pretty down after that because he didn't see the effort I put into it and that I actually can't paint at all. He just didn't see us as individuals."					
	c) expectations of teachers	<i>high</i> : "Oh, no () how could they even help me? I mean they do help us by giving lessons." <i>low</i> : "It's important that they talk to us about personal matters. To establish a personal relationship with the students."					
Interests (3)		<i>existent:</i> "I especially like mathematics. I'm a huge fan of natural science; it's the same with English. I like languages, but only the practical part of it, the talking part. What I neither can do nor like: analyses." <i>nonexistent:</i> does not answer questions about aims nor about interests and adds: "I'm just that type of person. Apparently I found myself or what I wanted to do in life pretty late."					
Biographical Horizon (4)		existent: "And it only confirmed my wish to study chemistry even more. Or physics, just some natural science. If my grades are good enough, it could even be medicine. As long as I can do research somewhere." <i>nonexistent:</i> On inquiry, no career aspirations were indicated or it was explicitly stated that the student was still undecided.					

\* These example statements show how the material was used, but the classification is overall based on a synopsis of the interviewee's statements. With a qualitative approach, it is permissible to assign a text section to multiple categories since one text can address multiple thematic areas; the chart therefore includes examples that were assigned to more categories than the category that they illustrate here.

The following punctuation in brackets is used: (.) short pause; (..) longer pause; (...) part omitted.

# STUDIA PAEDAGOGICA

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# YOUTH AT RISK IN HIGHER LEVELS OF UPPER SECONDARY EDUCATION: A SUPPORTIVE INTERVENTION TO PREVENT SCHOOL FAILURE AND DROP OUT

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#### ABSTRACT

This study addresses the question of how learners whose parents have a migration background can be supported in upper secondary education to prevent their dropping out of education. To that end, we conducted interventions in an upper secondary education setting in order to improve school grades, subject-specific self-conceptions of ability in mathematics and German, motivation to study, and perceived self-efficacy and we evaluated the effects on learner achievements. We applied a two-phase process: a more virtual approach during restrictions imposed during COVID-19 and a more face-to-face approach in which learners were tutored by teachers. The intervention showed an improvement in grades in German and in the self-conception of ability in mathematics. However, this was only established during the face-to-face intervention phase. During the COVID-19 phase, and thus when there was no possibility of standardized intervention, no specific effects were observed.

#### **KEYWORDS**

upper secondary education; intervention; dropout risk; migration; performance; subjectspecific ability self-concept

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#### Introduction

At the upper secondary level, unevenly distributed participation in education is related to more than language barriers. It is co-determined by the sociostructural characteristics of origin (Düggeli et al., 2015; Maaz et al., 2008; Scharf et al., 2020; SKBF, 2018; Verhoeven, 2011). These characteristics can create educational obstacles for learners, as has been particularly welldocumented in crossover research (see, for example, Becker et al., 2013). Even if young adults succeed in entering higher qualifying training, the problems have often not been overcome. In most cases, the problems continue to exist in the challenge not to immediately drop out of the training after successfully starting it. The stress of the training situation for these learners is often only relieved if they have a degree certificate that opens access to a working life and thus creates a good starting point for their further professional biographical development (Hupka-Brunner & Meyer, 2021; OECD, 2022a).

#### 1 Problem setting and questions

In order for national education systems to be informed about the extent to which younger generations can integrate into society by acquiring occupational certifications, many countries report figures on participation and graduation rates at this level at regular intervals. For example, according to the OECD (2022b), the average participation rate in Europe in 2019 was 84% (15- to 19-year-olds). The rate is 80% in Germany and around 88% in Switzerland. The number of graduations in the same age group is slightly lower: the OECD average is about 80%, in Germany it is about 73%, and in Switzerland about 84%. These figures may vary depending on the age group studied. For example, in Switzerland, some apprentices have not yet completed their education at 19; when considering all learners who have completed upper secondary education by the age of 25, the rate in Switzerland is about 90% (FSO, 2021). Thus, at least in Switzerland, a large number of young adults seem to be able to achieve a degree in upper secondary education by the age of 25. Including gender and family characteristics in the analyses, a heterogeneous picture emerges, especially with regard to higher-level qualifications (ISCED 35) (UNESCO Institute for Statistics, & Eurostat, 2012). For men, the overall graduation rate for higher-level qualifications is 34%; for women, the rate is around 44% (Gaillard & Babel, 2018). It is also apparent that learners born in Switzerland to Swiss parents achieve a 20% higher graduation rate from higher education courses than learners whose parents are not Swiss, regardless of whether the latter were born in Switzerland (Gaillard & Babel, 2018).

Such inequality distributions are not new, and they have long been discussed in relation to questions of justice theory (Blossfeld, 2013; Dumont & Ready, 2020; Heinrich, 2010). The basic premise of modern education systems with a Western influence has been critically questioned. It has been explicitly stated that no one in Switzerland should be hindered or excluded from participation in education on the basis of their characteristics of origin. Violations of this assured right to participate centrally affect the educational biographical developments of adolescents. However, misadministration also affects the economic system, which relies on young people who are as well-educated as possible. Both the individual and the socio-economic areas concern fundamental issues of common and fair participation in civil society. These hold together, as social pillars, the collective togetherness (Putnam, 2015; Sassen, 2014). If damage can be identified in these areas - that is, if inequalities are found that can be identified as injustices - compensatory measures are necessary for those who have been disadvantaged (Becker & Schoch, 2018; Esser & Seuring, 2020). Moreover, these measures must be maintained until the causes of these injustices are eliminated. This paper is a first step in this regard. The focus is on the conceptualization and implementation of corrective regulatory support for learners whose training risks are increased. This support must be effective during transitions and throughout the entire training period at the relevant levels of education.

This study concerns support throughout the training period. The focus is on young people with a parental migration background who have completed higher-qualifying education at the upper secondary level. However, if their grades at this level of education are not sufficient, or if their self-conception of their abilities is unstable and their perceived self-efficacy at school and motivation to work are weak, the probability that they will be able to complete their education decreases. To counter this situation, an intervention was carried out in a higher-qualifying training course in Switzerland. The aim was to support committed and motivated learners so that they could complete the training. The initial question of this study begins at this point. The question is: To what extent does support-oriented intervention succeed in positively influencing the development of learners' grades, self-conception of subject-specific skills, general perceived self-efficacy at school, and motivation to work?

#### 2 The intervention

The intervention proposed to achieve the objectives was open to learners with a parental migration background. The learners had to be committed and willing to attend an additional weekly learning session. The intervention was located at a business school in Switzerland. This is a higher-qualifying full-time upper secondary level vocational school that prepares learners for a qualified vocational qualification. At the same time, this training gives them the option of attaining the Federal Vocational Baccalaureate. The intervention is presented below in conformity with its structural framework. The embedded contents are discussed. Finally, the characteristics to which the intervention was directed are reported. An attempt is made on the basis of these steps to represent the intervention effect.

#### 2.1 Structural Phase I

The first phase of the intervention lasted from January 2020 to December 2020, a period understandably referred to as the COVID-19 setting. The COVID-19 setting was characterized by distance teaching and distance learning. Formally, meetings during this phase can be described as ad-hoc online meetings. We refrained from imposing an obligation to participate. Nevertheless, attempts were made to meet with the young people regularly electronically, largely through individual exchanges (see Figure 1).

#### 2.2 Structural Phase II

During the second phase, which lasted from the beginning of 2021 until the end of June 2021, the structural teaching conditions normalized; this phase can thus be referred to as a "normal setting" in terms of the intervention. It was possible to work with the learners as planned, weekly and face-to-face. Participants were expected to participate regularly in person (see Figure 1).

## 2.3 Content Phase I (January 2020 to December 2020)

During the first phase, an attempt was made to actively approach the learners in the intervention group and to respond to their difficulties and questions arising from the situation. Looking back, the focus was not only on school learning problems but, in some cases, also on questions about the challenges of shaping life in general. These questions could be explained more and more in terms of the learner's connection to their home. Attempts were also made to advance the adolescents in their learning, differentiated by questions about their learning organization. Particular care was taken to clearly see the progress they had made and to attribute the causes to their own abilities wherever possible. In general, the content of the first phase was not very systematic. However, this phase is discussed here, because it allows at least the development of a sense of how the features discussed here changed under the condition of highly dynamic school realities (see Figure 1).

## 2.4 Content Phase II (January 2021 to June 2021)

At the beginning of 2021, the teaching situation changed again to a more structured level. At that time, it became possible to implement the systematically organized intervention units as planned. It was possible to work with the intervention participants, as planned, for three hours a week. Teachers in German, mathematics, English, economics, and law were available to them. Thus, those subjects that are particularly lucrative in the training plan were prioritized. Work was focused on problems that students brought with them. Basically, the intervention was designed as a learning setting in which the learners largely self-directedly advanced their tasks on the basis of unresolved questions and upcoming content-related problems or deficiencies. This usually included the areas of task aids and upcoming tests. Stabilizing the selfassessment of various abilities was also an important part of the intervention. This was attempted by identifying strengths during individual support that were then made visible by the supporting teachers as learning successes. Work organization issues were also addressed, and learners were supported in this regard. The learners were thus given individually supervised learning time as well as the opportunity to design the time available to them together



Figure 1 Basic model of the intervention; structural construction, content-related design, and impact areas

with the others. During the intervention units, learning groups formed in which socially oriented self-regulation and co-regulation took place. This also made aspects of social-emotional learning visible (see also Dueggeli et al., 2021) (see Figure 1).

## 2.5 Dimensions of impact

Based on the structural and content-related frameworks and on the background of the intervention objectives, three impact dimensions were examined: first, the grades in the subjects of German and mathematics; second, the learner's subject-specific self-concept of their own ability in these subjects; and, third, two motivational aspects of learning: general perceived self-efficacy at school and the motivation to work. With respect to the grades, the intervention focused on the area that centrally decided on whether to stay in training. They were therefore the focus of the intervention as a performative criterion. Cognitive and motivational processes are linked to grades (see OECD, 2016) and are promoted in an interventional manner here as target dimensions and recorded as dimensions of impact.

# 3 Hypotheses, design, instruments, and sample

The initial question is differentiated in relation to the two intervention phases into the following hypotheses:

- Hypothesis: Intervention Phase I: The grades in the subjects of German and mathematics, as well as the associated subject-differentiated self-conception of abilities, the perceived self-efficacy at school, and the motivation to work change to the same extent in the intervention group as in the reference groups<sup>1</sup>.
- Hypothesis: Intervention Phase II: The grades in German and mathematics in the intervention group increase more strongly than in the reference groups. The self-conception of ability in mathematics and German increases more in the intervention group than in either reference group. Perceived self-efficacy at school and motivation to work also increase in the intervention group as compared to the two reference groups.

<sup>&</sup>lt;sup>1</sup> Note: No substantive work was possible (due to COVID) during this phase of intervention. The corresponding variables could not be systematically worked on, so no effects are expected. Specifically, H0 cannot be rejected.

#### 3.1 Design

As the reported basic model shows, the first phase of intervention work started at the end of February 2020. It preceded the T0 measurement in January 2020. The time span between the T0 measurement and the start of the intervention was used to identify those young people for whom the intervention was designed. Young people could be admitted to the program only if their parents had a migration status. By default, the intervention was designed for a weekly work unit of 3 hours (see the section Intervention). In addition to process-accompanying qualitative evaluation formats, which were carried out monthly with the learners and once per term with the teachers, six-month quantitative impact tests took place in a quasi-experimental intervention control group design with four repetitions of the measurements. The first three measuring dates have been fully evaluated and are included in the present study (T0 January 2020; T1 January 2021; T2 June 2021).

#### 3.2 Sample

The intervention was carried out with students from the 2019-2022 cohort at an upper secondary-level business school. This school-based organized vocational training leads either to a certificate of professional competence or to a vocational qualification. It thus enables a higher-qualifying grade at the upper secondary level (ISCED 35). Learners were offered the intervention based on possible parental migration status. Regular participation and personal commitment were required. This condition was met by 14 young people, who formed the intervention group. Two reference groups were also formed. The first (reference group I) comprised 26 young people. They could have joined the intervention group because of their parental migration status, but they decided not to participate. The second reference group (reference group II) consisted of 13 learners. Their parents had no migration status. They were therefore not eligible for intervention (see Table 1). The average age was comparable in all groups: 17.64 years (intervention group), 17.12 years (reference group I) and 17.31 years (reference group II). In the intervention group, 7 participants (50%) were male and 7 (50%) were female. In reference group I, 16 learners (61.5%) were male and 10 (38.5%) were female. In reference group II, 9 learners were male (69.2%) and 4 (30.8%) were female. After selecting the learners, it was recorded whether the learners spoke German at home. In the intervention group, 4 adolescents (28.6%) spoke German and 10 adolescents (71.4%) did not. In reference group I, 12 young people (46.2%) spoke German at home and 14 (53.8%) did not. In reference group II, whose parents had no migration status and who were therefore not eligible for the intervention, 10 learners (76.9%) spoke German at home and 3 learners (23.1%) stated that they did not speak German
able 1 Cample description

	N (53)	A, (ye	ge ars)		Gen	der		M (Sel	igratio of pa ection	n stati rents criteri	st (uo	Laı	nguage at hc	e spok me	en
Group		Μ	SD	Μ	ale	Fen	nale	Y	SS	Z	0	Geri (CH/	man D/A)	Non- ma	Ger- un
4				z	%	z	%	z	%	z	%	z	%	z	%
Intervention Group (With migration status of parents and regular participation)	14	17.64	1.08	4	50.0	4	50.0	14	100	0	0	4	28.6	10	71.4
<b>Reference Group I</b> (With migration status of parents, without intervention)	26	17.12	1.03	16	61.5	10	38.5	26	100	0	0	12	46.2	14	53.8
<b>Reference Group II</b> (Without migration status of parents, without intervention)	13	17.31	1.11	6	69.2	4	30.8	0	0	13	100	10	76.9	3	23.1

at home. The proportion of learners who speak German at home therefore sees an increasing trend from the intervention group to reference group I up to reference group II (see Table 1).

#### 3.3 Instruments

The grades of the students in the subjects of German and mathematics were recorded. The subjectspecific self-conceptions of ability in mathematics and German as well as motivation to work and general perceived self-efficacy at school were also gathered (see Table 2).

#### 3.4 Evaluation methodology

To test the hypotheses, a Kruskal-Wallis test for independent samples and corresponding post-hoc comparisons with the change values (T0-T1 and T1-T2) were calculated. A non-parametric approach was chosen because the change values of some variables could not be assumed from normally distributed data (grades in mathematics/ German; self-conceptions in mathematics/German). There were inhomogeneous group variants (grades in mathematics and selfefficacy), and no interval scaling of the values could be assumed (see grades in mathematics and German). In addition, due to the risk of distortions due to outliers in the change values and the rather small group sizes, the less pre-supposed procedure was chosen.

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Identified characteristics and operationalization

Instrument	Example item	Source
Self-conception of ability in mathematics	I'm good at mathematics.	Schwapzor et al. (2005)
Self-conception of ability in German	I'm good at German.	Schwanzer et al. (2003)
General perceived self-efficacy at school	I can solve difficult problems in class if I make an effort.	Jerusalem and Satow (1999)
Motivation to work	Most of the time, I have a lot to do.	Kirschkamp (2008)
School grades in German		
School grades in mathematics		

#### 4 Results

#### 4.1 Intervention Phase 1 (T0-T1)

During the first intervention phase, the so-called COVID-19 phase, no significant differences between the groups were found in the values of the analyzed characteristics. However, the German and mathematics grades tended to show a slight decline in all three groups. The change in the characteristics of perceived self-efficacy or motivation to work was similar. Here, too, a descriptive decrease can be observed in all three groups. With regard to the subject-specific self-conceptions of ability in mathematics and German, it can be stated, again descriptively, that in the area of German, there was a slight increase in all three groups. In the area of mathematics, it was reduced in the intervention group, while the values in the two reference groups increased. However, these mean value differences cannot be statistically assured as group differences.

Looking at the intervention group specifically in comparison with the two reference groups, the following trends are shown, again descriptively: For grades, the values in the intervention group were reduced to a greater extent than in the two reference groups. In the self-conception of ability in German, the increase for the intervention group was greater than in the reference groups; in the self-conception of ability in mathematics, there was a slight decrease in the intervention group and a slight increase in the reference groups. In terms of motivation to work, the decrease in the value for the intervention group was somewhat less than in the two reference groups (see Table 3).

	Me of cl	an ranki hange T(	ngs )–T1	df	н	р
	IG N=14	RG I N=26	RG II N=13			
Grade in German	32.64	25.69	23.54	2	3.05	.218
Grade in mathematics	31.39	25.46	25.35	2	1.66	.435
Self-conception of ability in German	25.43	25.54	31.62	2	1.58	.45
Self-conception of ability in mathematics	32.61	24.52	25.92	2	2.68	.262
Perceived self-efficacy	20.57	27.29	33.35	2	4.65	.098
Motivation to work	22.36	29.67	26.65	2	2.06	.358

Table 3
Results TO–T1

#### 4.2 Intervention Phase 2 (T1–T2)

During the second intervention phase, there was a statistically significant change in the German grades and in the subject-specific self-conception of ability in mathematics (see Table 4). Downstream individual group comparisons show that both effects were due to the differences between the intervention group and reference group II (the group without intervention and without parental migration). This means, first, that a positive change in the German grades of young people from families with a migration background was offset by a decrease in the German grades in the group without intervention and without parental migration (see Table 4). Second, with regard to the subject-specific self-conception of ability in mathematics, the decreasing value for reference group II was faced with an increasing value among young people with a parental migration background (intervention group) (see Table 4). All other characteristics showed statistically insecure trends in change. The mathematics grades tended to decrease in the reference groups and increase in the intervention group. The self-conception of ability in German increased somewhat in the intervention group and in reference group II, while it decreased slightly in reference group I. Perceived self-efficacy tended to increase in all three groups. In terms of motivation to work, a decreasing trend can be seen in the intervention group and in reference group I. In reference group II, it rose somewhat during this phase (see Table 4).

	Mea of ch	an rank ange T	ings 1–T2	df	н	р	Post-hoc (Bonferroni)		
	IG N=14	RG I N=26	RG II N=13				IG – RG I	IG – RG II	RG I – RG II
Grade in German	18.71	28.83	32.27	2	6.58	0.037		p=.049; r=.46 d=1.04	
Grade in mathematics	23.75	29.08	26.35	2	1.19	0.552			
Self-conception of ability in German	21.46	30.60	25.77	2	3.43	0.18			
Self-conception of ability in mathematics	18.64	26.79	36.42	2	9:17	0.01		p=.007; r=.58 d=1.42	
Perceived self-efficacy	31.07	27.48	21.65	2	2.57	0.277			
Motivation to work	28.71	27.37	24.42	2	0.56	0.576			

Table 4 Results T1–T2

#### **5** Discussion

The positive development of the German grade during the second intervention phase was a central result of this study. Learners whose parents had a migration background and whose language at home was less frequently German made greater progress than learners without a migration background who more often spoke German at home. This finding indicates an optimistic direction. With the effect in German, the positive change affected an area that is highly significant for general school development. If German grades improve for learners who, due to migration, are at increased risk of not completing their training, the basis for other subjects taught in the local language of instruction will also be stabilized. The second central finding is the positive change in the subject-specific self-conception of ability in mathematics. This change concerned the same two groups: it was again the learners of the intervention group who changed positively compared to the change in reference group II. The attempts to positively influence the development of grades and, in parallel to this, to stabilize young people in their self-assessment with regard to their ability in subjects, seem to have had a desirable effect here, at least to some extent. However, the analyses of the qualitative data of this study will show exactly how internal inter-relationships are to be understood. This will stabilize the basis somewhat in order to be able to further develop the structure and implementation of the intervention in a differentiating manner.

These two effects cannot hide the fact that the analyses leave central questions unanswered. For example, further thought should be given to how the effectiveness of the intervention could be broadened and thus extended to other characteristics. In addition, further analysis is needed to address the question of why the developments between the intervention group and reference group I are not more different. In concrete terms, this means trying to discuss the extent to which the proportion of young people who speak German at home may play a role here. This proportion was higher in reference group I than in the intervention group. In general, this could mean that the intervention had an effect primarily on the young people with a parental migration background who did not speak German at home.

The fact that the intervention also produced stronger effects during the second phase could indicate that supportive funding at the upper secondary level should be coupled with an obligation to participate regularly in face-toface formats. If participatory and self-regulated forms of learning are to be sought, which must also be the responsibility of the learners themselves, a formal obligation to participate regularly seems to be a prerequisite for learning and training success. Without structuring framework requirements, learners have to create formal learning structures themselves. This is undoubtedly important. However, it takes away the time and attention they need for learning specific subject matter. We saw this clearly during the first phase of intervention, which was not very systematically structured. It was necessary to clarify questions about the structuring of the day in general with the young people before addressing the subject matter. Moreover, in light of the developments during the first phase of the project, this topic may need to be considered in general at the upper secondary level. In educational terms, the findings indicate that young people are empowered in their responsibility to regulate and shape their own learning in more open learning formats, which can include distance formats. In this context, the development of the self-conception of ability seems to be of particular importance.

However, all the findings reported here must not give the impression that this offer creates educational justice. As the study was implemented, its main concern was to ensure that the negative effects of educational inequality not become even more pronounced. However, the basic lever for mitigating this inequality cannot be exclusively compensatory individual support. It must start at the level of educational structure at the same time. The course must be set here so that structural risk factors for educational inequality can also be eliminated at the upper secondary level and beyond. That is not easy. And if it means taking specific counter-measures, especially with programs such as this one, then that is what must be done. It is necessary to structurally anchor new approaches to knowledge, as may emerge from the study presented here, in compulsory compensation channels. Perhaps this is not particularly fair, as some have to give more time and commitment to their education at the upper secondary level because of their characteristics of origin than others without these risk factors. However, protecting individuals from a situation in which they are released into the labor market without a degree seems to be a primary objective, and one that does not prevent them from undertaking their professional development with as much freedom as possible. This is a professional biographical life-design justice that should be further developed situationally and prospectively, as well as structurally.

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# STUDIA PAEDAGOGICA

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### EDUCATIONAL DECISION MAKING OF REPEATEDLY UNSUCCESSFUL CZECH VOCATIONAL EDUCATION AND TRAINING EXAMINEES LEADING TO PASSING THE MATURA EXAM

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#### ABSTRACT

Repeatedly unsuccessful vocational education and training (VET) examinees are educational policy actors who, through their decision making, influence not only their completion of upper secondary education but also their futures. Drawing on biographical narrative interviews with 18 Czech VET examinees who failed the Matura exam at least twice, we identified how examinees make their decisions about the Matura exam and how their individual decision-making ways differ. For our participants, we can confirm that the ways they make decisions depend on which attempt to pass the Matura exam it is, as well as on in what context and on what the repeatedly unsuccessful examinees have to decide. We concluded that repeatedly unsuccessful VET examinees perceive decision making about passing the Matura to follow the principle of free choice in the first and second attempts. Due to the influence of institutionally formed beliefs about their own academic success, it is a rather limited choice. If in the third attempt they integrate their decisions about passing the Matura exam in the context of their career development, their decision making becomes a process in which we identify several individualized steps.

#### **KEYWORDS**

Matura exam; vocational education and training; upper secondary education; decisionmaking process; Matura examinees

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#### Introduction

Graduating from upper secondary education (ISCED-3) represents an important milestone in a person's life and it "has become increasingly important in all countries, as the skills needed in the labour market are becoming more knowledge-based and workers are progressively required to adapt to the uncertainties of a rapidly changing global economy" (OECD, 2018, p. 180). Successfully passing the Matura exam is one way to complete upper secondary education in the Czech Republic. Unfortunately, since the implementation of a unified Matura exam in 2011, the number of VET examinee failures has been growing (CERMAT, 2019; Vojtěch et al., 2020) and the failure rate is becoming an issue for the current educational policy in the Czech Republic, because unsuccessful VET examinees have no certificate of successful ISCED-3 completion (MŠMT, 2020).

For these reasons and for the purposes of this study, repeatedly unsuccessful VET examinees are viewed as educational policy actors as well as an at-risk group because after their failure they are caught in a low-education trap and without qualifications. Our aim is to determine how repeatedly unsuccessful VET examinees make decisions about the Matura exam, what circumstances enter into their decision-making process, and how the process differs for each of them. We focus on explaining the choices and decision making of students and examinees of vocational and technical tracks who completed nine years of compulsory schooling (ISCED-1 and ISCED-2), studied a selected educational program at a selected secondary technical school, a lyceum, or a secondary vocational school (Act No. 561/2004 Coll<sup>1</sup>), and first attempted to pass the Matura exam after four years of successful studies at one of these types of schools (further referred to as "VET examinees"). Even though we are aware that the making of each educational decision (including the decision to pass the Matura exam) is set into the context of the individual biographies of the examinees as young adults, many other stakeholders (e.g., the Ministry of Education, Youth and Sports, the local government, the teachers, and the school) enter this process in accordance with the Czech legislation. By monitoring the choices and decisions of the VET examinees who made three consecutive attempts to pass the Matura

<sup>&</sup>lt;sup>1</sup> In the Czech Republic, vocational training at the level of upper secondary education is provided in three types of upper secondary schools (further referred to as VET schools), which differ from each other in the ratio of the general and specialized components of the curriculum and the amount of practical experience. While studies at technical schools and lyceums are always concluded with the Matura exam, this does not apply in secondary vocational schools as they do not require a Matura exam.

exam, we have a unique opportunity to investigate the space for their decisionmaking process that is created by the Czech legislation and the impact of individual context on the decision making of VET examinees as well as on how they make their educational decisions within this space.

#### 1 Matura exam

The Matura exam is not unique to the Czech educational system. This type of exam is common in other European countries<sup>2</sup> as well. In these countries, the existence of the Matura exam is being justified in part by an effort to unify the requirements for graduates from the ISCED-3 level, which strengthens the role of the nations in delimiting the content, level, and conditions of the Matura exam. However, the form of the exam differs among the individual countries (see BBWF, n.d.; CERMAT, n.d.; Eurydice, 2021; NEC, n.d.; NÚCEM, n.d.).

Research of the Matura exam has indicated some preferred research topics, such as predicting students' previous and future achievements at the Matura exam based on their previous achievement at school (Želvys et al., 2021). Sočan et al. (2016) focused on predicting student achievement at university based on their Matura exam results. Some research groups have considered the formal aspects of the Matura exam. If the exam is set up correctly to test students, a substantial part of the exam is meaningful. On the other hand, research often focuses on the success rates of Matura exams and fails to focus on the views of the students (Gashi, 2018; Gerbovits & Szabó, 2014; Schmidt, 2018; Thaçi, 2017, etc.). In the Czech Republic, research has focused only on longitudinal analyses of student success rates (CERMAT, 2019) and on the transition of graduates from school to the labor market (Kleňhová & Vojtěch, 2011). Because we are interested in the views of students and examinees, we enrich this research focus to include their decisions about the Matura exam.

#### 1.1 Czech form of the Matura exam

In the Czech Republic, the form of the Matura exam and the conditions for passing it successfully are delimited in detail by law whether the student taking it completes an academic track or a vocational/technical track. The Czech legislation defines the space for identifying the decision-making processes of these students and examinees as educational policy actors and therefore we present the form of the Matura exam taken by our participants, VET

<sup>&</sup>lt;sup>2</sup> For example, in Austria, Kosovo, Hungary, Poland, Slovakia, and Slovenia.

examinees from 2018 and 2019, on the basis of the Czech legislation (Act No. 101/2017 Coll.; Act No. 242/2008 Coll.; Act No. 472/2011 Coll.; Act No. 561/2004 Coll.; Amendment to Act No. 82/2015 Coll.; Amendment to Act No. 370/2012 Coll.; Decree No. 177/2009 Coll.; Decree No. 232/2018 Coll.; Decree No. 371/2012 Coll.) in Figure 1.





The Matura exam, defined as "a school-leaving examination which shall consist of common and profile parts" (Act No. 561/2004, Section 77), is considered to be completed by those who successfully pass both parts of the exam. The Ministry of Education, Youth and Sports guarantees the common part of the Matura exam by establishing the extent of knowledge and skills that may be verified by the partial exams, guarantees the compilation of unified questions and task<sup>3</sup> evaluation criteria setting, and guarantees

<sup>&</sup>lt;sup>3</sup> For the spring exam period, the application to the Matura exam must be submitted by December 1 of the previous year and for the autumn exam period, by June 25 of the given year (Decree No. 232/2018 Coll.).

the central evaluation of the results of the partial exams in written form, including the period of time the students have available to complete them (Decree No. 177/2009 Coll.).

The profile part of the Matura exam consists of two or three mandatory exams that cover the professional qualification of the school graduates in vocational/technical tracks. The number of exams for each field of study is set by the Framework Educational Programme (FEP). The specific offer of both mandatory and optional exams is announced by the school director in accordance with the FEP and the school educational program (Act No. 561/2004 Coll.). The exams from the profile part may take place in various forms listed in Decree No. 177/2009 Coll. The selection of forms and the set of requirements for the partial exams of the profile part are governed by the school administration. Specific dates of oral exams of the common part and all exams of the profile part are set by the school director in the period delimited by the Ministry of Education, Youth and Sports (Decree No. 232/2018 Coll.).

#### 2 Matura exam as a decision-making opportunity

The law states that the Ministry of Education, Youth and Sports is the main stakeholder creating a specific decision-making situation upon the conclusion of upper secondary education (ISCED-3) for students in the fourth year at all types of secondary schools through the provisions of the School Act concerning registering for the Matura exam (Act No. 561/2004 Coll., Section 78). Anyone who wants to pass the Matura exam must submit an application for each attempt, even if they have been studying in an educational program that concludes with the Matura exam (Act No. 561/2004 Coll.; Decree No. 177/2009 Coll.).

In accordance with Czech law, the Matura exam is taken by students with legal adult status, so this step set by the law can be interpreted either as a conclusion of the right of the "active customers" to education with the knowledge of shared responsibility for education (Act No. 561/2004 Coll.) or as an exercise of the right of the "participatory citizens" to education in compliance with the Charter of Fundamental Rights and Freedoms (Parliament of the Czech Republic, 1993). In both cases, the legislation emphasizes *individual* choice, which completes previous choices carried out within the educational market; in both cases, it implicitly includes the presumption that students and examinees, as educational policy actors, can make free choices based on individual preferences, aims, and interests (Veselý et al., 2007). There are differences between the free choices of an active customer and of a participatory citizen. The free choice of an active customer

presupposes a rational evaluation of costs and gains in the spirit of rational choice theory (e.g., Daoud & Puaca, 2011); the free choice of a participatory citizen emphasizes the (dis)continuity of the choices in the context of other social roles that citizens play. Hodkinson and Sparkes (1997) use the term "pragmatically rational decision making" to describe this kind of decision making.

Based on an analysis of the Czech legislation, it is clear that Czech examinees should apply the principle of free choice in their decision making, but their decision-making processes can vary due to the role that examinees play according to the legislation. Nevertheless, the Czech law "views" the educational decision making of students and examinees in an individualized, rational, and context-free manner.

The legislation also determines the rights and obligations of students and examinees.<sup>4</sup> The student obligations only refer to the application to the first attempt. The first student obligation is to choose the second exam of the common part of the Matura exam (see Figure 1) and to state that choice in the application.<sup>5</sup> The second obligation refers to student grades in the last year of secondary school. Only students who successfully concluded their studies in the last year are allowed to attempt the Matura exam. The law guarantees several rights to the examinees, specifically the right to repeat the failed partial parts of the Matura exam, the right to a reevaluation of exam results,<sup>6</sup> and in specific cases, the right to an adjustment of the conditions

<sup>&</sup>lt;sup>4</sup> We understand the term "students" as a designation for individuals attending VET school. The moment they complete the first Matura exam attempt, we refer to them as "examinees." Examinations typically include the loss of student status. If the examinees succeed on the first attempt, they "lose" their student status. If the examinees fail on the first attempt, they lose their student status on August 31, i.e. just before the second attempt.

<sup>&</sup>lt;sup>5</sup> This condition only concerns the partial exams in the form of a didactic test and in an oral form (Amendment to the Act No. 370/2012 Coll.). For the VET examinees, this condition means that if their results are insufficient in the last year of their studies, they can only attempt to pass a part of the Matura exam at the first (regular) date, specifically only the partial exam taken in the form of a "practical exam" (see the profile part of the Matura exam).

<sup>&</sup>lt;sup>6</sup> If a student fails some part of the Matura exam, that student can request a reevaluation of the course and the results of the exam in writing. If an unsuccessful examinee has reservations regarding the evaluation of the didactic test from the common part of the Matura exam, they file their request with the Ministry of Education, Youth and Sports. If they request a reevaluation of other parts of the Matura exam, they file their request with the appropriate regional authority (Amendment to the Act No. 370/2012 Coll.).

during the partial exams.<sup>7</sup> Should an examinee fail at the first attempt, they can exercise their right to repeat and submit an application to a repeat attempt. However, they can repeat each exam twice more at most (Amendment to the Act No. 370/2012 Coll.). If an examinee fails an optional exam, they do not have to take the repeat exam (Act No. 561/2004 Coll.).

As the description above clearly shows, with regard to the unambiguous determination of the rights and obligations of students and examinees, the Czech legislation defines the educational choices and decisions of students and examinees and creates a space for each of their decision-making processes on the conclusion of upper secondary education. It also delimits roles for other stakeholders in this space, but we are interested in how the repeatedly unsuccessful VET examinees can operate within this space, i.e. how their educational decision making can be viewed.

## 3 Decisions about the Matura exam as a case of career decision making

Educational decision making concerns the choices and decisions that students and other stakeholders make during and/or in connection to education and training.<sup>8</sup> The choices and decisions about the Matura exam can be an example of educational decision making. On the other hand, the ways in which individuals perform their educational decision making is an important and traditional part of psychology research and sociology education research. Some authors (e.g., Germeijs & Verschueren, 2006; Kulcsárc et al., 2020) have argued that educational decision making is an integral part of the processes involved in career decision making, and therefore educational choices and decisions are within the focus of research into career decision making. All traditional career decision making theories (trait theory,

<sup>&</sup>lt;sup>7</sup> In compliance with the students' rights to exercise their rights on the basis of equality, the Ministry of Education, Youth and Sports sets the conditions and the manner of holding a Matura exam for students with developmental learning disorders (Amendment to the Act No. 82/2015 Coll.) and foreign students (Decree No. 371/2012 Coll.). These may request adjustments of the course of the Matura exam in accordance with the law.

<sup>&</sup>lt;sup>8</sup> Ball et al. (2002) distinguished the concepts of choice and decision. "Where choice suggests openness in relation to a psychology of preferences, decision-making alludes to both power and constraint" (p. 51). In this text, we distinguish these concepts as follows: choice is choosing from several options (e.g., choosing the school or the subject, submitting the application form) and decision is making decisions within some horizons and contexts within which actions can be taken (e.g., decisions about education level or educational track, field of study, and participation in further education).

developmental theory, and social learning theory) assume that decision making: "(i) is fundamentally an individual process, (ii) it should and can contain large elements of technical rationality, and (iii) that the prime factors determining choice remain within the influence, if not the control, of individuals" (Hodkinson & Sparkes, 1997, p. 32). If we focus on the decision making of repeatedly unsuccessful VET examinees, then the characteristics of who is making the decisions cannot be overlooked, i.e. decision-making can be seen as a manifestation of individuality, which is a traditional focus of research into career decision making.

#### 3.1 Decision making as an individual process

Career decision making is a complex process. The research field, initially focused on individual differences in career decision making, generated countless decision-making styles that provided answers to questions such as whether an individual's decision-making style differed according to the decision-making situations (Arroba, 1977) or how individuals approach decision-making tasks (Harren, 1979). It was found that individuals apply their decision-making styles according to the decision-making situations and that the "selection" of a style is related to the perceived importance of the decision and to the degree of control the decision maker has over the given situation (Arroba, 1977).

Career decision-making research is currently dominated by the effort to learn more of the career decision-making processes and their phases (Gati & Asher, 2001; Germeijs & Verschueren, 2006). Gati et al. (2010), who based their theory on the presumption that in the course of decision making, individuals use various strategies that are influenced by both personal and situational factors, concluded that various strategies are connected to the decision-making process phases as proposed by Gati and Asher (2001). Bimrose and Mulvey (2015) argued that in adults, age- and gender-specific behavioral patterns always repeat when individuals reach transition points of their life or when they deal with crises in their work life. Using only some career decision-making styles (e.g., Haren, 1979) or profiles (e.g., Perez & Gati, 2017) can paradoxically create obstacles in the career decision-making process. Many young adults find making these types of decisions difficult as it involves uncertainty and stress and concerns numerous personal conditions (Gati & Tal, 2008).

Gati and Saka (2001) confirmed that secondary school students encounter three types of difficulties in career decision making and in various educational decision-making situations. The first group of difficulties concerns the lack of decision-making readiness, including lack of motivation, general indecisiveness, and dysfunctional beliefs. The second group of difficulties is represented by the lack of information about the self, about occupations, about ways to obtain additional information, and about the decision-making process. The third group of difficulties is related to inconsistency of information, which includes unreliable information, internal conflicts, and external conflicts. Such difficulties may lead to postponing decision making or even chronic indecisiveness, or to transferring responsibility for decision making to others (comp. Gati et al., 1996; Gati & Tal, 2008). It is a no less important finding that in comparison to others, some career decision-making styles may be connected to smaller decision-making difficulties and that "career decision-making difficulties do not stem from lack of aptitudes and skills needed for academic success, but from other factors" (Amir & Gati, 2006, p. 498).

Sociology of education studies, which research social inequality in the educational choices of students (e.g., Ball et al., 2002), and focus on Bourdieu's concepts of habitus and field (e.g., Hodkinson & Sparkes, 1997) or on Beck's concept of individualization (Baker, 2019) have argued that choice has two meanings. One meaning is cognitive and relates to the matching of performance to the selectivity of institutions (schools). The second meaning is sociocultural and relates to social classifications of the self and institutions (Ball et al., 2002, pp. 52–53). These research findings refute the presumption of freedom of choice from the national legislation and international documents, and "suggest that career decision-making depended on a complex pattern of stakeholder relations and their various perceptions and reactions to the official regulations" (Hodkinson & Sparkes, 1997, p. 36).

#### 4 Methodology

We are interested in one example of the educational decision making of repeatedly unsuccessful VET examinees as a group of educational policy actors: their decision-making process for passing the Matura exam. Although the Czech legislation clearly described the rights and the obligations of students and examinees, there are few empirical findings about how young adults make choices and decisions about the Matura exam and how they themselves view their choices and decision-making processes. Psychological and sociological research tends to explain decision making as the result of individual rational choices that are influenced by personal, social, and structural determinants. On the other hand, educational policy creates space for individual free choice through legislation and other documents and its research of the decision-making process is focused on the question of how different stakeholders use this space. To determine the differences in decisionmaking processes among repeatedly unsuccessful VET graduates, it is necessary to identify what they decide in connection with the successful passing of the Matura exam, in which decision-making situations they decide, and in what ways they make their choices and decisions.

With regard to the set aim, we use qualitative data collected by means of biographic narrative interviews (Burke, 2014; Hollway & Jefferson, 1997; Jovchelovitch & Bauer, 2000) with repeatedly unsuccessful VET examinees from 2018 and 2019.<sup>9</sup> In compliance with the principles of a biographic narrative interview, every interview started with the following statement:

We are interested in everything that preceded your first attempt to pass the Matura exam, how you got to secondary school, what memories you have of your studies, how you prepared for the Matura exam, how your Matura exam went, when you learned of the results, what your view was of the entire situation, and in how your life continued after. Everything you can remember is important to us, and we would appreciate it if you could tell it as a coherent story in your own words.

During the interviews, we tried to maximize the placement of the interviewees at the heart of the research study and to support them in controlling the direction, content, and pace of the interview (Anderson & Kirkpatrick, 2015; Burke, 2014; Hollway & Jefferson, 1997; Jovchelovitch & Bauer, 2000; Mueller, 2019). Nevertheless, we had to support the flow of their thoughts with openended questions (open clarifying questions on their perceptions of the causes of failure).

We created a research sample of 27 participants from the project and applied the following criteria: successfully concluded a fourth year of fulltime studies at some type of VET school and had at least two unsuccessful attempts to pass the Matura exam, with the first unsuccessful attempt in 2018 or 2019. Eighteen participants met these criteria; we provide their characteristics in Table 1.

<sup>&</sup>lt;sup>9</sup> The participants responded to advertisements with interest in cooperating in the research project Životní dráhy neúspěšných maturantů a maturantek, through Masaryk University.

#### Table 1

D		Age	First attempt	Second attempt	Third Attempt
Partici- pants	of qualification	(during first attempt)	Failure at:	Failure at:	
Agáta *	Applied Photo and Media	19	CZ (dt, oe) EN (dt) PP	CZ (dt) EN (dt)	Unsuccessful
Adéla *	Lyceum of Natural Sciences	19	CZ (dt)	CZ (dt)	Unsuccessful
Alena *	Public Administration	19	EN (we) PP	рр	Successful
Alex	Electrical Engineering	20	РР	РР	Successful
Alice *	Public Administration	19	CZ (we, oe) M	CZ (oe) M	Successful
Amalie *	Social Services	19	CZ (dt) M	М	Unsuccessful
Aneta *	Nurse Practitioner	19	G (dt) PP	G (dt)	Successful
Arnold	Creative Processing of Metals and Precious Stones	20	EN (dt)	EN (dt)	Successful
Arnošt	Economy and Entrepreneurship	20	CZ (we) M	CZ (we) M	Successful
Bára *	Packaging Technology	19	М	М	Unsuccessful
Berenika *	Multimedia Design	19	CZ (dt)	CZ (dt)	Successful
Bětka *	Interior and Textile Design	18	РР	РР	Successful
Blanka *	Applied Photo and Media	19	CZ (dt)	CZ (dt)	Unsuccessful
Bořek	Economy	19	CZ (dt, we) AJ (we) PP	CZ (dt, we) AJ (we) PP	Successful
Božena *	Physician Assistant	18	CZ (dt)	CZ (dt)	Unsuccessful
Brenda *	Economy and Entrepreneurship	19	CZ (dt)	CZ (dt)	Unsuccessful
Brigita *	Social Services	18	М	М	Unsuccessful
Bronislava *	Pedagogical Lyceum	18	CZ (dt) M PP	М	Unsuccessful

Note: Names beginning with A: cohort 2018; Names beginning with B: cohort 2019; \* women; CZ: Czech language; EN: English language; G: German language; M: mathematics; PP: profile part; dt: didactic test; we: written essay; oe: oral exam

We initiated the data analysis with inductive coding (Chandra & Shang, 2019; Gibbs, 2007) in the ATLAS.ti software. In this way, we acquired 203 codes from the entire data corpus. These codes expressed all the cases of choices and decisions of our participants. In the next step, we created the following categories based on the thematic similarity of the acquired codes: VET school choice, course of studies, Matura exam, relationships, and overcoming obstacles. Within these categories, we identified seven examples of choices or decisions: choice of the second subject in the common part of the Matura exam; an adjustment of the conditions of passing the Matura exam; appeal; application to the Matura exam; preparation for the Matura exam; choice of degree of education; and customization of conditions to ensure success. We then arranged the individual choices and decisions so that they corresponded to the Matura exam attempts.<sup>10</sup> We used axial coding to identify the context and other conditions that influenced the decision-making processes of participants who succeeded at their third attempt. Finally, in the last step of our data analysis, we focused on the differences in the identified decision-making ways of our participants according to the decision-making situations (first, second, or third attempt). We discovered that some decision-making ways differed according to the subject of the decision as well as the decision-making situation.

#### 5 The path to a successful Matura diploma

Our participants encountered three decision-making situations (first, second, and third attempts) on their path to success in the Matura exam in accordance with the law (Act No. 561/2004 Coll.). These situations always occurred when they had to decide whether they would attempt to pass the exam. The participants had to make other choices or decisions in each of these decision-making situations. In the first and second attempts, the decision-making process of all our participants was very similar, but in the third attempt, the decision-making ways of our examinees were more significantly embedded in their individual biographies. In order to present the differences in decision making between individual attempts and among participants in the third attempt, we work only with data from the nine participants who succeeded on their third attempt (see Table 1) and obtained a certificate of completion of upper secondary education in the selected field.

Students and the examinees who wish to successfully pass the Matura exam encounter decision-making situations that we identify with individual attempts to pass the Matura exam. By law, they can encounter the same decision-making situation three times at most (Act No. 561/2004 Coll.).

We introduce how our participants made their decisions in the following part of the text, and we progress chronologically according to the decisionmaking situations (attempts).

#### 5.1 The first attempt to pass the Matura exam, or "a sure bet"

The participants intentionally chose a study program that concluded with the Matura exam: "I did look for artistic work with metal, but I also wanted a school with a Matura exam. A school where they really have some actual demands and where I could get a proper education" (Arnold). We believe that VET examinees perceived the application form for the first attempt as a necessary formality and not as a formalized expression of their choice to complete their upper secondary education. Regarding their previous study results, our participants believed that the school had prepared them to pass the Matura exam successfully and they did not believe failure to be a possibility. They believed that they had done all that was necessary to fulfill their school duties and that their success was certain. This implies that our participants did not think about the application submission as a moment in which they had to decide about anything. If our participants were to have made a decision about their application for the first attempt, it would have been clear from their narrative that they had considered and explored at least the possibility of repeated failure at the Matura exam (or not graduating from upper secondary education) as a career alternative to success (comp. Kulcsárc et al., 2020). They approached the application for the first attempt as if it were a choice based on individual preference.

For the same reasons, the mandatory choice of the second subject in the common part of the Matura exam became a partial formal decision for them. The decision whether to submit a request for an adjustment of the conditions during the Matura exam was also a decision-making situation for some participants who had been diagnosed with specific educational needs. In both cases, their decision was limited to the choice of one from two options delimited by law. For the second subject in the common part of the Matura exam, participants chose either foreign languages or math (see Figure 1). For the request for an adjustment of the conditions during the Matura exam, participants considered whether to submit an application and perform the other related partial tasks or not to submit the application at all. In more detailed analyses in which we monitored the ways in which our participants chose one of the available options, we identified two decision-making ways, the *automatic choice* and the *path of least resistance*.

If the participants made their decisions in an *automatic choice*, it was clear that they did not even explore the second offered option. They explained their choices in various ways. For instance, for Bára, the choice of the second subject in the common part of the Matura exam was made because of consistently good grades in one of the subjects. "Since I was really good at math in primary school, I even had straight As, I chose math." For those who had been previously diagnosed with a specific education need, the exercise of the right to an adjustment of the conditions was an easy choice in the spirit of: "Since I have this option, I want to use it."

Those who made decisions by taking the *path of least resistance* considered their chances of achieving success in choosing the second subject in the common part of the Matura exam. Because they did not feel sufficiently competent in any subject, they chose the one that seemed the easiest. Interestingly, the fact that the foreign language exam consists of three parts (see Figure 1) while there is only a single didactic test for mathematics was even included in some students' considerations. For some of our participants, mathematics became "the lesser evil" on the basis of the ratio of three parts versus a single test. Some of the participants entitled to an adjustment of the conditions during their attempt to pass the Matura exam decided to take the path of least resistance, which meant not requesting and not providing the necessary certificate (thus not actively participating in the special process related to the request) and thus not using this option.

Both identified decision-making ways of our participants during the first attempt (*automatic choice* and *path of least resistance*) can be explained by the principles of rational choice theory (Daoud & Puaca, 2011): minimization of costs (energy and time for the preparation) and maximization of gains (success). Their assessment of the costs included a belief in their academic success that they had formed throughout their studies in high school.<sup>11</sup> Based on rational choice theory, these decision-making ways can be viewed as poorly considered or even rash. The participants' belief in their own academic success entered their assessment of their level of knowledge and skills for passing the Matura exam and generated a lack of information about themselves that was an obstacle to rational decision making (Gati & Saka, 2001).

#### 5.2 The second attempt to pass the Matura exam, or "no time like September"

The dates of the second attempt are set by law for the beginning of September, immediately after the failed examinees cease to be students of the school, but before enrollment dates for university studies. This is probably the main reason our participants were not overly discouraged by their first failure. They considered it merely bad luck or a partial failure. This view of failure and the opportunity to try to pass the Matura exam on a second attempt

<sup>&</sup>lt;sup>11</sup> The belief in academic success is shaped by the institutional context (school), but this belief led to dysfunctional decision making for our participants.

relatively soon after the first failure did not represent a significant problem for our participants in terms of fulfilling their career goals, or specifically in terms of the beginning of university studies.

After the first failure, all our participants faced two choices, by law. They were supposed to decide if they wished to exercise their right to have the results of the first attempt re-evaluated and if they wished to submit an application for the second attempt. One more decision emerged in our data: whether to prepare for the second attempt, a decision that the participants talked about more than they had for the first attempt. Once again, they approached decision making on the same principle as for the first attempt, using *automatic choice* or the *path of least resistance*.

The right to a reevaluation of the results of the exam that the examinees failed was used only rarely by our participants. If they decided to exercise their right and appealed, they did so on the basis of the *automatic choice* principle, within the meaning of: "I am missing a single point to pass the exam, I will file an appeal." However, none of our participants' appeals were successful. All our participants also approached the submission of the application for the second attempt fully in the spirit of automatic choice.

All our participants decided to prepare for the second attempt using the *path of least resistance*. Since our participants were convinced that they were already well prepared for the first attempt, they postponed the preparation for the failed parts of the Matura exam, believing that they still had enough time to refresh their knowledge in a month. Resting or enjoying the summer holidays was the main goal of the months between the two attempts (from June to August). As Brigita said: "In the first month of the holidays, I'll admit that I just really wanted to enjoy the holidays. We flew off for a vacation with my folks and so on." Some did start preparing about mid-way through the summer, but others kept postponing the preparation, further increasing their aversion to studying and the stress about the next attempt. That did not change anyone's belief that they would pass the Matura exam on the second attempt, as exemplified by Brigita: "I thought it would work out."

For our participants, decision making in the second attempt was hasty and not well considered with regard to the possible consequences. Our participants still believed that they would succeed; the second failure was therefore much more of a surprise than the first one. This moment of surprise, in some cases even shock, evoked a change in some participants' approaches to the next decision-making situation.

#### 5.3 The third attempt to pass the Matura exam, or "anything to succeed"

After the second failure, all of our participants experienced deep disappointment, anger, frustration, and feelings of injustice. It was not easy for any of them to accept the second unexpected failure. Their negative feelings also resulted from the situation in which the unsuccessful graduates found themselves after a second attempt. They had lost their student status just before the second attempt. The unsuccessful examinees therefore had to apply for the third attempt as regular citizens. The examinees who had failed in their second attempt also had to either find employment or pay for health insurance themselves until it was possible to make a third attempt at the Matura exam (the dates of the third attempt are set by law eight months after the second attempt, usually in May). The examinees who had planned to begin studies in tertiary education were unable to do so without the Matura certificate.

A minority of our participants decided to submit an appeal with the conviction that it would be successful and they would be able to return to their originally set career goals without the need for significant changes. Those examinees can be said to have decided on the basis of automatic choice, i.e., in the same way as they did after the first failure. Their disappointment was thus even greater when they learned that their appeal had been rejected. None of the participants who filed an appeal were successful; all of our participants then had to focus on the second important decision, connected to re-evaluating their existing career goals including the further participation in education/training. Our data show that the reassessment of their original career goals differentiates our successful participants from the unsuccessful ones (see Table 1) and also significantly entered the decision-making process of those who succeeded on the third attempt.

To emphasize the differences in the decision-making strategies of the participants who succeeded in the third attempt, we present four contrasting stories that outline the options for vocational education graduates (enter the labor market or tertiary education) and different decision-making practices between the second unsuccessful and the third successful attempt at the Matura exam. From those who succeeded on the third attempt, we selected two women (Aneta, Berenika) and two men (Arnošt, Bořek) from the examined 2018 and 2019 cohorts.

#### The story of Berenika after the second failure

Berenika is a typical example of those participants who wanted to spend the period between the second and third attempt meaningfully. Berenika blamed the educational system for not offering any option for repeatedly unsuccessful graduates to speed up the "waiting" for the third attempt. She suggested: "You need to have some chance to go somewhere in formal education. Because when you simply lose a year of your life without choosing to do so on your own, you just...You cannot get it back." As a reason for her failure, she cited a lack of legal support. She had been diagnosed with several specific learning disorders, and as compensation, she was entitled to request an extension of the time to complete the test. From Berenika's point of view, this time extension was entirely insufficient support because it did not solve the problems. At the time of her second failure, she had already been admitted to several art colleges, none of which she could officially enter without a Matura certificate. However, the opportunity to start college was an important career goal for her. Therefore, Berenika focused all her strength, wanting to succeed in the Matura exam as soon as possible. She praised the support of her parents, who financed private tutoring for her during this period, through which she gained confidence. Thanks to her determination, apparent motivation, and the clearly defined career goal of continuing her studies at college, she finally succeeded.

#### The story of Arnošt after the second failure

Arnošt is an example of a participant who decided in the period between the second and the third attempt to be certain to achieve an upper secondary education, so he spent this period meaningfully. He is also an example of a participant who changed his career goal after his second failure at the Matura exam. At first, Arnošt was disappointed because the second failure meant the inability to start college, where he wanted to study. He dealt with the situation by evaluating a certificate of apprenticeship as better than only the lower secondary education, as proven by his statement: "Yes, after the second attempt, I actually studied at a vocational school to at least do something for the year, and so I'd have at least some certificate." Arnošt's fear of another failure directed his decision to exercise his right to education in accordance with the Charter of Fundamental Rights and Freedoms (Parliament of the Czech Republic, 1993) while waiting for the last attempt. He registered in a field of study that concluded with a final exam, which is a possible path to concluding ISCED-3 in the Czech Republic other than the Matura exam and is allowed by the School Act (Act No. 561/2004 Coll.). As shown by Arnošt's example, this alternative represents a safe, well considered, and pragmatic decision for students unwilling to take another risk. The knowledge that even if the third attempt to pass the Matura exam did not succeed, Arnošt would complete at least some type of upper secondary education gave him a state of mental well-being, and he approached the third attempt with less stress. In the meantime, he also worked and paid for individual private tutoring in subjects he had not passed at the previous Matura exam attempts. He changed his career goal during the year of waiting for the third attempt. He eventually rejected the opportunity to enter university and devoted all his efforts to preparing for the Matura exam. With the apprenticeship certificate and the school-leaving certificate, he feels that he has a higher value on the labor market and, in his words, that he no longer needs a university degree: "I re-evaluated going to college because I think things can be learned differently. I would rather learn by practice than in theory."

#### The story of Aneta after the second failure

Aneta is another example of a participant who, after being disappointed by the second failure, decided to succeed at all costs on the third attempt. However, she first filed an appeal and, for a long time, stuck to her original career goal of immediately working in her planned field in the Czech Republic or abroad without trying to deviate from the planned path in any way. Aneta's appeal did not succeed, but she still could not back down from her goal, which for her also meant becoming independent from her parents and moving in with her partner. Moreover, because she preferred work opportunities in her field of study, she was one of the few participants who hesitated to apply for the earliest Matura exam date. After much deliberation, however, she realized that by successfully passing the Matura exam, she would be able to keep

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her current job and even increase her salary. Therefore, she decided to begin to reevaluate her earlier decisions, searching for the reason for her failure. She started viewing some of her decisions as "wrong" only after the second failure. In the interview, she unequivocally stated that it had not been a "good decision" to be passive in giving feedback to her teacher, who did not teach German language well and did not reflect student needs: "I just thought it was better in German, but when it was the beginning of the last year [graduating year], and we were at the first-year level, we started to feel insecure. ... We should not have given it up; we should have risen up and start solving it, even though she was not listening to us." At the same time, Aneta found that she was not living in an environment that was suitable for her effective preparation for the Matura exam. She realized that she needed to focus more on finding support, which she found specifically in her partner, who gave her both mental and financial support. She and her partner therefore found shared housing. Aneta was registered for several months at the Czech Labour Office, which covered her compulsory health insurance. After a few months, she started working and was able to partially support herself financially. Her boyfriend also paid for tutoring for her, thanks to which she finally succeeded in the third attempt. Aneta admits that she only found out during tutoring that she had not understood the curriculum needed for the Matura exam in her first two attempts. Aneta had not experienced support from her nuclear family. In her own words, she was able to prepare well enough for the third attempt after she decided to live with a partner who supported her and she had a quiet environment in which to concentrate on the preparation and study.

#### The story of Bořek after the second failure

Bořek never had grand study ambitions. He did not do well in high school, and he was not admitted to some subjects in the first Matura exam attempt due to his poor performance. Like the other participants, Bořek had to decide what to do between the second and third attempts. He decided to enter a post-graduate English program, thanks to which he retained his student status. However, his insurance was not paid for him, so he also registered at the Czech Labour Office. Even Bořek, after the second unsuccessful attempt, realized that he wanted to pass the Matura exam at all costs. Bořek wanted to prove to his father and to his teacher of the vocational subject in which he had failed that he had what was needed to pass the Matura exam successfully, and that he could do it if he wanted to. Borek began to look for the causes of his earlier failure. He found that the main problem was an unfavorable study environment. Unlike Aneta, who found support in her partner, Bořek realized that he was living in a toxic relationship, from which he had tried unsuccessfully to leave. Being in this relationship made it impossible for him to pursue his studies, and he decided definitively to leave. Decisions about relationships can be considered a key career decision that co-creates decisions about the Matura exam, not only for Bořek. He then began to study very intensively. In addition to the post-graduate study of English, he also paid for tutoring in the Czech language, which was the second subject he repeated. Although he was never particularly ambitious in school, Bořek found in the "waiting period" that he enjoyed studying, and he applied to the university where he is currently studying.

Although the ways of decision making of our participants differed in the third attempt, they were primarily determined by context. From empirical data, it was possible to identify five areas in which the participants had to decide. These areas are the contexts into which the decision making of all those who finally succeeded in the third attempt entered, in different intensities and levels of importance. Based on our analysis, we named these areas: deciding what to do with the extra year; finding the reason for repeated failure; identifying motivation for success; cleaning up in personal life; and taking control.

First, the participants had to decide how to fill an extra year of their lives while waiting for the third attempt. Abandoning the third attempt (the last one) and concluding the studies at the ISCED-2 level was the first option. This decision would also mean that the VET examinees would have no proof of any qualification despite concluding four years of study at VET schools. Our participants considered the option of giving up only immediately after they learned the results of their second attempt, while they were emotional. Overcoming their initial disappointment, anger, or sense of injustice was a common feature of our successful participants in this moment, and it gradually allowed them to explore other legal educational or employment options. Even though not all of the participants explored all the available options, the exploration of various educational or/and work opportunities motivated them to make decisions and consider the benefits of concluding their upper secondary (VET) education with the Matura exam. Most of them started (or continued) earning some money on the side through part-time jobs or/and they registered at the Czech Labour Office. All of them attended private tutoring outside the formal education system.

Second, our participants questioned their previous decisions while trying to identify the reason for the repeated failure. Some questioned their choice of the second subject in the common part of the Matura exam, a choice they made with the path of least resistance or the automatic choice. Some participants went even further into their past and started to question the choice of secondary school itself. Those who decided to question their previous decisions, possibly even in the more distant past, were able to identify the "causes" of their failure. Although these causes differed, all the subsequently successful participants realized that the second failure indicated the need for a radical change in their preparation in order to address the fundamental gaps in their knowledge and skills. Our participants, who had to reconsider their original career goals as a result of the second failure, rejected the idea that they belonged among people with uncertified lower secondary education. This led them to identify their motivations for success, as well as to re-evaluate the Matura exam in relation to their career goals. Successfully passing the Matura exam ceased to be a tool for achieving their career goals and became the priority career goal, strengthening their resolve to succeed in the exam.

Third, the moment in which they identified the reasons for their failure was important in terms of their subsequent behavior. Recognizing the reasons, which came in the reappraisal of previous decisions, the Matura exam became a priority career goal for our participants, a goal they felt highly motivated to achieve. The *motivation for success* usually more closely connected the Matura exam certificate with the planned future of our participants. Most of the participants were motivated to succeed by a "better" job in the labor market. Still, some wanted to prove to themselves and others that they had the necessary skills to pass the exam successfully.

Fourth, after answering the question of why they failed, another important question arose: how would they succeed? Our participants who were successful on the third attempt started to identify the obstacles that they believed blocked their path to success and tried to react so as to overcome these barriers. Although the obstacles were different, they were always connected with each person, so our participants had time to *clean up in their personal life* when needed. All of that was motivated by the goal of succeeding in the Matura exam, and all those decisions about overcoming barriers were intended to eliminate the probability of a third failure.

Once the participants made decisions in the given topics, a common feature in their decision making was taking control of their success. Before the third attempt, all of them adapted their life as much as possible to truly be wellprepared for the Matura exam. Some decreased their work hours; others terminated their employment or their registration at the Czech Labour Office and invested in tutoring. Everyone found a means of more intensive private tutoring or tutoring courses for the Matura exam outside of the educational system, which brought them the desired success. In the stories of our participants, several months of individual professional tutoring tailored to their needs led to success. Tutoring was mediated either by an organization specializing in preparation for the Matura exam or by a teacher who had experience preparing high school students for the Matura examination. For tutoring to have the right impact on our participants, it needed to be an unfamiliar person from the private sector or a teacher with whom our participants developed good but asymmetrical teacher-student relationships. Attempts to use an acquaintance or relative as a tutor did not lead to success.

The transformed perception of decision making in the attempts to pass the Matura exam was accompanied by a transformation in the approach to decision-making situations from a passive approach (the first and the second attempts) to an active one (the third attempt). While the passive approach to decision-making situations was reflected in the participants' choice of one of several existing options without a detailed examination of the impact of each option, the active approach involved taking control of the path to meet their career goal. We consider this change in approach to decision-making situations to be the moment in which the participants escaped a cycle of educational decisions leading to repeated failure, and, at the same time, the moment in which some participants managed to change their ways of decision making.

#### 6 Summary

Passing the Matura exam is an opportunity for decision making for Czech students and examinees. We found that repeatedly unsuccessful VET examinees made their choices and decisions differently. Their decision making in the first and second attempts to pass the Matura exam concerned choices given by law (choice of subject in the common part of Matura exam, request for an adjustment of the conditions for passing the Matura exam, appeal) and preparation beyond school preparation only when someone anticipated failing a subject. We identified two decision-making ways, which we called *automatic choice* and the *path of least resistance*. Our participants perceived these decision-making ways as free choices, but their choices were influenced by dysfunctional beliefs about their academic success that they had acquired during their studies. The ways in which our participants made their decisions manifested their role as active customers in the educational policy-making process.

The decision-making ways of our repeatedly unsuccessful graduates did not change significantly until after the second failure. After the second unsuccessful attempt, their decision-making processes concerned filing an appeal, applying for the third attempt, and preparing for the third attempt. We focus only on those participants who succeeded in their third attempt to pass the Matura exam. They made decisions about what to do with the extra year; finding the reason for repeated failure; identifying motivations for success; cleaning up in personal life; and taking control. Thanks to the legal situation in which twice unsuccessful examinees find themselves, decision making can also be seen as a process (cf. Gati & Asher, 2001; Germeijs & Verschueren, 2006) initiated by negative feelings after the second failure and connected with the reevaluation of career goals. The result of this reevaluation is a decision on the level of education they want to achieve in life, which can lead to applying for a third attempt. The choice to submit the application for the third attempt is connected with a reassessment of their previous decisions, including their attitudes to learning (Gati & Saka, 2001), and there is a clear connection between the choice to submit an application and the preparation for the third attempt.

Our participants who were successful on the third attempt started by considering their previous decisions; this consideration allowed them to reflect on the causes of their failure and to see the obstacles they believed were in the way of their success. It led to the decision to succeed and a change in learning conditions and preparation for a third attempt. The decision to change the conditions for learning, which we have termed *taking control*, is individual. For some participants, it meant suppressing some personal qualities (laziness) and changing their learning strategy. For others, it was a more radical change in their personal lives, which we termed *cleaning up in personal* 

*life.* In general, *taking control* manifested itself in adjusting the conditions that our respondents saw as obstacles preventing them from succeeding. In order to remove the obstacles, they needed the support of people close to them. Ensuring the support of their loved ones meant more fundamental changes in the lives of some participants; for others, it meant a change in their attitudes and views of themselves. These changes were reflected in their preparation for the third attempt. Compared to previous decision-making ways *(automatic choice* and *path of least resistance)*, cost maximization was a typical factor in decisions about preparing for a third attempt (securing professional tutoring, changing learning methods, and investing effort, time, and money in preparation) to ensure a minimum gain, i.e. to reach the minimum limit of success.

The decision making of those participants who succeeded on the third attempt supports research findings claiming that decision-making is a process. For our participants, this process can be divided into several steps in this order: reevaluate career goals; reassess previous decisions and attitudes; "take control"; and succeed. It is surprising that each step involves different choices and decisions. The participants changed their decision-making ways after the second failed attempt to pass the Matura exam; the decision making changed from a one-time event to a process. They left the decision-making ways typical for educational decisions made in the role of an educational policy actor for pragmatic rational career decisions (Hodkinson & Sparkes, 1997) made in the role of a citizen through interactions with significant others in their life history context.

#### Conclusion

In this study, we focused on the decision-making processes of repeatedly unsuccessful VET examinees in choosing to pass the Matura exam. Passing the Matura exam (upper secondary education, ISCED-3) is undoubtedly a question of performance for every examinee in the Czech Republic, but decision making also plays an important role. The Czech laws and other educational policy documents define the conditions for passing the Matura exam and set the rules for individual decisions about the Matura exam. These documents operate on the assumption of individual freedom of choice, made based on rational assessments of abilities, knowledge, skills, and competences matching the available options and opportunities. We found that for our repeatedly unsuccessful VET examinees, belief in their own academic success (unperceived or real as the result of a lack of resources or of inability to realize the consequences of their decisions) was a factor that explained why they lacked control over their decisions and had lost the power of the educational policy actor role. By providing descriptions of decision-making ways, we draw attention to the problem between the general and static character of the law, which assumes free choice, and the various decisions of young adults encountering social and structural determinants. This gap between the "letter of the law" and the lives of young adults can be bridged either by loosening some rules or by the addition of tools to help repeatedly unsuccessfully examinees reassess their decisions. Our findings hinted at a lack of mechanisms or services that would enable young adults to adopt the view of active citizens in their decisions regarding the Matura exam. They could be taught to make pragmatically rational decisions, including accepting responsibility for their career decisions and thus accepting shared responsibility with other stakeholders for their education (Act No. 561/2004 Coll.). We consider this problem to be the main challenge all stakeholders in education policy in the Czech Republic currently face, not only in VET education.

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### TYPOLOGIES OF EARLY SCHOOL LEAVERS FROM SECONDARY EDUCATION: A REVIEW STUDY

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#### ABSTRACT

The goal of this review study was to map the current state of knowledge of early school leaving typologies (ISCED 3) and to provide an overview of the findings. Using systematic mapping, ten texts published in peer-reviewed journals between 2000 and 2021 were identified and analyzed. Although the researchers applied different theoretical concepts, five significant, recurring, and distinguishable types of early departures were identified in these studies. The interest in this specific area has been growing in recent years and the number of qualitative research studies on the phenomenon is also increasing. At the same time, however, there is not enough knowledge convincingly explaining the circumstances leading to early school leaving for the individuals in the largest group – the quiet type.

#### **KEYWORDS**

dropout; early school leaving; review study; secondary school; typology

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#### Introduction

Early school leaving is an indicator that has been used by Eurostat since 1999 (Estêvão & Álvares, 2014). It is defined as leaving school before completing upper secondary education (ISCED 3) (Csereklye, 2008; Lamb et al., 2011; OECD, 2012). Since 2021 Eurostat frequently used the term "early leaving from education and training" (ELET), which includes pupils who leave early from school or from other forms of education or training. As "early school leaving" corresponds to the area of interest of this text, focused on the early exit from secondary education, this term is primarily used in this article. For the sake of clarity, the acronym of this term (ESL) is used to refer to students who left secondary school before graduating. Surveys conducted in Europe refer to this group of young adults as *early school leavers*. These are individuals under the age of 17 and 20) who left school early, attained only the lower level of secondary education (ISCED 2), and did not receive further education (Lamb et al., 2011).<sup>1</sup>

Another term used in connection with the phenomenon of early leave from education and training is "school dropout," which has been defined as "leaving education without obtaining a minimal credential, most often a higher secondary education diploma" (De Witte et al., 2013). This definition is based on the concept of compulsory education, the duration of which differs among educational systems (Estêvão & Álvares, 2014). As a result of this variance, school dropout can be described in many different ways, and inconsistencies in these definitions are a common problem, because "it varies across and within countries, for different education programs (for example, for children in regular schools compared to children in special schools for children with disabilities) and over time (due to modifications of the definition and formula)" (UNICEF, 2016). For this reason, the term "dropout" is used in this paper only if it was used by the authors of the cited studies.<sup>2</sup>

<sup>&</sup>lt;sup>1</sup> In 2021, 9.7% of 18- to 24-year-olds in the EU had finished their education with only a lower secondary education certificate and they had not started upper secondary school or training (Eurostat, 2021).

<sup>&</sup>lt;sup>2</sup> The wide concept of early leaving from education can be divided into two categories: formal and functional (Estêvão & Álvares, 2014). The formal definition corresponds to the concept of compulsory education as formulated by the laws of the state. A key aspect of the definition is the age at which the pupil leaves compulsory education, or the number of years of compulsory education. The functional definition is less rigorous and reflects the context of leaving education, focusing mainly on the practical effects of the education achieved in the life of the individual. School dropout is closer to a formal definition; ESL largely corresponds to a functional definition.

ESL is an important phenomenon in terms of education policies, as it has both a significant impact on the life of the individual and societal costs. In the EU, almost 60% of early school leavers are unemployed (Eurostat, 2016). In most OECD countries, graduation from upper secondary education is considered to be the minimal level of qualification as it is required for entering university and for working at most well-paid job positions. Surveys in different countries show that those individuals who do not obtain an upper secondary education are more often unemployed and experience worse health (Owens, 2004) or have lower income and economic capital (Rumberger & Lamb, 2003) than graduates from upper secondary schools.

Research into the causes of ESL is far from easy. For a long time, the prevailing perception of early school leavers as a homogeneous group led to ignoring the existence of significant differences among them (Bowers & Sprott, 2012b). The internal heterogeneity of this phenomenon was documented in the 1990s by Kronick and Hargis (1998). The authors described various types of ESL related to individual student characteristics. The validity of this study was confirmed by research by Janosz et al. (2000).

Although current studies identifying the reasons for dropout all suggest that there is no single factor leading to ESL but rather a combination of circumstances (Bowers et al., 2012; Lamote et al., 2013; Rumberger, 2011), research findings on the significance of these (especially school) factors and predictors are not always consistent. There are, therefore, a number of classifications with different and often overlapping terms (Krstic et al., 2017). Research into the typologies of these classifications contributes to clarifying the research field of the heterogeneous phenomenon of ESL. A well-designed typology can describe the various features of the problem, can aid in understanding these features, and can thus enable the design of effective interventions (Etzion & Romi, 2015; Janosz et al., 2000). However, a larger survey comparing the typologies of ESL is not currently available. The aim of this paper, therefore, is to search for existing typologies of ESL available from specialized databases, to analyze them in detail, and to create an overview of the findings on the categories of students who leave secondary education early.

#### 1 Methodology

The method of systematic mapping of relevant research work was selected. The ambition was to create a study encompassing all research focusing on ESL available from databases and to analyze this work with the aim of drawing conclusions that will "help orientation of further research in the area" (Mareš, 2013, p. 430).
The aim of this review study is to provide a broader summary of all relevant empirical research that (1) addresses the issue of ESL (ISCED 3); (2) is in the research area of the typology of ESL; and (3) are peer-reviewed qualitative, quantitative, or review texts in English, regardless of the country of origin. The process of selecting sources for analysis was divided into several phases, following Fink's strategy (2020).

## 1.1 Search for documents

Three existing databases were used for the search: Scopus, Web of Science, and Google Scholar. The primary research<sup>3</sup> showed a significant increase in the amount of literature involving ESL from upper secondary education after 2010. The Scopus database offered 6,953 results before 2010 (1938–2009) and 9,662 texts published after 2010; Google Scholar found 21,900 documents written before 2010 (1938–2009) and 18,200 results from 2010–2020. The search was therefore narrowed by a combination of keywords representing the studied phenomenon (*dropout typology*; early school leaving typology). All types of documents (articles, conference papers, reviews, and book chapters) were included in the systematic mapping of texts that was conducted in June 2021, without limiting the time span. Scopus<sup>4</sup> found 51 documents, WoS<sup>5</sup> 19 results, and Google Scholar<sup>6</sup> 94 texts corresponding to this combination.

## 1.2 Sorting and selection

The documents were further sorted. By eliminating duplicates, the selection was narrowed to 73 items. After reading the abstracts and conclusions, papers not meeting the objectives of this particular review study (those whose topic was an ESL typology) were discarded. This filtering identified 11 relevant publications from peer-reviewed journals. After obtaining full versions of the texts (nine articles were obtained directly from the databases and two texts were provided by their authors on request via the ResearchGate social network), one Spanish-language article (Julià Cano, 2018) was discarded due to language unavailability. The subject of this review study is thus ten articles

<sup>&</sup>lt;sup>3</sup> In the primary research, the keywords "dropout" OR "early school leaving" AND "secondary education" OR "high school" were used.

<sup>&</sup>lt;sup>4</sup> The search was defined by the operators: ALL ("dropout typology" OR "early school leaving typology" AND "secondary education" OR "high school").

<sup>&</sup>lt;sup>5</sup> The search was defined by the combination of operators TS = (dropout typology OR early school leaving typology) and TS = (secondary education OR high school).

<sup>&</sup>lt;sup>6</sup> The search was defined by the operators: ("dropout typology" OR "early school leaving typology" + "secondary education" OR "high school").





in English, all published in peer-reviewed journals. The oldest analyzed text is from 2000, the latest typological studies were published shortly before the start of our data collection, i.e. in the first half of 2021. The procedure of sorting publications (according to Mareš, 2013, p. 442) is shown in Figure 1.

## 1.3 Analytical process

The goal of the analysis of selected empirical studies was to find answers to the following questions: (1) What research methods are used in creating ESL typologies? (2) What is the research sample? (3) What theoretical concepts are the proposed typologies based on (is the typology a follow-up to something)? (4) What analytical categories are used to construct the typologies? (5) Which categories (types) of ESL do the typologies identify? The main characteristics of the analyzed texts are summarized in Table 1; partial findings are presented below.

## 2 Studies of typologies of early school leaving

## 2.1 Research methods and research sample

Six of the ten studied texts come from the North American region. These are quantitative studies processing data from large, often national, databases (Bowers & Sprott, 2012a, 2012b; Fortin et al., 2006; Janosz et al., 2000; McDermott et al., 2017, 2018). In terms of the methods used in the quantitative research aimed at creating typologies, multidimensional analyses (growth mixture modelling; latent class analysis) dominated; in one case the "turning points" are identified by correlation analysis (McDermott et al., 2018). A mixed design, namely the combination of a questionnaire survey and followup semi-structured interviews, was chosen by Israeli researchers (Etzion & Romi, 2015). The review shows that qualitative ESL studies have appeared to a greater extent only in recent years, and in the European region, in Austria, Finland, and Croatia (Nairz-Wirth & Gitschthaler, 2020; Ogresta et al., 2021; Pikkarainen et al., 2021). According to Hunt (2009), qualitative studies can provide a more holistic and deeper insight into students' own perspectives on and interpretations of their experiences connected with ESL. To achieve this, researchers use one of the types of qualitative interviews. The first two of the three analyzed qualitative studies tried to address the research issues regardless of respondent ethnicity and background (Nairz-Wirth & Gitschthaler, 2020; Ogresta et al., 2021), in the most recent of the analyzed studies, the researchers focused on a specific group of Finnish residents, predominantly Romany prisoners (Pikkarainen et al., 2021).

Table 1

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thor and year f publication	Country	Sample (Number; Age; Other characteristics)	Theoretical underlying concept	Objectives
c et al.	Canada	<ul> <li>467 early school leavers selected from respondents in longitudinal studies:</li> <li>(a) of delinquency of Canadian high school students in 1974 (n = 166)</li> <li>(b) of psychosocial adaptation of Canadian children from families with moderate and low SES levels from 1985 (n = 301)</li> </ul>	1	<ol> <li>To build empirically a typology of early school leavers based on the characteristics of individual school experience</li> <li>To test the reliability of the typology by replicating the classification on two different longitudinal samples.</li> <li>To test the predictive validity of the typology.</li> </ol>
a et al. )	Canada	810 Canadian students at the start of high school (12–13 years old) of whom 235 students at risk of ESL were identified using the Decision questionnaire (Quirouette, 1988), these were then studied using a combination of a questionnaire, analysis of school documents, and teacher evaluations.	1	<ol> <li>To identify subgroups of students who are at risk of dropping out of high school at its start.</li> <li>To compare different subgroups of students at risk with students who are not at risk of leaving school early.</li> <li>To test the validity of the typology.</li> </ol>
rs and t (2012a)	USA	5,400 students from the dataset Education Longitudinal Study 2002 identified on the basis of their grades	1	<ol> <li>To assess the extent to which different ESL typologies were present in the national dataset.</li> <li>To estimate the effects of known variables for ESL on each of the subgroups.</li> </ol>

<ul> <li>(1) To identify ESL types using a nationally (US) representative data set.</li> <li>(2) To describe the specific characteristics that identify the types of ESL.</li> <li>(3) To compare the reasons given by the students as reasons for leaving school early (2 years later) with different types of ESL.</li> </ul>	<ol> <li>To classify youth at risk into relatively homogeneous groups according to a complete set of personality and behavioral variables.</li> </ol>	<ol> <li>To study the typologies of push/pull and protective factors that were present in high school students at risk of ESL.</li> <li>To verify the extent to which these factors predict an early school leaver's return to school in early adulthood.</li> </ol>	<ul> <li>(1) To find which turning points for ESL identify an early school leaver.</li> <li>(2) To state whether there are any differences in ESL's turning points with respect to the profile of their past experience.</li> </ul>
ſ	I	Ecological systems theory (Bronfenbrenner, 1979), Push/ pull perspective (Bradley & Renzulli, 2011)	Ecological systems theory (Bronfenbrenner, 1979), Push/pull perspective (Bradley & Renzulli, 2011), Integrative stress process (life course theory of drop out) (Dupéré et al., 2015)
1,470 early school leavers selected from a dataset of 15,400 students from 750 high schools in the US	282 subjects ages 12–18 years old from institutions for youth at risk; control (contrast) group of 217 adolescents	1, 942 early school leavers ages 18–25, $971$ women, $971$ men; deliberate overestimation of women with respect to the planned analysis <sup>7</sup>	1,047 early school leavers, ages 18–25 years old, from an online panel of a research agency; deliberate overestimation of women with respect to the planned analysis
USA	Israel	USA	USA
Bowers and Sprott (2012b)	Etzion and Romi (2015)	McDermott et al. (2017)	McDermott et al. (2018)

If the data was collected on a proportional basis, the sample would have included too few women to conduct an extensive data analysis by different subgroups.

Ŀ-

(1) To create a typology of ESL	<ol> <li>To detect the causes of ESL in Croatia.</li> <li>To formalize these causes into an ESL typology for the Croatian context.</li> </ol>	<ol> <li>To find which life events, circumstances, and personal experiences early school leavers associate with ESL.</li> <li>To identify the paths leading to ESL in the early school leavers' communications.</li> </ol>
Bourdieu's concepts of habitus and capital (Bourdieu, 1984)	Ecological systems theory (Bronfenbrenner, 1979), Integrative stress process (life course theory of drop out) (Dupéré et al., 2015)	Self-determination theory (Deci & Ryan, 1985; Ryan & Deci, 2020)
25 early school leavers, 16–25 years old, 9 female, 16 male	20 early school leavers, 16–21 years old, 7 female, 13 male	<ul><li>11 carly school leavers,</li><li>5 female, 6 male,</li><li>(at the time of the research,</li><li>the respondents were in prison)</li></ul>
Austria	Croatia	Finland
Nairz-Wirth and Gitschthaler (2020)	Ogresta et al. (2021)	Pikkarainen et al. (2021)

2.2 Underlying theoretical concepts When explaining the causes and the course of ESL, the authors of the analyzed studies used the following theoretical concepts: ecological systems theory; push/pull perspective; integrative stress process (life course theory of drop out); concepts of habitus and capital; and self-determination theory. These theories, which will be described in more detail in the following paragraphs, can be distinguished with respect to whether the dropout is observed in the context of the long-term perspective of the student's career, or whether it is treated more as a current isolated consequence of life changes. Most often researchers view the phenomenon by combining both perspectives (long-term and current).

Bronfenbrenner's (1979) ecological systems theory allows researchers to study the role of parents, schools, teachers and peers in the process of making the decision to leave school early. The long-term career perspective emphasizes that a dropout should be perceived as the consequence of a sequence of events, not as the impact of a single event or a student's characteristics (McDermott et al., 2017). The multifactorial nature of the phenomenon stems from personal, family, and school contexts in which the factors do not act in isolation but intertwine within the numerous ecologies of an individual's life. At the same time, researchers take

into consideration those contexts that are most directly related to dropout (Ogresta et al., 2021). In combination with the push/pull perspective, the ecological model is a convenient starting point for a systematic examination of the effects of individual factors in different contexts (McDermott et al., 2018). Push/pull theories emphasize that students are discouraged from further studies especially by school-related factors (Bradley & Renzulli, 2011).

The integrative stress process (the life course theory of dropout) (Dupéré et al., 2015) explains dropout as a consequence of the coalescing of several events triggering the process of leaving school. This can be, for example, the chronic absence of students with long-term illnesses or mental health problems (Dupéré et al., 2015; Fortin et al., 2006) or a type of social infection when close friends leave school (Dupéré et al., 2021). This configuration of stressors can include both immediate factors and factors that may not appear serious but that persist throughout life and can make a student more at risk of failing at school (Dupéré et al., 2021).

Typologies based on Bourdieu's concepts of habitus and capital emphasize the relationship paradigm: Habitus (a set of dispositions) is a relationship concept internally connected with the capital that an early school leaver has. The mechanism of completing or not completing school is thus explained by the "inheritance" of success or failure that an individual achieves in education. The intergenerational transfer of educational achievement remains an important factor in ESL, especially in students from low socio-economic backgrounds (Nairz-Wirth & Gitschthaler, 2020).

In self-determination theory (Deci & Ryan, 1985; Ryan & Deci, 2020), ESL is understood as the search for one's own self-determination, i.e. as a way of fulfilling needs that were not met in education. Early school leavers therefore seek to fulfil their needs through alternative sources and leave the school that frustrated them for an environment where they can better meet their needs (Pikkarainen et al., 2021).

	Data processing (Data collection tool; Analytic method)	Analytic categories (Variables)	Results (Created ESL typology)
Janosz et al. (2000)	Secondary analysis of ESL data from longitudinal research studies	3 axes of school characteristics (low-high): (a) Behavioral maladjustment; (b) Commitment; (c) (Study) achievement.	<ul><li>(a) Quiet;</li><li>(b) Disengaged;</li><li>(c) Low-achiever;</li><li>(d) Maladjusted.</li></ul>
Fortin et al. (2006)	Combination of questionnaires; Cluster analysis	Three contexts associated with school dropout risk: (a) Personal context (poor acade- mic performance, inappropriate behavior, lack of social skills and presence of depression); (b) Family context (quality of the family climate measured by the social and environmental characteristics of the family); (a) School context (teachers' attitudes and the classroom social climate).	<ul> <li>(a) Anti-social covert behavior type;</li> <li>(b) Uninterested in school type;</li> <li>(c) School and social adjustment difficulties;</li> <li>(d) Depressive type.</li> </ul>
Bowers and Sprott (2012a)	Secondary analysis of data of a longitu-dinal study from 2002 (NCES, n.d.); Growth mixture modelling	<ul> <li>(a) Grades;</li> <li>(b) Origin and demographic characteristics of students and schools;</li> <li>(c) Students' behavior;</li> <li>(d) Variable structures of the school.</li> </ul>	(a) Mid-decreasing; (b) Low-increasing. <sup>8</sup>
Bowers and Sprott (2012b)	Secondary analysis of data of a longitu-dinal study from 2002 (NCES, n.d.); Latent class analysis	<ul> <li>(a) Dichotomically scaled</li> <li>variables (quality of teaching, negative feelings, safety/fight, fairness, fondness for school);</li> <li>(b) Continuously scaled variables</li> <li>(results of standardized tests, grades, absence from school, difficulties at school, etc.);</li> <li>(c) Demographic data (gender, ethnicity, socio-economic status, etc.).</li> </ul>	<ul><li>(a) Quiet;</li><li>(b) Jaded;</li><li>(c) Involved.</li></ul>

Descri	tion	of the	main	characte	ristics	of the	analvzed	texts	(data	processing	analytic	cateonries.	results)
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Table 2

<sup>&</sup>lt;sup>8</sup> The authors created a typology of study paths for all US high school students from the Education Longitudinal Study 2002 dataset. From the sample of 5,400 respondents, the authors identified, in addition to two types of ESL (mid-decreasing; low-increasing), two categories of students who successfully completed their studies (mid-achieving; high-achieving). However, in light of the topic of this review study, these groups are not further mentioned in the text.

Etzion and Romi (2015)	Questionnaire; Semi-structured interview	<ul> <li>(a) Emotional adjustment;</li> <li>(b) Behavioral adjustment;</li> <li>(c) Social adjustment;</li> <li>(d) Personal adjustment;</li> <li>(e) Life satisfaction;</li> <li>(f) Deviant behaviors;</li> <li>(g) Suspensions from school.</li> </ul>	<ul><li>(a) Suspended;</li><li>(b) Sociabilists;</li><li>(c) Alienated;</li><li>(d) Loners.</li></ul>
McDermott et al. (2017)	Questionnaire; Latent class analysis	<ul><li>(a) Protective factors</li><li>(protective factors of the school, family, peers, and individuals);</li><li>(b) Push/pull factors.</li></ul>	<ul> <li>(a) Quiet (presence of protective factors and absence of push/pull factors);</li> <li>(b) High adversity (adversity of circumstances, presence of protective factors and a number of push/pull factors);</li> <li>(c) Instability (presence of instability in factors related to social relationships and school or housing).</li> </ul>
McDermott et al. (2018)	Questionnaire (online); Correlation analysis of identified turning points and profiles of experience from previous research (McDermott et al., 2017)	Seven categories of turning points: (a) Mobility, (b) Family; (c) Peers; (d) School engagement and environment; (e) Health; (f) Crime; (g) Multiple categories.	(a) Quiet; (b) High adversity; (c) Instability.
Nairz-Wirth and Gitschthaler (2020)	Narrative (biographic) interview; Habitus type generation method (Bremer & Teiwes- Kügler, 2010)	Resources available to the respondents: (a) Subjective perspective ESL; (b) Economic resources; (c) Cultural resources; (d) Social resources.	<ul> <li>(a) Ambitious;</li> <li>(b) Status-oriented;</li> <li>(c) Non-conformist;</li> <li>(d) Disoriented;</li> <li>(e) Resigned;</li> <li>(f) Escapist;</li> <li>(g) Caring.</li> </ul>
Ogresta et al. (2021)	Semi-structured interview; Qualitative content analysis; Cluster analysis	-	<ul><li>(a) Poor academic achievers;</li><li>(b) Quiet;</li><li>(c) Maladjusted;</li><li>(d) Stressed.</li></ul>
Pikkarainen et al. (2021)	Narrative (biographic) interview	Three basic psychological needs according to self- determination theory (SDT): (a) Competence; (b) Relatedness; (c) Autonomy.	<ul><li>(a) Withdrawing;</li><li>(b) Struggling;</li><li>(c) Carrying burdens.</li></ul>

## 2.3 Types of early school leaving

If a typology is to be clinically useful, it must maximize the differences between the groups and minimize the intragroup differences (Janosz et al., 2000). A strategy that is suitable for grouping the overlapping types identified in the studies into categories is their classification according to the main characteristics of ESL and subsequent grouping according to the mutual correspondence of these features. Across the studies, five sufficiently significant, repetitive, and distinguishable group characteristics were found from which five ESL categories were derived. These are presented in Table 2 and described in more detail below. The designation of the groups is based on the original research by Janosz et al. (2000).

Table 3				
Correspondence	of ESL t	ypes in	the .	studies

	Quiet (causes that are hard to identify)	Disengaged (disinterest in school, low school engagement)	Maladjusted (problems with behavior)	Low-achiever (academic difficulties)	Disadvantaged (unfavorable life situation, significant social and health difficulties)
Janosz et al. (2000)	Quiet	Disengaged	Maladjusted	Low- achiever	-
Fortin et al. (2006)	Uninterested in school type	_	School and social adjustment difficulties type; Antisocial covert behavior type	_	Depressive type
Bowers and Sprott (2012a)	Mid- decreasing	_	Low-increasing	_	_
Bowers and Sprott (2012b)	Quiet; Involved	Jaded	_	_	_
Etzion and Romi (2015)	Suspended	Loners	Sociabilists; Alienated	_	_
McDermott et al. (2017)	Quiet	Instability	High adversity	_	_
McDermott et al. (2018)	Quiet	Instability	High adversity	-	_

Nairz-Wirth and Gitschthaler (2020)	_	Status- oriented; Disoriented; Escapist	Non-conformist	_	Ambitious; Caring; Resigned
Ogresta et al. (2021)	Quiet	_	Maladjusted	Poor academic achievers	Stressed
Pikkarainen et al. (2021)	_	Withdrawing	_	_	Carrying burdens; Struggling

Quiet. The quiet types show only a few problems on the outside; their school performance is around average. They have no behavioral problems and go unnoticed until they decide to leave school (Bowers & Sprott, 2012b; Fortin et al., 2006; Janosz et al., 2000; Ogresta et al., 2021). This is worrying as there seem to be very few indicators that would explain the circumstances leading to the decision to leave school. According to Bowers and Sprott (2012a), the dropout of these students is not primarily caused by difficulties at school but by underestimating the social aspects of school, resulting in weak social ties to the school community. This group of students do not build sufficient social networks at school, which is a condition for getting social support (Kebza, 2005). In case of difficulties, they do not find enough support at school (Bowers & Sprott, 2012a; Ogresta et al., 2021). These students are prone to rapid declines in performance as a consequence of external factors (Fortin et al., 2006; Janosz et al., 2000) and gradual breaking away from school (Bowers & Sprott, 2012a). In comparison to other types of ESL, the quiet types share the most characteristics with successful graduates. In contrast to the other types of early school leavers, however, they show a slightly higher level of depressiveness (McDermott et al., 2018; Ogresta et al., 2021) and more often declare experiencing boredom in lessons (Fortin et al., 2006; McDermott et al., 2018). The quiet types are the most numerous group in all studies: one third (Fortin et al., 2006; Janosz et al., 2000) to one half (Bowers & Sprott, 2012b; McDermott et al., 2017) of respondents.

**Disengaged.** This type of ESL reflects students who are indifferent to the educational process. These students are "expected" to leave school. They do not like school, have difficulty getting along with teachers and other students, find lessons uninteresting, see little value in education, and show high absenteeism (Bowers & Sprott, 2012b; Janosz et al., 2000). According to US researchers (McDermott et al., 2017, 2018), some at-risk students adopt the declared indifference to school from their parents and share this attitude

with the family, as a result of which the school becomes a rather marginal institution of vague importance to them. Insufficient identification with the school can also be caused by frequent moving or by low parental interest in their children and their education. However, lower school engagement may not always result in school failure. While Bowers and Sprott (2012b) described the grades of these students as significantly below average, according to Janosz et al. (2000) they achieve slightly above-average. Therefore, the reason for school dropout may not primarily be the negative inner attitude of the actor towards education. Leaving school can also be a secondary consequence of rejection by the school and classmates that students from socio-economically disadvantaged backgrounds usually face. For these students, leaving school can be an effort to break free from a hostile environment (Pikkarainen et al., 2021).

Maladjusted. The maladjusted share a low level of school commitment with the group of disengaged. However, they differ from them in their delinquent behavior (Fortin et al., 2006; Janosz et al., 2000), which they manifest at school (e.g., conflicts with teachers and classmates, non-compliance with school rules, bullying) or outside of it (e.g., vandalism, theft, petty crime). Their school results are usually below average, they have difficulties at the academic, behavioral, and motivational levels (Janosz et al., 2000). In many cases, they have to repeat the year due to excessive absenteeism that is usually connected with poor school results, (McDermott et al., 2017). The causes of ESL of this group are usually internal (Ogresta et al., 2021), and therefore it is difficult to reverse the process of expulsion from school or leaving school early by interventions. McDermott et al. (2017) characterized this group as adolescents who face "high adversity," especially (their own) delinquent behavior, foster care, or homelessness. McDermott et al. (2017) claimed that this group of early school leavers have the highest chance of returning to school and completing their education if given sufficient support.9 However, in McDermott's research, only 3.28% of respondents<sup>10</sup> fell into this type; this is an isolated research finding.

<sup>&</sup>lt;sup>9</sup> According to the analysis by McDermott et al. (2017), 66.6% of students included in the *high adversity* type completed secondary school (14.3% of them also completed a university degree).

<sup>&</sup>lt;sup>10</sup> These were 63 participants of the 1,942 involved early school leavers.

Low achievers. A general characteristic of this group of early school leavers is the inability to meet the academic requirements of the school, resulting in a lack of success in education (Janosz et al., 2000). These students state that poor school results are the reason for leaving school early. Study failure is a combination of adverse internal and external circumstances. As internal causes, these early school leavers speak of their lack of effort and lack of motivation resulting in absenteeism and poor school results. As negative external factors, they often refer to low parental interest in their education or logistical difficulties in commuting to school (Ogresta et al., 2021). Although only a few typologies treat this group as a separate type, quantitative analyses of data (Bowers & Sprott 2012a; McDermott et al., 2018) show that repeating a year (mainly due to poor school performance) is a relatively accurate predictor of ESL.

Disadvantaged. During their school attendance, these students face highly stressful life events that become the key turning points in their school career. These events include serious mental and health problems (Fortin et al., 2006), taking care of a relative, need to start working due to loss of family support (Nairz-Wirth & Gitschthaler, 2020), and discrimination on the grounds of ethnicity (Pikkarainen et al., 2021). Although this group consists of students with varying degrees of school commitment, their achievements and behavior do not generally deviate from the average (Fortin et al., 2006) until a significant adverse event leading to negative changes (loss of interest in school, decline in school performance, repeating a year, behavioral problems, alcohol or drug abuse, and feelings of helplessness) occurs in their lives, triggering the process of ESL (Ogresta et al., 2021). According to Austrian researchers (Nairz-Wirth & Gitschthaler, 2020), in their interviews these young people declare positive attitudes toward education and try to compensate for their low social capital by returning to the education system later or by establishing relationships with people with high academic ambitions.

## 3 Summary and discussion

The presented review study analyzed texts from 2000 to 2021. The existing literature shows that interest in the specific topic of ESL has been growing in recent years. According to some authors, the reason for this trend may be the growing awareness that an appropriate typology sufficiently clarifying the reasons for and processes of ESL is a relevant starting point for intervention programs (Etzion & Romi, 2015; Janosz et al., 2000). The aim of this paper was therefore to systematically map the current studies of ESL typologies and to create an overview of the research findings. The original plan, however,

was not easy to accomplish. The main and substantial limitation of the work is the low number of analyzed texts. There are many studies (e.g., Bowers et al., 2012; De Witte et al., 2013; Lamb et al., 2011) and government reports (Eurostat, 2021) that describe aspects and predictors of school dropout/ESL/ ELET, but only a few studies in which authors have created ESL typologies. One reason could be that the topic is under-researched. Another possible reason could be that the search method did not reveal all the existing studies. The articles analyzed in this review mainly refer to the same previous typological studies that are evaluated in this paper (especially the article by Janosz et al., 2000). The search for relevant texts showed their narrow geographical scope. Almost all the studies came from the North American and European regions, although the dropout phenomenon (especially the research of its predictors) is of scientific interest in other parts of the world as well (e.g., Adelman et al., 2018; Espinoza et al., 2020; Shi et al., 2015). The question therefore remains whether ESL typology research is such a specific topic that it has not yet received global attention, or whether it is difficult to find quality English-language studies from non-Euro-American regions.

The results of the review study show that early school leavers are a heterogeneous group. The oldest reviewed study (Janosz et al., 2000) identified four types of ESL based on an analysis of the school characteristics of two independent groups of respondents. This typology was based on three school axes: behavioral maladjustment, commitment, and (academic) achievement. Later studies (Bowers et al., 2012; Fortin et al., 2006) broadened this view and sought an explanation for ESL in the combination of factors related to young people's learning experiences, emotional and mental well-being, behavior and, in some cases, family background (McDermott et al., 2017, 2018; Nairz-Wirth & Gitschthaler, 2020; Ogresta et al., 2021). They showed that not all students who drop out of school had low academic performances.

Several factors significantly influencing the dropout process were identified: school results, school commitment, problematic behavior, mental health, and family support. However, there is no consensus among researchers as to whether internal (e.g., personal and social) or external factors (e.g., environment) give more accurate predictions. Janosz et al. (2000) considered internal factors to be crucial in identifying at-risk students; Bowers and Sprott (2012a), on the other hand, showed in a secondary analysis of data from 5,400 American high school students that ESL can be more accurately predicted from external factors, such as repeating a year, or grades and teacher assessment. Although these variables may predict academic failure for some types of ESL (Bowers & Sprott 2012a; McDermott et al., 2018), the dropout process appears to be a complex phenomenon that arises from a combination of multiple factors (Dupéré et al., 2015). These can "affect different students in different times in different

ways" (Tesseneer, 1958, p. 143) often linked to socioeconomic status (Bitsakos, 2021; Van Praag et al., 2020). These conclusions suggest that factors from different contexts, affecting students during their adolescence (e.g., home environment, school, and peer and social relationships), should be considered when creating typologies (Bronfenbrenner, 1979). This is related to another limitation of this work – the designation of the groups is based on the original research by Janosz et al. (2000). The question is the extent to which the creation of typologies could reinforce the stereotyping of their members. Some papers have shown that stigmatizing labels like *low-qualified* or *failed* are used in both educational practices and policies (De Witte et al., 2013; Nairz-Wirth & Gitschthaler, 2020). Classifications of the types could be therefore associated with attaching labels to early school leavers and to their stigmatization (De Witte et al., 2013; Lamb et al., 2011).

An interesting finding is the different perceptions of the dropout process by researchers and the actors themselves. While researchers (especially the authors of quantitative studies) tend to focus on respondents' long-term adverse life circumstances and view the dropout as a long-term process of alienation from school (McDermott et al., 2018), students describing their school leaving experience look for explanations in short-term "critical" events and often perceive their dropout as the result of a sudden adverse change in their lives – a turning point (Dupéré et al., 2015).

At the same time, the review study shows that there is not currently sufficient knowledge to convincingly explain the circumstances leading to ESL of individuals from the most numerous and most frequently identified type of ESL: the quiet dropout. These students share many characteristics with successful graduates and their study paths do not differ significantly from those of ordinary students. Although some studies show that these individuals are more prone to psychological problems (McDermott et al., 2018; Ogresta et al., 2021) and have difficulty managing the negative effects of the environment (Fortin, et al., 2006; Janosz, et al., 2000), the exact causes and mechanisms of their school leaving are unknown. Thus, it seems that studies focusing on the relationship between mental health and the risk of ESL could be a promising research direction (Fortin et al. 2006; Ogresta et al., 2021).

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