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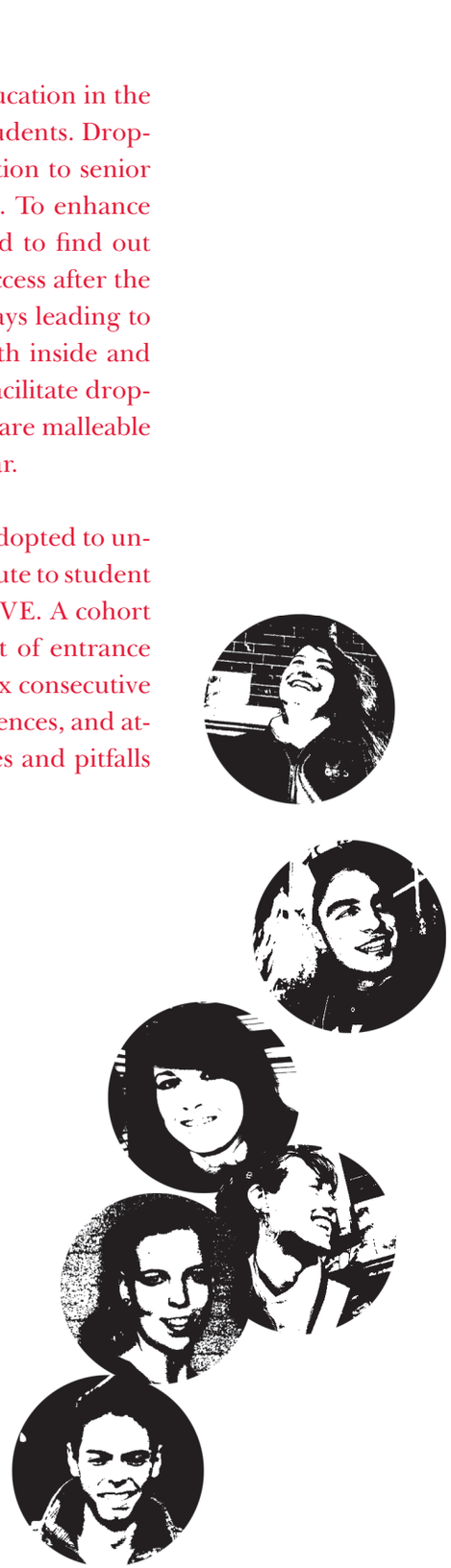
The transition to post-secondary vocational education in the Netherlands appears to be difficult for many students. Drop-out rates peak in the first year after the transition to senior vocational education (SVE, or MBO in Dutch). To enhance the school careers of students in SVE, we need to find out what particular factors interfere with school success after the transition to SVE. As there are multiple pathways leading to dropout, several sources of influence, from both inside and outside the school, need to be considered. To facilitate drop-out prevention, we need to identify factors that are malleable through school-based interventions in particular.

In this dissertation, a step-by-step approach is adopted to uncover distal and proximal processes that contribute to student persistence or dropout after the transition to SVE. A cohort of 1438 students is followed from the moment of entrance into SVE until the start of the second year. In six consecutive studies that examine students' entrance, experiences, and attainment in the first year in SVE, the principles and pitfalls of a successful start in SVE are described.



The transition to post-secondary vocational education: students' entrance, experiences and attainment Louise Elffers

The transition to post-secondary vocational education

Students' entrance, experiences and attainment

Louise Elffers

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ico

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The transition to post-secondary vocational education: students' entrance, experiences, and attainment

ACADEMISCH PROEFSCHRIFT

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Introduction

The transition to post-secondary vocational education in the Netherlands appears to be difficult for many students. Dropout rates in the first year after the transition are high. In accordance with the economic development agenda of the European Union, Dutch government intends to bring down dropout rates considerably (Dutch Ministry of Education Culture and Science, 2010a). As recent large-scale attempts to reduce dropout have not yielded the desired effect in post-secondary vocational education, Dutch government has announced that, in the coming years, it will concentrate on dropout prevention in this educational sector (Dutch Ministry of Education Culture and Science, 2010a). The key to effective dropout prevention is to gain better insight in the roots of dropout (Dutch Education Inspectorate, 2009). We need to find out what particular factors interfere with students' school success after the transition to post-secondary vocational education. To better understand the multiple pathways that lead to dropout, several sources of influence that may affect students' school careers, from both inside and outside the school, have to be considered. In particular, we need to identify the factors that are malleable to school-based interventions. With this dissertation, I aim to contribute to building a knowledge base for the enhancement of school success and dropout prevention in post-secondary vocational education. In order to obtain this goal, I have followed a cohort of students from the moment of entrance into post-secondary vocational education until the start of the second year. I examined students' social and educational background, their educational plans and expectations upon entrance, and their emotions, behaviors, and attainment in school throughout the first year. The general research question that guided the research reported in this dissertation is: Which factors and processes inside and outside school could help to explain the risk for dropout in the first year in post-secondary vocational education in the Netherlands? In this introduction, I outline the background and design of the study.

BACKGROUND OF THE STUDY

Introducing Dutch post-secondary vocational education

In the Netherlands, 55% of students in Dutch secondary education attend the pre-vocational track (PVE, or VMBO in Dutch) between the age of 12 and 16 (Dutch Ministry of Education Culture and Science, 2010a). Since a PVE diploma does not qualify as a basic qualification, the mandatory level that every person in Dutch education is expected to obtain (Dutch Ministry of Education Culture and Science, 2006), PVE graduates are required to transfer to a subsequent level of education. Most PVE graduates, 87%, transfer to senior vocational education (SVE, or MBO in

Dutch) at the age of 16 (Dutch Ministry of Education Culture and Science, 2011b). SVE provides specialized vocational training in engineering, health & social care, economics, and agriculture at four degree levels, preparing students for a wide range of occupations (Dutch Ministry of Education Culture and Science, 2006). In order to meet the basic qualification requirement, students have to obtain a level 2 diploma or higher before leaving SVE (Dutch Ministry of Education Culture and Science, 2006). In the academic year 2008/2009, the year in which the data collection for this study took place, the total student population in SVE was 526.047 students, which is about 34% of the total student population in Dutch post-secondary education (Knowledge Centre for Vocational Training and Labour Market, 2010; The Netherlands Association of VET Colleges, 2010). The majority of SVE students, 63%, enroll in full-time school-based training programs ("voltijds BOL" in Dutch), which consist for 20 to 60% of workplace learning (Knowledge Centre for Vocational Training and Labour Market, 2010). A smaller proportion of SVE students enroll in programs in which they work four days a week and take classes one day a week ("BBL" in Dutch). A small part of the SVE population, 5%, enrolls in degree programs at level 1 (assistant level), 25% enrolls in level 2 programs (basic vocational level), 27% in level 3 programs (full professional level), and 43% in level 4 programs (specialist level) (The Netherlands Association of VET Colleges, 2010). Program level enrollment is determined by students' PVE degree level. Level 1 programs do not apply entry requirements. A degree from one SVE program level gives access to a subsequent program level. Students with an SVE diploma at level 4 are qualified to transfer to higher education. SVE program durations range from 6-12 months (level 1) to 4 years (level 4). Most students in SVE enroll in programs in economics (33%), health & social care (31%), and engineering (30%). A small proportion of students attend agricultural programs at specialized institutions for agricultural education (The Netherlands Association of VET Colleges, 2010). About 40% of the total Dutch labor force holds an SVE degree (The Netherlands Association of VET Colleges, 2010).

The difficult transition to SVE: high dropout rates

Compared to students in the two upper tracks in Dutch secondary education, students in the vocational track are required to make an additional school transition to obtain the mandatory basic qualification (Dutch Ministry of Education Culture and Science, 2006). The compulsory transition to SVE appears to be difficult for many students. Dropout rates peak in SVE: 75% of students who drop out of school before obtaining a basic qualification do so in SVE (Dutch Ministry of Education Culture and Science, 2011a). Five years after their entrance in SVE, approximately 25% of students have left the educational system without a diploma (Dutch Ministry of Education Culture and Science, 2011b). More than half of SVE dropouts leave in the first year (Dutch Ministry of Education Culture and Science,

2011b). Dropout rates in the first year differ largely between program levels: 35% of students drop out of a level 1 program, 15% of a level 2 program, 8% of a level 3 program, and 6% of a level 4 program (Scientific Council for Government Policy, 2008). Some dropouts will return to school in later years, but most dropouts leave the educational system for good, without a basic qualification (CBS Statistics Netherlands, 2011; Herweijer, 2008). Young people without a basic qualification are twice as likely to be unemployed as students with a basic qualification (Dutch Ministry of Education Culture and Science, 2011a). Moreover, if dropouts without a basic qualification have a job, this is more often a temporary, low-qualified or low-wage job (Dutch Ministry of Education Culture and Science, 2010a; Research Centre for Education and the Labor Market, 2009). Although some students make a deliberate and well-considered decision to leave school, and pursue a successful career (Eimers, 2006; Scientific Council for Government Policy, 2008), for many students dropping out of school is a negative decision that unfavorably affects their life course (Bridgeland, DiIoliou, & Morison, 2006; Research Centre for Education and the Labor Market, 2009).

Searching for the reasons why students struggle with the transition to SVE

To help students succeed in SVE, we need to understand what factors make the transition to SVE difficult for so many students. In general, school transitions are difficult for all youth, as transferring students are required to integrate into a new institutional environment (Alexander, Entwisle, & Kabbani, 2001; Tinto, 1993). The transition from PVE to SVE is thought to be particularly difficult, because of substantial differences between the two types of education. Compared to PVE, SVE requires more autonomy and self-direction from students, as SVE programs provide less directive structures, instructions and expectations (Verstegen & Severiens, 2007). SVE schools are larger, with less intensive contacts between students and school staff, and more perceived anonymity (Scientific Council for Government Policy, 2008). In addition, SVE schools offer less extensive student support services than PVE schools (Scientific Council for Government Policy, 2008). Another particular complexity of the transition to SVE, is the choice that students need to make for an SVE program which prepares them for a specific job or vocational sector. SVE students often have difficulty to determine what vocational sector and program suits their interests and abilities best, and many SVE students discover that they made the wrong choice after a while (Voncken, van der Kuip, Moerkamp, & Felix, 2000). Last, students may lack motivation to transfer to SVE. Some students prefer to work in a full-time job instead of going to school (Scientific Council for Government Policy, 2008). Because of the basic qualification requirement, they have to make the transition to SVE nevertheless.

Students think of the transition to SVE as a big step (Verstegen & Severiens, 2007). Yet, most students succeed in the first year after the transition to SVE, whereas, on

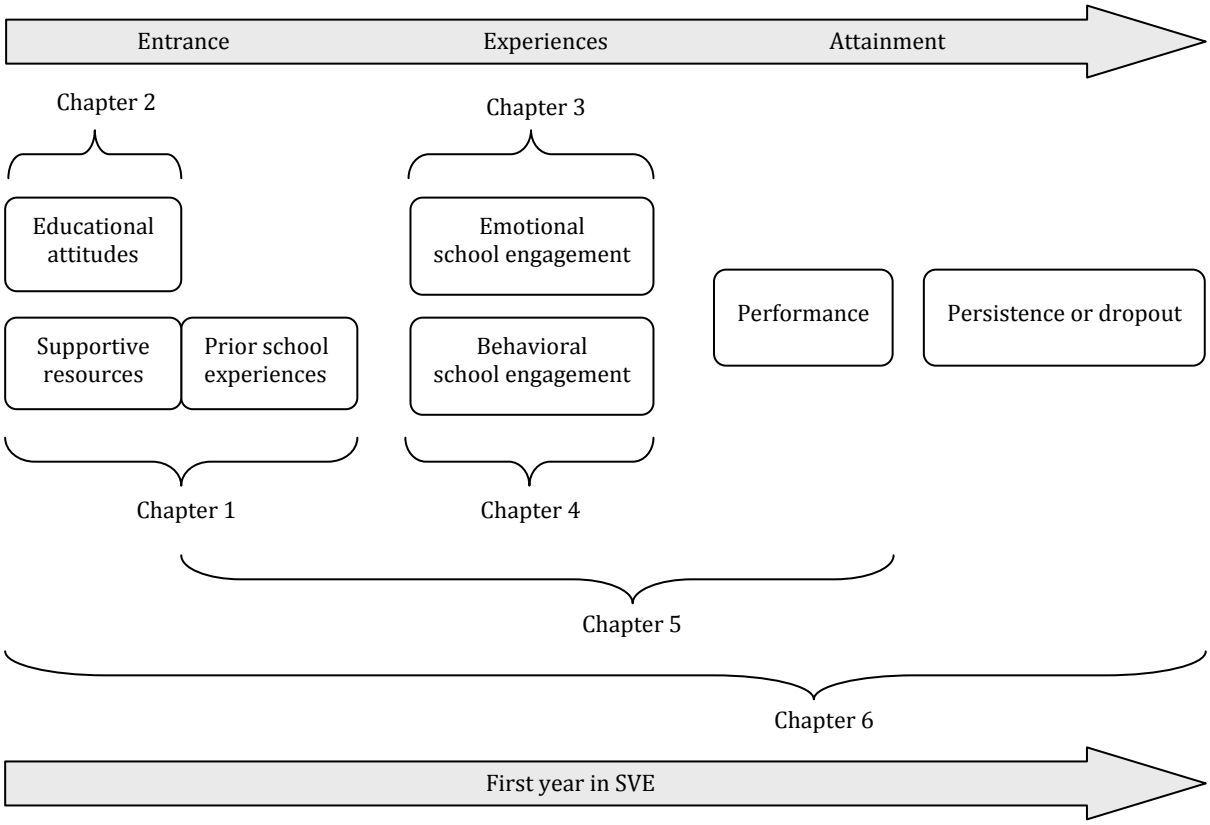
average, 1 in 6 students drops out within the first year (Scientific Council for Government Policy, 2008). It has been suggested that students from disadvantaged backgrounds struggle with school transitions in particular (Roderick, 1993). Dutch dropout rates confirm that students from disadvantaged backgrounds, such as a low socioeconomic or ethnic minority background, have an increased risk to drop out. In addition, male students, students growing up in broken families, and older students have been found to drop out more often (Dutch Ministry of Education Culture and Science, 2010b). These statistics do not inform us about the reasons why students with those particular characteristics drop out more often than other students. Various possible explanations can be found in the international literature, ranging from differences in the school orientation and support in students' home environment to differences in students' experiences, behavior and performance in school (e.g. Alexander et al., 2001; Finn & Rock, 1997; OECD, 2006). Next to sociodemographic patterns in dropout rates, Dutch dropout reports indicate that students who are involved in problematic situations and behaviors outside school, such as debts, the use of drugs, or delinquency drop out more often (Dutch Ministry of Education Culture and Science, 2011b; Scientific Council for Government Policy, 2008; ter Bogt, van Lieshout, Doornwaard, & Eijkemans, 2009; Weerman & van der Laan, 2006). It is difficult to establish causal order in the relationship between those circumstances and dropout, as both may be symptoms of another underlying cause (Rumberger, 1987). In sum, we know which background characteristics of students indicate an increased risk for dropout in SVE, but we do not know the mechanisms that account for this increased risk. In this dissertation, I seek to uncover some of these mechanisms by studying the entrance, experiences and attainment of at-risk and non-at-risk students in the first year in SVE.

Towards a comprehensive model of dropout

To facilitate dropout prevention interventions, it is essential to search for factors and processes associated with an increased risk for dropout that are manipulable (Finn & Voelkl, 1993). From that perspective, the concept of school engagement is of particular interest. School engagement refers to students' emotional and behavioral involvement in school (Appleton, Christenson, & Furlong, 2008; Fredricks, Blumenfeld, & Paris, 2004). Over the past two decades, school engagement has emerged as a promising theoretical model to understand the dropout process (Appleton, Christenson, Kim, & Reschly, 2006; Finn, 1993; Fredricks et al., 2004). Previous research points to school engagement as "the most proximal point of entry" to enhance the school success of at-risk students (Connell, Spencer, & Aber, 1994, p. 504; Finn, 1993; Finn & Voelkl, 1993). For that reason, school engagement plays a key role in this dissertation. I examine the school engagement of at-risk and non-at-risk students in SVE, the influence of students'

perceptions of various social and academic aspects of SVE on their school engagement, as well as the role of school engagement in students' performance and persistence in SVE. However, a sole focus on students' experiences inside school would deny the role of other sources of influence, such as family, peers, and individual factors in dropout (Janosz, LeBlanc, Boulerice, & Tremblay, 2000). Several researchers have emphasized that combining those multiple sources of influence into one comprehensive model of school dropout is a challenging but essential next step to advance our understanding of the complex roots of dropout (Alexander, Bozick, & Entwisle, 2008; Battin-Pearson, Newcomb, Abbott, Hill, Catalano, & Hawkins, 2000; Janosz et al., 2000; Rumberger, 1995). Dropout should not be conceptualized as an event that takes place at one particular point in time, but rather as the culmination of a process that may stretch over multiple years and contexts (Alexander et al., 2001; Finn, 1993). A focus on the identification of processes that immediately precede dropout, such as declining school performance, bears the risk of overlooking the many factors that contribute to the dropout process over a longer course of time (Battin-Pearson et al., 2000; Rumberger & Lim, 2008). In this dissertation, I work towards a more comprehensive model of dropout, by taking a step-by-step approach to uncover distal and proximal processes that contribute to dropout. This approach is reflected in the structure of this dissertation, which consists of three parts that each comprise two chapters. Part I revolves around students' entrance in SVE. In Chapter 1, students' social and academic background characteristics upon the transition to SVE are explored, by looking at students' access to supportive resources in their home environment, as well as their school experiences prior to the transition to SVE. In Chapter 2, I examine students' educational attitudes, aspirations, and expectations upon entrance in SVE. Part II discusses students' experiences in SVE. In Chapter 3 and 4, I study the role of social and academic school experiences in students' emotional and behavioral engagement in SVE. Part III addresses students' attainment in the first year in SVE. In Chapter 5, the role of school engagement in students' performance across the transition to SVE is studied. In Chapter 6, I examine the social and academic determinants of school dropout in the first year in SVE. The step-by-step approach enables the in-depth study of the various processes that constitute the pathway to and through the first year in SVE. Figure 1 presents a schematic overview of the main constituents and the corresponding chapters of this dissertation.

Figure 1: main constituents and corresponding chapters of this dissertation



DESIGN OF THE STUDY

Sample

To enable the analysis of dropout processes and the mechanisms underlying the increased risk for dropout among certain sociodemographic groups, I analyze the entrance, experiences, and attainment of SVE students in urbanized school regions. Student populations in those regions are more diverse, with a substantial proportion of at-risk students, and dropout rates are higher than in rural areas the Netherlands (Dutch Ministry of Education Culture and Science, 2008). A focus on students in urban school regions enables the study of various potential sources of dropout that are embedded in students' lives inside and outside school. This focus confines the possibility to generalize the findings in this dissertation to the total SVE population in the Netherlands. For participation in the study, I invited ten regional school boards ("ROC's" in Dutch) from highly and intermediately urbanized areas in two regions where dropout rates are high (Dutch Ministry of Education Culture and Science, 2008). Nine school boards were interested in participation, of which five boards eventually agreed to participate in the study. Reasons for non-participation were internal organizational problems and simultaneous participation in other research projects. Prior to the start of the academic year, I asked the five school boards to select first year "voltijds BOL"

classes for each available combination of vocational sector (economics, engineering, health & social care) and program level (1 to 4). The resulting sample consisted of 1438 students in 61 classes, distributed over three sectors (health & social care: 37%; engineering: 29%; economics: 34%), and four program levels (level 1: 13%; level 2: 33%; level 3: 23%; level 4: 31%), indicating a small overrepresentation of students in level 2 and health & social care programs. Further descriptives of the sample can be found on page 21. Most schools employ a flexible intake, which means that students could start in a program at two, or several, moments in the academic year. Therefore, a number of new students were to be expected to enter the classes in the sample over the course of the academic year. This was not a problem, as the student ID numbers enabled identification of students who were not part of the initial sample. Yet, class compositions turned out to be less stable than was anticipated beforehand. A large number of new students entered the classes in the sample over the course of the study, and one class was discontinued because all students were transferred to a different class. In addition, staffing turned out to be quite unstable in some schools as well. Staff were regularly transferred to different units or locations. At one school board, a substantial reorganization caused the lay off of staff members that were involved with the study, resulting in the loss of three classes at the third measurement.

Survey instruments

To suit the specific context of SVE and its students, I developed two new questionnaires: one for the first measurement, and one for the second and third measurement. At the first measurement, data were collected on students' personal, social, and educational background, as well as their educational attitudes, aspirations, and expectations of the SVE school and program. At the second and third measurement, students were asked to report on their experiences, behavior, and performance in SVE. Items were partially inspired by existing questionnaires that have been developed to measure school experiences and engagement in other educational settings (Beekhoven, 2002; Goodenow & Grady, 1993; Pascarella & Chapman, 1983; Voelkl, 1995; Willms, 2003). All items were phrased as short statements, to which students responded on a continuous scale from disagree to agree. The questionnaires were tested in a pilot study. The time needed to complete the questionnaire was measured, and students commented on the questionnaires' content, language, difficulty, structure, lay out, and instructions.

Survey data collection

Survey data were collected at three moments in the first year in SVE: in the first week of the academic year, after the Christmas break, and at the end of the academic year. Students completed questionnaires in a classroom setting. Class-based data collection has the advantage that questionnaire completion is less

dependent on students' personal motivation and remembrance, as the questionnaire is distributed and completed during class, under supervision of a teacher. Questionnaire completion was on a voluntary basis, but there were no indications that students were not willing to participate. To maximize response, completion was not tied to one moment. Instead, teachers could decide on the best moment(s) to hand out the questionnaires in the period between receiving and returning the questionnaires. As 61 classes had to complete a questionnaire in the same week(s), I was not able to attend all data collection occasions in person. Several teachers, team coordinators, and administrative staff members assisted in the coordination of the data collection process. A written teacher instruction about the purpose and procedure of the data collection, including contact information if teachers needed assistance or additional explanation, accompanied all questionnaire packages. Students filled in their student identification number, as printed on their school ID card, on the questionnaires. With this number, and with students' date of birth, school, program sector and level as back-up information, I matched respondents' data from the three separate measurements, without accessing any personal data such as student names.

Dropout data collection

Dropout in the first year in SVE was assessed at three differents moments: dropout in the first semester, dropout in the second semester, and dropout over the summer break before the start of the second year. After each survey measurement, I examined which students from the initial sample completed a questionnaire, and which students did not. To find out whether the missing students had dropped out of the program, or if they were still participating, I asked school administrations to report on the enrollment status of all missing student numbers. If the students were not enrolled in the program anymore, I asked the schools to report on the dropout status of the students. The schools reported if a student dropped out of the program, if he or she graduated, as was possible for students in level 1 programs, or if there was a special reason for the student to leave the program, such as hospitalization or migration. Thus, I was able to discriminate between 'school dropout' and 'study dropout', and to mark 'special dropout cases'. This procedure was repeated after each survey measurement.

Methods

A variety of statistical methods is used to analyze the data that were collected for this dissertation. In the first four chapters, I provide a more in-depth view of smaller parts of the data set, by applying multilevel (sequential) regression analysis to data from measurement 1 (Chapter 1 and 2) and measurement 2 (Chapter 3 and 4). In Chapter 5 and 6, I take a longitudinal perspective, using data from all three measurements. In Chapter 5, I apply multilevel structural equation

modeling to analyze the development of student engagement and performance across the transition to SVE. In Chapter 6, I use logistic sequential regression analysis to examine the influence of multiple factors on the odds to drop out in the first year in SVE.

CONTRIBUTION OF THIS DISSERTATION

This dissertation contributes to educational theory, policy and practice in several ways. First and foremost, it elucidates the principles and pitfalls of a successful transition to SVE. Currently, there is little empirical knowledge about the mechanisms underlying the increased risk for dropout among particular groups of SVE students. The multifaceted perspective adds to the establishment of a more solid knowledge base for educational policy and practice workers who seek to enhance the school success of students in SVE. The large-scale longitudinal design of the study forms an important addition to previous, valuable yet small-scale, dropout studies that have been carried out in the Netherlands (Francissen, Cohen, & Bosveld, 2011; Oberon, 2008; van Lieshout, 2003; Voncken et al., 2000). These qualitative studies all apply a retrospective analysis of the causes of dropout, by interviewing students after they had dropped out. By measuring students' personal conditions, educational attitudes, school engagement and performance prior to the occurrence of dropout, this dissertation sheds more light on the dynamics of the dropout process over time. The findings enhance the development of more differentiated dropout prevention policies, directed at different forms of dropout (Eimers, 2006; Scientific Council for Government Policy, 2008; Tinto, 1993).

Second, the comprehensive approach advances educational theory. With this dissertation, I take up the "tremendous challenge" (Janosz et al., 2000, p. 185) to combine multiple sources of influence from both inside and outside school into a more comprehensive model of dropout. The integration of existing theories that focus on either the social or academic contexts affecting students' educational attainment advances the current state of knowledge in research of dropout, school transitions, and school success in general (Pascarella & Terenzini, 2005). Furthermore, renowned dropout models, such as the theoretical frameworks developed by Finn (1989) and Tinto (1993), have been studied mainly in the context of, primarily Anglo-Saxon, secondary and higher education, with predominantly White middle class samples (Braxton, 2000; Fredricks et al., 2004; Guiffrida, 2006; Pascarella & Terenzini, 2005). This dissertation expands the existing body of research to other relevant, yet understudied, educational settings and student populations. It is the first study to rigorously apply school engagement theory to the context of SVE. Thus, this dissertation contributes to the understanding of universal and context-specific forces that shape educational processes worldwide.

Part I

Students' entrance in post-secondary vocational education

"Before we talk of departure, we must first speak of entry"
(Tinto, 1993, p. 8).

Chapter 1

One Foot Out the School Door? Interpreting the Risk for Dropout upon the Transition to Post-Secondary Vocational Education*

ABSTRACT

Many students drop out in the first year after a school transition. Most commonly used indicators of an increased risk for dropout reveal little of the mechanisms that push or pull students out of school. In this study, we look at the association of a set of common risk indicators with students' supportive resources and school experiences upon the transition to post-secondary vocational education in the Netherlands. Multilevel regression analyses on a diverse sample of 1438 students indicate that most sociodemographic risk indicators relate to less access to supportive resources for school, whereas personal circumstances outside school that are associated with an increased risk for dropout correlate with negative school experiences. Students from lower educated or poor families and students who use drugs, have debts, or are delinquent score negative in both domains, suggesting that those students make the transition with one foot out the school door.

* This chapter is based on:
Elffers, L. *(in press)*. One Foot Out the School Door? Interpreting the Risk for Dropout upon the Transition to Post-Secondary Vocational Education. *British Journal of Sociology of Education, 33* (1).

INTRODUCTION

School transitions are stressful events that impose difficulty on the school careers of many students (Alexander, Entwisle, & Kabbani, 2001; Roderick, 1993). Typically, achievement levels drop and dropout rates increase in the first year after a school transition (Dutch Education Inspectorate, 2002; Gutman & Midgley, 2000; Roderick & Camburn, 1999; Tinto, 1993). In the Netherlands, dropout rates peak after the transition to senior vocational education, or SVE (CBS Statistics Netherlands, 2010). SVE is the senior continuation of the lowest track in Dutch secondary education, and provides specialized vocational programs for students of 16 years and older. Approximately 75% of school dropout in the Netherlands takes place in SVE (Dutch Ministry of Education Culture and Science, 2010). Like in many Western school systems, dropout rates in SVE are stratified according to sociodemographic characteristics. For instance, students from lower socioeconomic or ethnic minority backgrounds drop out more often (Dutch Ministry of Education Culture and Science, 2009). While sociodemographic characteristics are often used as indicators of a student's risk for dropout, they are not the proximal causes of dropout (Alexander et al., 2001), nor do they inform us about the processes underlying the sociodemographic patterns in dropout statistics (Stevens, Clycq, Timmerman, & Van Houtte, 2009). Next to sociodemographic characteristics, difficult personal circumstances in students' lives outside school, such as drug abuse, pregnancy or delinquency, are often classified as risk indicators in dropout statistics (Dutch Ministry of Education Culture and Science, 2009; Scientific Council for Government Policy, 2008). However, both the personal circumstances in students' lives that increase the risk for dropout and the actual decision to drop out may be caused by the same underlying forces (Rumberger, 1987).

To enhance successful school transitions and careers for all students, we need to understand the forces that place certain groups of students at risk for dropout. Earlier research points to social and academic constraints to a successful school transition for students from disadvantaged backgrounds. First, students who grow up in more challenging social or economic circumstances may encounter greater difficulty when making a school transition due to the fewer supportive resources they have access to (Roderick, 1993; Roderick & Camburn, 1999). Second, students from such backgrounds appear to be more likely to transfer to a new school with a record of declining school engagement and performance (Marks, 2000; OECD, 2006; Roderick & Camburn, 1999; Voelkl, 1995). In such cases, students may enter their new school with one foot out the school door, prone to further disengagement from school (Finn, 1993). In this study, the association of a set of common risk indicators with students' supportive resources and school experiences is tested at the moment of the transition to SVE. We examine whether at-risk students, defined as students who are overrepresented in dropout statistics

according to (1) their sociodemographic characteristics, and (2) their personal circumstances outside school, differ from non-at-risk students with respect to (1) the encouragement and support for school that they encounter in their personal environment, and (2) their school experiences prior to making the transition to SVE. Students who transfer to SVE have spent at least 12 years in school, and SVE serves a diverse student population with a substantial proportion of students from lower socioeconomic and ethnic minority backgrounds. Hence, the transition to SVE is not only a very relevant context to study social and academic constraints to successful transitions, it also provides an excellent opportunity to do so.

THEORETICAL BACKGROUND

Many dropout studies and policy reports distinguish students who are at risk for dropout from students who are not. The label 'at-risk' is usually based on various, separately defined, sociodemographic indicators. While such indicators enable us to successfully identify students with an increased risk for dropout, they are merely a diagnostic tool, as they reveal little of the underlying mechanisms that push or pull students out of school (Alexander et al., 2001; Rumberger, 1987). Another set of commonly used risk indicators pertains to personal circumstances in students' lives that can disturb their school careers. It is likely that, instead of a causal relationship, in many cases both such personal circumstances and the decision to drop out of school are symptoms of the same underlying cause (Rumberger, 1987). To interpret the risk for dropout, we need to explore the interrelatedness of factors associated with an increased risk for dropout. Several scholars have underlined the importance of taking into account multiple sources of influence, such as the family, school, community, and peers, to better explain the dropout process (Battin-Pearson, Newcomb, Abbott, Hill, Catalano, & Hawkins, 2000; Rumberger, 1995; Rumberger & Lim, 2008; Wehlage, Rutter, Smith, Lesko, & Fernandez, 1989; Woolley & Bowen, 2007). In this study, we examine the association of various common risk indicators with some potential constraints to a successful transition that are embedded in those multiple sources of influence. First, we review the literature on school dropout that was used to define the set of risk indicators included in this study. Next, we outline previous findings about the role of supportive resources and school experiences in school transitions and dropout.

Sociodemographic indicators of the risk for dropout

Sociodemographic background characteristics are the most commonly used indicators of the risk for dropout. Not without reason, as clear differences exist between sociodemographic groups with respect to the likelihood of dropping out. Especially a low socioeconomic status (SES) is considered a key indicator of the

risk for dropout (Alexander et al., 2001; Battin-Pearson et al., 2000; Ekstrom, Goertz, Pollack, & Rock, 1986; Rumberger, 1987, 1995; Rumberger & Lim, 2008; Wehlage et al., 1989). A students' SES is usually represented by a composite measure of parental level of education, parental employment, and family financial resources (Rumberger & Lim, 2008). Parental level of education seems to assert the most prominent and consistent influence on academic success (Battin-Pearson et al., 2000; Luyten, Bosker, Dekkers, & Derks, 2003). However, it remains difficult to detect which aspect of a student's socioeconomic background is the main determinant of the risk for dropout, as in many cases socioeconomic characteristics, such as lower educated parents and low financial resources at home, are clustered within the same families (Alexander et al., 2001; Rumberger & Lim, 2008). This difficulty is the reason for conflicting findings on the effect of students' ethnic background on the risk for dropout as well (Battin-Pearson et al., 2000; Stevens et al., 2009). Ethnic minority students drop out at higher rates than native students (Dutch Ministry of Education Culture and Science, 2009, 2010; Ekstrom et al., 1986; Wehlage et al., 1989), but various studies indicate that the differentiating effect of students' ethnic background disappears mostly or entirely when controlling for SES (Battin-Pearson et al., 2000; Luyten et al., 2003; Rumberger, 1995). A similar issue emerges when examining the effect of growing up in a single parent home. Dropouts come from broken families more often than graduates (Barrington & Hendricks, 1989; Dutch Ministry of Education Culture and Science, 2010), but those families tend to have less financial resources, which may account for the effect (Wehlage et al., 1989). Other sociodemographic variables that have been found to affect a student's risk for dropout are age and gender. Older students and male students have an increased risk for dropout (Battin-Pearson et al., 2000; Dutch Ministry of Education Culture and Science, 2009, 2010; Ekstrom et al., 1986; Rumberger, 1987; Rumberger & Lim, 2008).

Personal circumstances indicating a risk for dropout

Next to their sociodemographic characteristics, students carry with them individual characteristics relating to the circumstances in their private lives outside school that may affect their risk for dropout. While such circumstances are not necessarily associated with social class or family background (Wehlage et al., 1989), those circumstances that have been found to affect the risk for dropout seem to occur more often among students from lower socioeconomic backgrounds (e.g. Lee & Staff, 2007; Singh, Darroch, & Frost, 2001). Pregnancy and parenthood increase the likelihood of dropping out, especially among girls (Ekstrom et al., 1986; Wehlage et al., 1989). Drugs abuse, marijuana use in particular, is positively associated with school dropout (Roebuck, French, & Dennis, 2004; ter Bogt, van Lieshout, Doornwaard, & Eijkemans, 2009). The use of drugs is often embedded in a social context of general deviance, and regularly co-occurs with increased contact

with the justice system (Battin-Pearson et al., 2000; ter Bogt et al., 2009; Weerman & van der Laan, 2006). Juvenile delinquency is strongly related to school dropout, especially when severe offences or official justice interventions are involved (Hirschfield, 2009; Weerman & van der Laan, 2006). In general, dropouts work more hours next to school than graduates (Ekstrom et al., 1986), and working more than 20 hours a week seems particularly detrimental to students' school career (Lee & Staff, 2007). Students who work many hours tend to come from more disadvantaged backgrounds (Lee & Staff, 2007), which likely involves a financial necessity to work more hours next to school. High debts increase the risk for dropout, as they can push students to leave school and find a job to pay off their debts (Verhagen, van Heijst, Jurrius, Calkoen, & Koot, 2010).

Encouragement and support for school: students' school-related social capital

Various studies suggest that the effects of sociodemographic characteristics on the propensity to drop out trace back to differences in the amount of parental involvement, monitoring and support for their children's school careers (Alexander, Entwisle, & Bedinger, 1994; Alexander et al., 2001; Audas & Willms, 2001; Kao & Tienda, 1998; Roderick, 1993). Dropouts have been found to score significantly lower on parental emotional support for education (Fortin, Marcotte, Potvin, Royer, & Joly, 2006), and they appear to discuss their school experiences less with their parents than graduates (Ekstrom et al., 1986). Students' academic achievement is stimulated if parents express high expectations of their children (Astone & McLanahan, 1991; Battin-Pearson et al., 2000). It is crucial that parents also transform those expectations into actual emotional and practical support (Garas-York, 2010), by talking with their children about their educational experiences, choices, and strategies, and by monitoring their child's progress (Astone & McLanahan, 1991; Babeliowsky, Derriks, & Voncken, 1990; Ekstrom et al., 1986; Finn, 1993; Jimerson, Egeland, Sroufe, & Carlson, 2000; Legault, Green-Demers, & Pelletier, 2006; Mandara, Varner, Greene, & Richman, 2009; Nettles, Caughy, & O'Campo, 2008; Stanton-Salazar & Dornbusch, 1995). We can conceptualize the resources that support students in their school careers as a school-related dimension of social capital, given that students acquire those supportive resources through their social relationships with others (Bourdieu, 1986; Dika & Singh, 2002; Portes, 1998; Stevens, Lupton, Mujtaba, & Feinstein, 2007). While a school-oriented home environment is crucial for every student (Mandara et al., 2009; Rumberger, Ghatak, Poulus, Ritter, & Dornbusch, 1990), for many working-class and minority youth the supportive ties that are particularly useful for their school career are mainly found outside the family (Stanton-Salazar & Dornbusch, 1995; Stevens et al., 2009). Students thus build their school-related social capital with ties from the various networks that they participate in. For

instance, Dutch students with a Moroccan or Turkish background report receiving support from their parents in the form of guidance and stimulation, while seeking additional, more practical, forms of support from other family members, peers and teachers, who are more familiar with the educational system (Crul, 2000; Stevens et al., 2009). The employment of different social ties for different goals highlights the notion that students' school-related social capital should not be defined in terms of the mere presence of social ties, but rather in terms of the actual resources that students identify and utilize in their networks (Crul, 2000; Portes, 1998; Stevens et al., 2007). Whereas some social ties contribute substantially to students' school careers, other ties may be less helpful or even detrimental (Portes, 1998). The latter may apply in particular to students with peers engaging in deviant behavior. Students who are the only one in their peer group attending school have difficulty to stay motivated in school (Crul, 2000). Dropouts have been found to have more friends who dropped out themselves or who work instead of going to school (Ellenbogen & Chamberland, 1997), and to have more friends who do not value school (Hymel, Comfort, Schonert-Reichl, & McDougall, 1996).

School experiences

Students transiting to post-secondary education have attended school for many years prior to the transition. Previous school experiences affect students' success after the transition, directly and indirectly, through shaping their attitudes, behavior, and performance in the new institutional environment (Eccles, 1983; Finn, 1993; Rumberger & Lim, 2008; Tinto, 1993). School experiences are significant precursors of dropout (Fredricks, Blumenfeld, & Paris, 2004; Rumberger, 1995; Tinto, 1993). Especially students' academic engagement, which refers to their behavior and performance in school, is a powerful proximal predictor of school success (Janosz, LeBlanc, Boulerice, & Tremblay, 2000; Jimerson et al., 2000; Wehlage et al., 1989). Emotional engagement, or a sense of belonging in school, is crucial as well, and is often lacking among dropouts (Ekstrom et al., 1986; Finn, 1989; Hymel et al., 1996). School engagement results from students' interaction with the various social and academic dimensions of the school environment: their teachers; classmates; the institutional climate; and the curriculum (Tinto, 1993; Wehlage et al., 1989). A good relationship with teachers has been found to be particularly important for some at-risk students to feel engaged (Croninger & Lee, 2001; Drewry, Burge, & Driscoll, 2010). Other studies report that students from lower socioeconomic backgrounds experience a weaker sense of belonging in school in general (Marks, 2000; Voelkl, 1995). When past experiences in school have been negative, students may start off in their new school "predisposed to non-participation" (Finn, 1993, p.16). If students have already partially withdrawn, emotionally or physically, from school life, this hinders their engagement and progress after a transition (Alexander et al., 2001;

Finn, 1993; Rumberger, 1995). Dropout, then, is the end point of a process of progressive disengagement that has its roots in earlier school years (Alexander et al., 2001; Jimerson et al., 2000; Rumberger, 1995).

RESEARCH QUESTION

Above, we have outlined which dropout risk indicators have been identified in the literature, and why students' school-related social capital and school experiences could help to explain the risk for dropout they impose. In this study, we assess the relationships between a set of common risk indicators and students' school-related social capital and school experiences. The research question guiding the analysis is: do sociodemographic background characteristics and personal circumstances that are associated with an increased risk for dropout relate to the school-related social capital and school experiences of students upon their transition to post-secondary vocational education?

METHODS

Variables

The sociodemographic background characteristics included in this study are: year of birth; gender; ethnic identity; household composition; job status parents; highest education parents and financial problems in the family. Measures of personal circumstances comprised: having a child or (partner) being pregnant; personal debts; drug abuse; having been arrested by the police and number of working hours in an extra job outside school. As outcome variables, we took into account three measures of students' school-related social capital and four measures of students' school experiences. Students' school-related social capital was measured with three scales: the encouragement and support that students receive for their educational career from their parents (e.g. *I can talk to my parents/guardians about school matters*, 5 items, α=.67), from their peers (e.g. *My friends and I talk about school matters*, 4 items, α=.68), and from their community in general (e.g. *Outside school, there are enough people with whom I can discuss school matters*, 2 items, α=.73). Students' school experiences prior to transition were measured on four scales: *emotional engagement* (e.g. *I felt at home at my previous school*, 3 items, α=.88), *academic engagement* (e.g. *I worked hard at my previous school*, 6 items, α=.77), *contact with classmates* (e.g. *I had many friends at my previous school*, 5 items, α=.81), and *contact with teachers* (e.g. *I had good contacts with my teachers at my previous school*, 6 items, α=.87). All measures are based on students' self-report.

Data collection

To suit the specific context of the transition to SVE, a new self-report questionnaire was developed for the study. The psychometric qualities of the scales regarding students' social capital and school experiences were examined through reliability analyses and principal component analyses. All scale variables were measured with statements: students indicated on a 5-point Likert-type scale (strongly disagree to strongly agree) to what extent they agreed with the statement. Questionnaires were distributed at the beginning of the academic year 2008/9, in the first week at school. Students completed the questionnaire in the classroom under supervision of their teacher. All teachers received an instructional handout. Additional information about the purpose of the study was included in a short introductory statement on the questionnaire. Students filled in the questionnaire anonymously. A privacy statement on the questionnaire assured respondents that no identifiable personal data would be reported.

Sample

The study was conducted with a sample of 1438 first year students entering SVE in the Netherlands. To ensure sociodemographic diversity of the sample, out of the 40 SVE school boards in the Netherlands, 10 urban school boards were invited to participation in the study, of which 5 agreed to participate. Within each school board, first year classes were selected from all vocational sectors and levels. Classes were selected for participation during the summer break, before individual students were assigned to classes. A total of 61 classes participated in the study, with an average class size of 24 students. Questionnaires were completed under supervision of a teacher. While participation in the study was voluntary for all students, we received no reports of students not willing to participate in the study. The descriptives of the sample in table 1 below correspond to available statistics of vocational education and urban schools in the Netherlands (Dutch Ministry of Education Culture and Science, 2010; Dutch Ministry of Health Welfare and Sport, 2010; Knowledge Centre for Vocational Training and Labour Market, 2010; Kuhry, 1998; Scientific Council for Government Policy, 2008).

Analysis

The data were screened for meeting the assumptions of regression analyses. Few missing values were encountered in the data set, and missing values were considered missing at random. Therefore, the expectation maximization algorithm was used to impute missing values (SPSS Inc., 2010). The intra-class correlation coefficient (ICC) indicated that part of the variance could be attributed to between-class differences, with ICC's ranging from .03 to .07 (Snijders & Bosker, 1999). To correct individual level variance for group level variance, we carried out multilevel regression analyses, with class and student included as two levels. We regressed

Table 1:

descriptives of a sample of 1438 students entering senior vocational education

Characteristics	%
Age	
16-17 years	58
18-19 years	30
Older than 19 years	12
Number of missing cases before imputation: 8	
Gender	
Female	53
Male	47
Number of missing cases before imputation: 4	
Ethnic identity	
Native Dutch background	51
Moroccan background	15
Turkish background	12
Surinamese background	9
Antillean background	3
Other ethnic background	10
Number of missing cases before imputation: 4	
Household	
Living with both parents	64
Living with one parent	25
Living on one's own	4
Living with other relatives / friends	7
Number of missing cases before imputation: 1	
Job status parents	
Both parents have a job	49
One parent has a job	22
Both parents have no job	14
Student doesn't know	15
Number of missing cases before imputation: 26	
Highest education parents	
Primary education or similar	9
Secondary education or similar	12
SVE or similar	20
Higher education or similar	19
Student doesn't know	40
Number of missing cases before imputation: 32	
Financial problems in family	18
Number of missing cases before imputation: 9	
Personal debts student	9
Number of missing cases before imputation: 37	
Student (or partner) is pregnant / has child(ren)	3
Number of missing cases before imputation: 22	
Student has been arrested by the police	17
Number of missing cases before imputation: 20	
Student uses (soft-)drugs	10
Number of missing cases before imputation: 37	
Extra job student	
no extra job	42
< 8 hours a week	17
8 – 15 hours a week	33
> 15 hours a week	8
Number of missing cases before imputation: 26	

Table 2: school-related social capital and school experiences of students upon the transition to senior vocational education

	School-related social capital			**School experiences**			
	Support parents	Support peers	Support community	Emotional engagement	Academic engagement	Contact classmates	Contact teachers
	p [a] / β (se) [b]	p / β (se)	p / β (se)	p / β (se)	p / β (se)	p / β (se)	p / β (se)
SOCIODEMOGRAPHIC CHARACTERISTICS							
Year of birth	**.09 (.03)****	.02 (.03)	.03 (.03)	**.12 (.03)*****	.04 (.03)	.06 (.03)	.03 (.03)
Male (vs. female)	**-.12 (.05)***	**-.41 (.06)*****	**-.23 (.06)*****	-.11 (.06)	-.08 (.06)	**.21 (.06)*****	-.10 (.06)
Ethnic identity (vs. native Dutch)	***p=.017***	***p=.001***	***p=.015***	***p=.030***	***p=.002***	***p=.000***	*p=.159*
Moroccan background	-.10 (.09)	**.26 (.09)****	.14 (.09)	**.27 (.09)****	**.32 (.09)*****	**.47 (.09)*****	**.25 (.09)****
Turkish background	-.04 (.09)	**.39 (.09)*****	.16 (.09)	.18 (.09)	.03 (.09)	**.56 (.09)*****	.12 (.09)
Surinamese background	-.02 (.10)	.11 (.10)	-.06 (.10)	.00 (.10)	**.29 (.10)****	**.45 (.10)*****	.05 (.10)
Antillean background	**-.33 (.15)***	.00 (.16)	-.31 (.16)	-.13 (.16)	.25 (.16)	.10 (.16)	-.05 (.16)
Other ethnic background	**-.28 (.09)****	.17 (.09)	-.16 (.09)	-.04 (.09)	.11 (.09)	**.26 (.09)****	.10 (.09)
Household (vs. living with two parents)	*p=.000*	*p=.776*	*p=.828*	*p=.124*	*p=.259*	*p=.239*	*p=.166*
Living on one's own	**-.65 (.15)*****	-.11 (.15)	-.04 (.16)	**.31 (.16)***	.27 (.15)	.15 (.16)	.24 (.16)
Living with one parent	-.04 (.07)	.04 (.07)	.05 (.07)	.01 (.07)	.00 (.07)	-.04 (.07)	.02 (.07)
Living with other relatives/friends	-.10 (.10)	-.04 (.11)	.06 (.11)	-.10 (.11)	-.06 (.11)	-.16 (.11)	-.14 (.11)
Job status parents (vs. both parents have a job)	*p=.962*	*p=.917*	*p=.245*	*p=.713*	*p=.930*	*p=.399*	*p=.177*
Both parents have no job	-.02 (.09)	.05 (.09)	-.06 (.09)	.01 (.09)	.03 (.09)	-.09 (.09)	.09 (.09)
One parent has a job	.00 (.07)	.01 (.07)	-.12 (.07)	-.07 (.07)	.03 (.07)	-.08 (.07)	.03 (.07)
Student doesn't know	-.04 (.09)	-.03 (.09)	-.14 (.09)	.01 (.09)	.06 (.09)	-.14 (.09)	**.20 (.09)***
Highest education parents (vs. SVE [c] or similar)	***p=.001***	*p=.256*	*p=.104*	*p=.065*	***p=.028***	*p=.328*	*p=.055*
Primary education	**-.36 (.11)*****	-.05 (.11)	-.02 (.11)	**-.29 (.11)***	**-.28 (.11)***	-.13 (.11)	-.20 (.11)
Secondary education	-.09 (.09)	-.07 (.09)	.13 (.09)	-.11 (.10)	**-.26 (.09)****	-.05 (.09)	-.13 (.09)
Higher education	.11 (.08)	.12 (.08)	**.18 (.08)***	.00 (.08)	-.15 (.08)	.04 (.08)	.04 (.08)
Student doesn't know	-.07 (.07)	-.03 (.07)	.02 (.08)	-.14 (.08)	**-.17 (.07)***	.06 (.08)	**-.15 (.08)***
Financial problems family (vs. no problems)	**-.40 (.07)*****	**-.16 (.07)***	**-.26 (.07)*****	-.08 (.07)	**-.15 (.07)***	-.13 (.07)	-.10 (.07)

(table 2 continues on next page)

(table 2 continued)

	School-related social capital			**School experiences**			
	Support parents	Support peers	Support community	Emotional engagement	Academic engagement	Contact classmates	Contact teachers
	p / β (se)	p / β (se)	p / β (se)	p / β (se)	p / β (se)	p / β (se)	p / β (se)
PERSONAL CIRCUMSTANCES							
Student (partner) expects / has child(ren) (vs. no)	.03 (.16)	-.11 (.16)	.17 (.16)	**.49 (.16)****	.24 (.16)	.10 (.16)	.23 (.17)
Personal debts students (vs. no debts)	**-.30 (.10)****	-.13 (.10)	**-.27 (.10)****	**-.23 (.10)***	**-.44 (.10)*****	-.23 (.10)	**-.22 (.10)***
Student uses (soft-)drugs (vs. no drugs use)	**-.26 (.09)****	**-.20 (.09)***	-.07 (.09)	-.07 (.09)	**-.36 (.09)*****	.05 (.09)	**-.24 (.09)***
Student has been arrested by the police (vs. not)	-.01 (.07)	-.14 (.07)	.04 (.07)	-.05 (.07)	**-.21 (.07)****	.08 (.07)	**-.17 (.07)***
Extra job student (vs. no extra job)	*p=.112*	*p=.057*	*p=.068*	*p=.359*	*p=.058*	*p=.220*	*p=.144*
< 8 hours a week	-.01 (.07)	**.19 (.07)****	.14 (.07)	.07 (.08)	-.03 (.07)	.09 (.07)	.05 (.08)
8-15 hours a week	.05 (.06)	.10 (.06)	.09 (.06)	.08 (.06)	.01 (.06)	.13 (.06)	.02 (.06)
> 15 hours a week	-.19 (.09)	.09 (.10)	-.11 (.10)	-.07 (.10)	**-.25 (.10)***	.03 (.10)	**-.20 (.10)***
Explained variance [d]	R^2 = .16	R^2 = .09	R^2 = .06	R^2 = .06	R^2 = .09	R^2 = .08	R^2 = .05
ICC	ICC=.04	ICC=.04	ICC=.07	ICC=.03	ICC=.05	ICC=.05	ICC=.03

Note: n=1438, N=61. Significant coefficients and p-values are printed in bold. * p<.05 **p<.01 *** p<.001.

[a] p-values indicate the global significance test of effects for the categorical variables: ethnic identity, household, job status parents, highest education parents, extra job student.

[b] β (se): standardized regression coefficients from multilevel regression analyses, with standard error in parentheses. Two-tailed test.

[c] SVE: senior vocational education.

[d] shown: student-level variance

students' school-related social capital and school experiences on indicators of their sociodemographic background and personal circumstances. To enhance interpretation of the scores, we standardized variables to zero mean and unity variance.

RESULTS

Table 2 shows the results of the multilevel regression analyses. Substantial associations occur between students' sociodemographic background and personal circumstances on the one hand, and their school-related social capital and school experiences on the other. Younger students enter SVE with more parental support, which is probably related to the closer attachment of younger adolescents to their parents. Younger students felt more at home at their previous school as well. Male students report less school-related social capital, from parents, peers, and their community in general. They report substantially less peer support for school, while they are more positive about the contact with their classmates at their former school. Students with an ethnic minority background generally report lower levels of parental support for school, and Moroccan and Turkish students, the two largest ethnic minority groups, report higher levels of peer support. Ethnic minority students are remarkably more positive about their school experiences, especially with respect to their contact with fellow students. Students living on their own report substantially less parental support for school, but they do not seem to compensate this deficiency with other social ties, as some ethnic minority students seem to do. Students with lower educated parents report less parental support, as well as less emotional and academic engagement. Students with higher educated parents report more access to supportive resources in their community. Students who don't know if their parents have a job report more connectedness to teachers. Those students probably have little or no contact with their parents, which they might compensate with more intensive contacts with their teachers. Not knowing the educational level of parents could be a proxy for having lower educated parents, which would explain the alignment of the scores on school experiences from this group with the scores of students with lower educated parents. Students living in poor families score lower on most outcome variables. They report less access to supportive resources, from parents, peers and the broader community, and less academic engagement. Being pregnant or being a parent does not relate to differences in school-related social capital, but those students felt more at home at their previous school than students without children. Having personal debts is negatively related to all outcome variables: students with debts report less supportive ties with parents and their broader community and more negative school experiences in general. Students using soft drugs also report less school-related social capital, as well as less academic engagement and less satisfactory contacts with teachers. Their results look remarkably similar to the scores of

students who have been arrested by the police. Last, students who work less than eight hours a week perceive their peer group as more supportive, while students working more than 15 hours a week report less academic engagement and less connectedness to teachers.

DISCUSSION

To promote school success for all, we need to identify the difficulties that students face in their school careers. The pre-entry characteristics with which students enter post-secondary education have far-reaching consequences for their success in school (Tinto, 1993). Assessing the risk for dropout of all incoming students enhances timely intervention and prevention of dropout. However, many common predictors of dropout are mere indicators of risk, concealing the underlying forces that account for the risk they impose. Whereas such risk factors are useful for easy identification of at-risk students, they are less helpful for the development of effective strategies to counter the risk they signify. Therefore, the goal of this study was to examine the association of a set of commonly used risk indicators to some pre-entry characteristics that are more directly related to students' school careers, and that consequently may be more susceptible to school-based interventions: the school-related social capital and school experiences with which students enter post-secondary vocational education. Our findings indicate that sociodemographic indicators of the risk for dropout tend to relate to lower levels of school-related social capital, whereas personal circumstances associated with an increased risk for dropout correlate with negative school experiences. Some students score negative on both social capital and school experiences measures at the moment of transition to post-secondary vocational education. Those students may be particularly at risk for dropout.

Interpreting the risk for dropout from the perspective of supportive resources

Our results confirm that sociodemographic dropout patterns align with differences in access to supportive resources in students' social networks outside school. Ethnic minority students, boys, student who do not live with both parents, students with unemployed parents, students with lower educated parents, and students living in poor families report lower levels of parental support for their education, although not all of those results are significant in our study. Students with higher educated parents report better access to supportive resources in their communities. Turkish and Moroccan students appear to discuss school-related matters with their peers more often, which confirms earlier findings as well (Crul, 2000; Stevens et al., 2009). Boys report substantially lower levels of school-related support in their peer group. Whereas male students report more positive social

contacts with classmates than female students, discussing school life or helping each other out with school-related matters is apparently not a frequent activity in male peer groups. This finding may reflect adolescent boy culture, in which school is not a shared focus and where asking for help is considered *uncool* (Stevens et al., 2007). As there is no reason to believe that the number of actual resources is lower in boys' than in girls' environments, the findings suggest that boys do less well in identifying and utilizing potential resources in their social networks.

Interpreting the risk for dropout from the perspective of school experiences

Differences in school experiences do not seem to explain the risk for dropout imposed by most sociodemographic characteristics. For instance, while ethnic minority students have a higher propensity to drop out, they report more positive school experiences, as is the case for boys and students living on their own. An important exception is the group of students with lower educated parents, who are overrepresented in dropout statistics and who score significantly lower on academic engagement. The most prominent differences in school experiences are found for students who have debts, who work more than 15 hours a week, who use drugs, and who have been arrested by the police. They all report more negative school experiences than classmates who do not engage in any of those activities.

A double drawback

Some students deal with constraints in both the social and academic realm. Students with lower educated parents report less parental support and more negative school experiences. The same counts for students growing up in poor families, who score negative on almost all outcomes in our study. They report significantly less access to support from parents, peers, and their community in general, as well as less academic engagement. These findings indicate that students from poor families and students with lower educated parents, who may often be the same students, are confronted with significant social and academic constraints when making the transition to post-secondary vocational education. Students with debts and students who use drugs are also more likely to encounter difficulties in both domains. Both groups of students, which may overlap to some extent as well, discuss school matters less with their parents, while school does not seem to play a prominent role in the peer group of students using drugs either. Moreover, they report more negative school experiences. With a history of more truancy, lower performance, poorer contact with teachers, and less encouragement and support for school in their social networks, students with a record of debts or drugs seem to make the transition to post-secondary vocational education with one foot out the school door.

Enhancing access to supportive resources

The value of students' social capital is not determined by the number of ties in their network, but by their possibility, whether in terms of practical access or social skills, to utilize the resources available in their environment (Portes, 1998; Stevens et al., 2007). Some students simply have limited access to primary supportive resources in their environment. Little parental support can be the result of limited or absent contact with parents, which is likely the reason for lower scores on parental support among students living on their own, older students, and immigrant students who have migrated to the Netherlands without their parents, as is frequently the case with Antillean and refugee students. In other cases, students may have social networks that largely consist of ties that are not particularly supportive to their school careers. This applies to students associating with peer groups with explicit anti-school attitudes, but may also be the case for students growing up in communities with limited experience in the educational system. In other cases, students have ample access to helpful resources, but they fail to identify and utilize those. Our findings suggest that this applies to boys in particular. Schools and youth organizations can provide students with additional supportive ties in the form of counsellors or tutors, who can compensate for a lack of supportive ties. Schools can also coach parents to get more actively involved with their children's school careers. Last, schools can train students to use their network more effectively by teaching them how to identify and utilize the available resources in their environment. Peer tutors at school can constitute a favorable additional source of support for students engaged in less school-oriented peer groups. Intake interviews at school facilitate the identification of students who are in need of additional forms of support.

Enhancing the school careers of at-risk students

A school transition is not an isolated event, but is embedded in students' educational life course (Elder Jr., Kirkpatrick Johnson, & Crosnoe, 2003; Pallas, 2003). Disengagement from school may have its origins in the early school years, and it is difficult for schools to counter an advanced stage of disengagement. However, adopting a life course perspective acknowledges the continuity in students' school careers (Bloomer & Hodkinson, 2000) and the impact of previous school experiences on subsequent stages in students' educational trajectories (Gorard, Rees, Fevre, & Welland, 2001). Intake interviews enable schools to learn about students' educational history, and to identify students who enter their new school with one foot out the school door. Prior school experiences cannot be changed, but transitions can offer students the opportunity to break out of a spiral of disengagement (Elder Jr. et al., 2003; Langenkamp, 2010). Schools need to talk with prospective students about their school experiences thus far, and discuss with them the strategies needed to successfully proceed their school careers. By

creating the opportunity for students to redirect their educational pathways in a positive direction, and by securing access to sufficient supportive resources, the transition to post-secondary vocational education enables at-risk students to throw off some important social and academic constraints to their successive school careers.

Chapter 2

Great Expectations! Students' Educational Attitudes upon the Transition to Post-Secondary Vocational Education*

ABSTRACT

In this study, we examine students' educational attitudes upon the transition to Dutch senior vocational education (SVE), a transition associated with high dropout rates in the first year. Prior studies have identified differences in educational attitudes between sociodemographic groups. However, the mechanisms underlying those differences remain topic of debate: some studies point at differences in the school orientation and support in students' social communities outside school, others focus on differences in educational experiences between sociodemographic groups. Multilevel sequential regression analyses on a diverse sample of 1438 students in urban SVE schools reveal that students have very positive educational attitudes upon their transition to SVE. Ethnic minority students express particularly positive attitudes. School-related encouragement and support at home plays an important role in students' attitudes, but the attitudes of students from lower educated or ethnic minority communities are less related to this support. Prior school experiences play an essential, but occasionally counterproductive, role in students' attitudes upon transition, depicting the transition as a fresh new start for some, and an unwelcome threshold for others.

* This chapter is based on:
Elffers, L. & Oort, F.J. *(under review)* – Great Expectations: the Role of Students' Social and Academic Context in their Educational Attitudes upon the Transition to Post-Secondary Vocational Education

INTRODUCTION

Educational transitions form a difficult hurdle for many students (Alexander, Entwisle, & Kabbani, 2001). Dropout rates typically increase in the first year after a transition (Dutch Education Inspectorate, 2002; Tinto, 1993). In many Western countries, dropout rates are socially and ethnically patterned: students from lower socioeconomic backgrounds drop out more often, as do students with lower educated parents, and ethnic minority students (Alexander et al., 2001; Dutch Ministry of Education Culture and Science, 2009; OECD, 2006). Whereas a transition can offer a welcome opportunity to make a new start, transitions are difficult for all youth, as students need to integrate into a new social and academic environment (Alexander et al., 2001; Langenkamp, 2010; Tinto, 1993). Students from disadvantaged backgrounds in particular may encounter difficulties when making a transition (Roderick, 1993).

Studies from various strands of research point towards the critical role of students' educational attitudes for their school careers. The attitudes with which students enter a new institution have been found to play a decisive role in their attainment after the transition (Bers & Smith, 1991; Hausmann, Schofield, & Woods, 2007; Tinto, 1993). Several studies report differences in the educational attitudes between sociodemographic groups, most prominently between ethnic groups. However, the nature of those differences remains topic of debate. While Fordham and Ogbu (1986) founded their renowned 'acting White' thesis on reports of oppositional attitudes towards school among Afro-American students, a growing number of studies indicates that the educational attitudes among ethnic minority students resemble the attitudes of majority students, or are more positive (Alexander, Entwisle, & Bedinger, 1994; Downey, Ainsworth, & Qian, 2009; Kao & Tienda, 1998; Khattab, 2003; Mickelson, 1990; Van der Veen & Peetsma, 2006). Differences in how educational attitudes are defined, and at what stage in students' academic careers they are measured, may account for the contradictions in those findings (Downey et al., 2009; Mickelson, 1990; Tyson, 2002). A range of explanations is offered to account for the differences in educational attitudes between sociodemographic groups. Whereas some studies attribute those differences primarily to sociocultural differences, and particularly to the educational attitudes prevailing in students' social communities (Davies & Kandel, 1981; Fordham & Ogbu, 1986; McCarron & Inkelas, 2006; McMillan & Reed, 1994; Ryan, 2000; Steinberg, Dornbusch, & Brown, 1992; Wentzel, 1998; Wigfield, Eccles, & Rodriguez, 1998), other studies suggest that they are mainly related to differences in students' educational experiences, and in the extent to which students evaluate their attitudes in light of those experiences (Alexander et al., 1994; Eccles, 1983; Eccleston, Smyth, & Lopoo, 2010; Hossler & Stage, 1992; Tinto, 1993; Tyson, 2002).

In this study, we look into the educational attitudes of students upon the transition to post-secondary vocational education in the Netherlands, a transition associated with high dropout rates in the subsequent first year. Dutch schools for senior vocational education (SVE), especially those in urban areas, serve a diverse population of students aged 16+, with a substantial proportion of students from lower socioeconomic and ethnic minority backgrounds. As students transferring to SVE have spent at least 12 years in school, their educational attitudes carry the traces of long-range experiences in education. Thus, the context of the transition to SVE offers excellent opportunity to study sociodemographic patterns, and the role of multiple social and academic factors, in students' educational attitudes. In this article, we capitalize on this opportunity by studying the following two research questions:

- To what extent do the educational attitudes of students upon the transition to Dutch senior vocational education relate to (1) their sociodemographic characteristics, (2) the school orientation and support in their home environment, and (3) characteristics of their academic pathway and school experiences?
- How do these factors interact in their relationship to students' educational attitudes?

THEORETICAL BACKGROUND

Defining educational attitudes

In previous works, the term 'educational attitudes' has been used to describe various dimensions of students' pro- or anti-school sentiments, their personal educational expectations, and their aspirations. The term is often used to refer to students' general orientation towards school, or the importance that students attach to education for their personal lives or careers (Downey et al., 2009; Mickelson, 1990). Such attitudes can be defined in more and less contextualized ways: students have both context-specific attitudes towards their particular school and degree program (Anderman & Kaplan, 2008), as well as a more universal orientation towards education or their role as a student (Anderman & Freeman, 2004). Of the various dimensions of students' educational attitudes, their educational expectations appear to be one of the most powerful predictors of academic achievement (Downey et al., 2009). Those expectations can take the form of more abstract, or idealistic, aspirations about the educational level that students hope to attain in their lives, or of more concrete, or short-term, expectations and goals, for instance regarding the completion of a class or degree program (Buchmann & Dalton, 2002; Deil-Amen & Lopez Turley, 2007; Mickelson, 1990; Teachman & Paasch, 1998). The various dimensions of students' educational

attitudes may overlap and affect each other, and are often studied together (Deil-Amen & Lopez Turley, 2007). The term 'educational attitudes' serves as an umbrella for those various dimensions, and we will use this umbrella term accordingly when referring to all four dimensions of students' educational attitudes that we included in our study: students' expected fit with the new school (expected institutional fit), their expected fit with the new degree program (expected academic fit), their aspirations with respect to the program they have enrolled in (educational aspirations) and their attitudes towards education in general (general educational attitudes).

Sociodemographic differences in students' educational attitudes

Educational attitudes relate to educational attainment: if students report high aspirations, optimistic expectations, and positive feelings towards their education, they are more likely to succeed in school (Ekstrom, Goertz, Pollack, & Rock, 1986; Maehr & Meyer, 1997; McMillan & Reed, 1994; Morgan, 2005; Rumberger, 1995; Schoon, 2008; Sewell & Shah, 1968; Tinto, 1993). School dropouts generally report less positive school attitudes (Ekstrom et al., 1986). As students from lower socioeconomic and ethnic minority backgrounds drop out more often, we may expect that those students report more negative attitudes towards school. While some studies indeed found more negative educational attitudes among those groups of students (Fordham & Ogbu, 1986), other studies revealed an inverse pattern: students from lower socioeconomic and immigrant backgrounds generally report more positive attitudes towards their education (Alexander et al., 1994; Downey et al., 2009; Van der Veen & Peetsma, 2006). Irrespective of the exact nature of the differences found, scholars point to both the social and academic context to explain differences in the educational attitudes across sociodemographic groups.

The social context

The educational attitudes of close relatives or significant others in students' lives affect students' own attitudes (Davies & Kandel, 1981; Khattab, 2003; Sewell & Shah, 1968). In particular, the influence of parents has been studied extensively in research on educational attitudes. Not only do parents act as "expectancy and value socializers" for their children (Eccles, 1983), their important role as sources of social and practical support and guidance for the educational careers of their children is emphasized in various studies (Alexander et al., 2001; Ekstrom et al., 1986; Hossler & Stage, 1992; Linnenbrink-Garcia & Fredricks, 2008; McCarron & Inkelas, 2006; McMillan & Reed, 1994; Rumberger, 1995; Schoon, 2008; Trusty, 1998). Parental influence on students' attitudes seems to be stronger than peer influence (Davies & Kandel, 1981). Yet, peer attitudes can shape students' educational attitudes considerably (Chang & Le, 2005; Ryan, 2000; Steinberg et al.,

1992), especially among adolescent students (Cotterell, 2007; Davies & Kandel, 1981; Wentzel, 1998; Wigfield et al., 1998). Differences in the school orientation and support for students' school careers in their community may account for differences in their attitudes. While most parents have high expectations of their children's academic careers regardless of the family's socioeconomic status (Khattab, 2005), socioeconomically disadvantaged communities, especially recent immigrant communities, may attach additional value to education as a means to pursue upward social mobility (Rothon, Arephin, Klineberg, Cattell, & Stansfeld, 2010). However, there seems to be more incongruity between the emotional and practical support provided by parents in disadvantaged communities (Alexander et al., 1994). Families with higher socioeconomic status have better knowledge of the educational system, and better access to human and financial resources, to not only support their children's educational careers emotionally, but in more practical ways as well (Khattab, 2005). We conceptualize the emotional and practical resources in students' social networks that support their academic career as a school-related dimension of social capital (Stevens, Lupton, Mujtaba, & Feinstein, 2007).

The academic context

The school environment has been found to affect educational attitudes substantially (Eccles, 1983; Goodenow & Grady, 1993; Kao & Tienda, 1998; Khattab, 2005; Maehr & Meyer, 1997). Not only can teachers and classmates influence students' educational attitudes through expressing, directly or indirectly, their personal academic values and expectations, students' experiences in education also shape their attitudes towards their current and future educational pathway (Eccles, 1983; Goodenow & Grady, 1993; Hossler & Stage, 1992; Nichols, 2008; Tinto, 1993). Students have been encouraged or discouraged by prior interactions with teachers and classmates before entering a new school (Finn, 1993), and some students make the transition in the course of gradual disengagement from school (Finn, 1993; Rumberger, 1995). Earlier experiences of failure in school can be an important reason for students to enter a new school with less positive attitudes (Tyson, 2002). Students from lower socioeconomic or ethnic minority backgrounds generally encounter more academic or behavioral difficulties in their school careers (Alexander et al., 1994; Finn, 1993; Finn & Rock, 1997), and have been found to report lower levels of emotional engagement in school (Marks, 2000; Voelkl, 1995). Such experiences could press down students' optimism about the next step in their educational careers. Thus, students' academic pathway can play an important role in shaping their educational attitudes upon the transition to a new school.

The case of the transition to Dutch post-secondary vocational education

Dutch senior vocational education (SVE) is the senior continuation of the vocational track in secondary education. The vocational track offers degree programs with an explicit vocational orientation and strong ties to the labor market. SVE programs in engineering, health & social care, economics, and agriculture are offered at four levels: assistant level (1), basic vocational level (2), full professional level (3), and specialist level (4), with program durations from one year (level 1) to four years (level 4). The Dutch post-secondary school system allows for moving up to subsequent degrees: graduation at one level in SVE enables students to continue at the next level, a level 4 SVE diploma gives access to higher professional education, which in turn can lead to access to university. The educational attitudes of students in school systems like the Dutch system, which sorts students into different educational trajectories at an early age, have been found to be more determined by the type of school they attend than in more comprehensive school systems (Buchmann & Dalton, 2002). Students may experience a stigma of attending the lower track, perceiving that they are less worthy and need to lower their future aspirations (Arum & Shavit, 1995; Khattab, 2005). However, while SVE programs are primarily intended to prepare students for a direct transfer to the labor market after graduation, many SVE students aspire to move on to higher levels of post-secondary education instead, and numerous students indeed do so. In contrast, other students may transfer to SVE with the desire to leave school as soon as the legal obligation to attend school ends at their 18th birthday. Yet, irrespective of their personal goals, the transition to SVE is a major step for all students. They leave their familiar, and usually smaller, school behind, and need to integrate into a new institutional environment, which may cause both anxiety and excitement.

METHODS

Sample

We conducted our study with a sample of 1438 first year students in senior vocational education in the Netherlands. From the total number of 40 SVE school boards in the Netherlands, 10 boards were invited for participation in the study, based on (1) their urban setting, to assure sociodemographic diversity of the sample, and (2) the range of degree programs offered, to enable data collection in various degree programs and levels within one school board. The five school boards that agreed to participate represent the initial selection satisfactorily. Within each school board, first year classes were selected from the three main vocational sectors (engineering, economics, and health and social care) at all four SVE degree levels. Classes were selected during the summer break, before student

enrollments were finalized, and before students were assigned to individual classes. A total of 61 classes participated in the study, with an average class size of 24 students. Participation in the study was voluntary for all students. As questionnaires were completed in a classroom setting under supervision of a teacher, in practice all students in a class completed a questionnaire, and we received no reports of students not willing to participate. Hence, it is unlikely that specific groups of students are over- or underrepresented in our study. This is confirmed by the descriptive statistics in table 1 below, which correspond to available statistics of vocational education and urban schools in the Netherlands (Dutch Ministry of Education Culture and Science, 2010; Dutch Ministry of Health Welfare and Sport, 2010; Knowledge Centre for Vocational Training and Labour Market, 2010; Kuhry, 1998; Scientific Council for Government Policy, 2008).

Questionnaire

A new self-report questionnaire was developed to suit the specific level and nature of SVE and its students. The questionnaire has been subjected to a pilot study before being finalized. Its psychometric properties have been assessed through reliability analyses and principle component analyses. Cronbach's alpha's were satisfactory to good. All variables had a 5-point Likert-type scale (strongly disagree to strongly agree), except for the items on students' sociodemographic background and characteristics of their new school and program (school board, sector, level).

Outcome variables

We defined four outcome variables to measure students' attitudes upon transition. Two measures assessed students' expected fit with their new educational environment: *expected institutional fit* (e.g. I think I will feel at home at this school, 3 items, α=.87), referring to students' expected fit with the institution in general, and *expected academic fit* (e.g. I think this degree program suits me well, 7 items, α=.80), referring to students' expected fit with the specific vocational program and sector. The variable *educational aspirations* (e.g. I really wish to graduate from this degree program, 3 items, α=.74) reflects students' ambitions with respect to the degree program they have enrolled in. *General educational attitudes* (e.g. I think it is important to go to school, 7 items, α=.80) refers to students' general valuing of education as a means to pursue their career goals.

Table 1:

descriptives of a sample of 1438 students entering Dutch senior vocational education

Characteristics	%
Gender	
Female	53
Male	47
Ethnic identity	
Native Dutch background	51
Moroccan background	15
Turkish background	12
Surinamese background	9
Antillean background	3
Other ethnic background	10
Age	
16-17 years	58
18-19 years	30
Older than 19 years	12
Job status parents	
Both parents have a job	49
One parent has a job	22
Both parents have no job	14
Student doesn't know	15
Highest education parents	
Primary education or similar	9
Secondary education or similar	12
SVE or similar	20
Higher education or similar	19
Student doesn't know	40
Financial problems in family	18
School board	
Board 1 – intermediate urban area	30
Board 2 – intermediate urban area	10
Board 3 – highly urbanized area	20
Board 4 – highly urbanized area	19
Board 5 – highly urbanized area	21
SVE sector	
Economics	34
Engineering	29
Health & social care	37
SVE degree program level	
Level 1	14
Level 2	32
Level 3	23
Level 4	31
Prior education	
PVE with diploma	62
PVE without diploma	6
SVE with diploma	10
SVE without diploma	9
Other	13

Explanatory variables

We distinguished three groups of explanatory variables: sociodemographic background characteristics, social context variables, and academic context variables. As indicators of students' sociodemographic background, we used measures of students' ethnic and socioeconomic background. The ethnic background measure was based on self-report by the student of his/her ethnic identity. As indicators of students' socioeconomic background, we included student statements about their parents' job status, highest educational level of the parents, and financial circumstances at home. Moreover, we took into account students' birth year and gender.

The social context variables comprised reports on students' school-related social capital: the amount of encouragement and support regarding their school careers that students receive from their parents (e.g. My parents/guardians think it is important that I finish school, and I can talk to my parents/guardians about my school experiences, 5 items, α=.67), peers (e.g. My friends think it is important to finish school, and My friends and I talk about school matters, 4 items, α=.68), and their community in general (e.g. Outside school, there are enough people with whom I can discuss school matters, and Outside school, there are enough people who can help me with my school work, 2 items, α=.73).

The academic context variables included the educational program that the student was enrolled in prior to entering SVE, with additional information on whether the student graduated in that program or not, the vocational sector that the student was about to enter at the moment of measurement (engineering, economics, health & social care), the school board (3 school boards in highly urbanized areas, and 2 school boards in intermediate urban areas), and the level of the degree program (level 1 to 4). Moreover, students' prior school experiences were measured using four scales: *prior emotional engagement* (e.g. I felt at home at my previous school, 3 items, α=.88), *prior academic engagement* (e.g. I worked hard at my previous school, 6 items, α=.77), *prior contact with classmates* (e.g. I had many friends at my previous school, 5 items, α=.81), and *prior contact with teachers* (e.g. I had good relations with my teachers at my previous school, 6 items, α=.87).

Data collection

Data were collected in the first week of the academic year 2008/9, at the moment students entered SVE. This planning prevented students' reported educational attitudes upon transition from being colored by actual experiences in their new school environment. Students filled in a questionnaire in the classroom under supervision of their teacher. All teachers were informed about the purpose of the study, and received an instructional handout. Students could hand in their questionnaire in a blank envelope. A short introductory statement about the

purpose of the study was printed on the questionnaire, as well as a short privacy statement in which we stated not to report on any identifiable personal data.

Statistical analysis

Data were screened for meeting the assumptions of regression analyses. As missing values were limited and missing at random, we applied the expectation maximization algorithm to impute missing values (SPSS Inc., 2010). The intra-class correlation coefficient (ICC) indicated that a substantial part of the variance could be attributed to between-class differences, with ICC's ranging from .04 to .10. Therefore, we conducted multilevel regression analyses, with class and student included as two separate levels (Snijders & Bosker, 1999). To facilitate the interpretation of the coefficients, we standardized variables to zero mean and unity variance. We conducted sequential regression analyses. First, we fitted a model which included students' sociodemographic characteristics only (Model 1). Then, we added the social context variables (Model 2). Third, we added the academic context variables (Model 3). In addition, we checked for first order interactions of all sociodemographic student characteristics with the social and academic context variables, by adding each interaction as a fixed variable to the third model one by one.

RESULTS

Table 2 shows the results of the multilevel sequential regression analyses. Our data indicate that, on average, students transiting to SVE have positive attitudes towards their education, with especially high aspirations (M=4.47 on a scale from 1 to 5, with 5 signifying the most positive score, SD=.51). A model that only includes sociodemographic characteristics explains small proportions of variance for students' expected fit (R^2=.02 for both expected institutional fit and expected academic fit) and aspirations (R^2=.04), and slightly more for their general attitudes (R^2=.11). Including the social context variables increases the amount of explained variance of all four outcome variables substantially (R^2=.11 to R2=.22), and adding academic context measures increases the proportion of explained variance even more (R^2=.15 to R^2=.29).

Sociodemographic patterns in students' educational attitudes

Ethnic minority students report significantly more positive aspirations and general attitudes than Dutch majority students. There is no significant difference for students with an Antillean background, but this exception may be caused by their smaller representation in our sample. Students with an ethnic background other than the largest five ethnic groups (native Dutch, Moroccan, Turkish, Surinamese,

Table 2: multilevel regressions of students' attitudes upon the transition to SVE, on sociodemographic characteristics, social context and academic context

	Expected institutional fit ICC = .05 mean [a] = 3.76 SD = .66			**Expected academic fit** ICC = .09 mean [a] = 3.87 SD = .56			**Educational aspirations** ICC = .04 mean [a] = 4.47 SD = .51			**General educational attitudes** ICC = .10 mean [a] = 3.79 SD = .68		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
SOCIODEMOGRAPHIC CHARACTERISTICS												
Year of birth	-.02	**-.07****	-.05	**-.10*****	**-.15*****	**-.14*****	**-.06***	**-.11*****	**-.07***	-.01	**-.06***	**-.08****
	(.03)	**(.03)**	(.03)	**(.03)**	**(.03)**	**(.03)**	**(.03)**	**(.03)**	**(.03)**	(.03)	**(.03)**	**(.03)**
Male (vs. female)	-.06	.05	.01	**-.14***	-.05	**-.14***	**-.15***	-.06	-.07	**-.25*****	**-.12***	-.09
	(.06)	(.06)	(.07)	**(.07)**	(.06)	**(.07)**	**(.06)**	(.06)	(.07)	**(.06)**	**(.06)**	(.07)
Ethnic identity (vs. native Dutch)												
Moroccan background	**.23***	.15	.14	.08	.05	.02	**.28****	**.27****	.16	**.44*****	**.39*****	**.28*****
	(.09)	(.09)	(.08)	(.09)	(.09)	(.09)	**(.09)**	**(.09)**	(.09)	**(.09)**	**(.08)**	**(.08)**
Turkish background	**.19***	.16	**.18***	.02	-.04	-.05	**.39*****	**.35*****	**.25****	**.64*****	**.56*****	**.52*****
	(.09)	(.09)	**(.09)**	(.09)	(.09)	(.09)	**(.09)**	**(.09)**	**(.09)**	**(.09)**	**(.08)**	**(.08)**
Surinamese background	-.01	.00	-.01	-.02	-.01	-.07	**.39*****	**.40*****	**.25****	**.30****	**.30*****	.17
	(.10)	(.09)	(.10)	(.10)	(.09)	(.09)	**(.10)**	**(.09)**	**(.10)**	**(.09)**	**(.09)**	(.09)
Antillean background	-.27	-.14	-.15	-.23	-.10	-.16	-.01	.12	.02	.14	.25	.10
	(.16)	(.15)	(.15)	(.16)	(.15)	(.15)	(.16)	(.15)	(.15)	(.15)	(.14)	(.14)
Other ethnic background	-.18	-.12	-.14	**-.30****	**-.23***	**-.26****	.12	**.19***	.09	**.34*****	**.38*****	**.29*****
	(.09)	(.09)	(.09)	**(.09)**	**(.09)**	**(.09)**	(.09)	**(.09)**	(.09)	**(.09)**	**(.09)**	**(.08)**
Job status parents (vs. both parents have a job)												
Both parents have no job	-.02	-.02	.00	-.05	-.05	-.03	-.09	-.08	-.10	**.19***	**.19***	**.18***
	(.09)	(.09)	(.09)	(.09)	(.09)	(.09)	(.10)	(.09)	(.09)	**(.09)**	**(.09)**	**(.08)**
One parent has a job	-.06	-.04	-.05	-.01	.01	-.01	-.07	-.06	-.07	.04	.04	.03
	(.07)	(.07)	(.07)	(.07)	(.06)	(.06)	(.07)	(.07)	(.07)	(.07)	(.06)	(.06)
Student doesn't know	.10	.13	.14	.14	**.16***	**.18***	-.04	-.02	-.03	.12	.13	.12
	(.09)	(.08)	(.08)	(.09)	**(.08)**	**(.08)**	(.09)	(.08)	(.08)	(.08)	(.08)	(.08)

(table 2 continues on next page)

(table 2 continued)

	Expected institutional fit ICC = .05 mean [a] = 3.76 SD = .66			**Expected academic fit** ICC = .09 mean [a] = 3.87 SD = .56			**Educational aspirations** ICC = .04 mean [a] = 4.47 SD = .51			**General educational attitudes** ICC = .10 mean [a] = 3.79 SD = .68		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Highest education parents (vs. SVE or similar)												
Primary education	-.07	.01	.05	-.07	.02	.03	-.19	-.11	-.13	-.01	.08	.10
	(.11)	(.11)	(.11)	(.11)	(.11)	(.11)	(.12)	(.11)	(.11)	(.11)	(.10)	(.10)
Secondary education	**.20***	**.21***	**.23***	.07	.09	.13	-.05	-.04	-.05	.00	.04	.08
	(.10)	**(.09)**	**(.09)**	(.09)	(.09)	(.09)	(.10)	(.09)	(.09)	(.09)	(.09)	(.08)
Higher education	-.07	-.12	-.09	.01	-.04	.00	.02	-.02	-.02	.10	.06	.10
	(.08)	(.08)	(.08)	(.08)	(.08)	(.08)	(.08)	(.08)	(.08)	(.08)	(.07)	(.07)
Student doesn't know	-.08	-.06	-.03	-.01	.00	.02	-.06	-.04	-.08	.00	.01	.03
	(.08)	(.07)	(.07)	(.08)	(.07)	(.07)	(.08)	(.07)	(.07)	(.07)	(.07)	(.07)
Financial problems family (vs. no problems)	**-.14***	.01	.03	-.13	.02	.05	-.13	.00	.01	-.10	.04	.08
	(.07)	(.07)	(.07)	(.07)	(.07)	(.06)	(.07)	(.07)	(.07)	(.07)	(.06)	(.06)
SOCIAL CONTEXT												
School–related social capital parents		**.19*** **	**.18*** **		**.21*** **	**.19*** **		**.18*** **	**.15*** **		**.21*** **	**.17*** **
		(.03)	**(.03)**		**(.03)**	**(.03)**		**(.03)**	**(.03)**		**(.03)**	**(.03)**
School–related social capital peers		**.12*** **	**.10*** **		**.11*** **	**.08** **		**.06***	.03		**.21*** **	**.18*** **
		(.03)	**(.03)**		**(.03)**	**(.03)**		**(.03)**	(.03)		**(.03)**	**(.03)**
School–related social capital community		**.13*** **	**.12*** **		**.10*** **	**.09** **		**.12*** **	**.11*** **		.02	.01
		(.03)	**(.03)**		**(.03)**	**(.03)**		**(.03)**	**(.03)**		(.03)	(.03)
ACADEMIC CONTEXT												
Prior education (vs. PVE with diploma) [c]												
PVE without diploma			.23			**.26***			**.31***			.00
			(.02)			**(.12)**			**(.12)**			(.11)
SVE with diploma			.16			-.05			.18			-.06
			(.09)			(.09)			(.09)			(.09)
SVE without diploma			**.31*** **			**.29** **			.18			-.02
			(.10)			**(.09)**			(.10)			(.09)
Other prior education			.09			**.20***			.15			**.16***
			(.08)			**(.08)**			(.08)			**(.07)**
Prior emotional engagement			-.04			**-.09***			**-.13*** **			**-.11** **
			(.04)			**(.04)**			**(.04)**			**(.03)**
Prior academic engagement			**.13*** **			**.18*** **			**.13*** **			**.26*** **
			(.03)			**(.03)**			**(.04)**			**(.03)**

(table 2 continues on next page)

(table 2 continued)

	Expected institutional fit ICC = .05 mean [a] = 3.76 SD = .66			**Expected academic fit** ICC = .09 mean [a] = 3.87 SD = .56			**Educational aspirations** ICC = .04 mean [a] = 4.47 SD = .51			**General educational attitudes** ICC = .10 mean [a] = 3.79 SD = .68		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Prior contact classmates			.04			**.14*** **			**.16*** **			**.10*** **
			(.03)			**(.03)**			**(.03)**			**(.03)**
Prior contact teachers			-.02			-.04			.04			-.05
			(.03)			(.03)			(.04)			(.03)
SVE school board (vs. board 1 – intermediate urban)												
Board 2 – intermediate urban area			**.27***			**.45*** **			.08			.03
			(.11)			**(.13)**			(.10)			(.10)
Board 3 – highly urbanized area			-.08			.09			.16			.08
			(.10)			(.12)			(.09)			(.09)
Board 4 – highly urbanized area			**-.25***			-.10			.15			.03
			(.10)			(.11)			(.09)			(.09)
Board 5 – highly urbanized area			-.10			-.02			.17			.03
			(.10)			(.12)			(.09)			(.09)
SVE sector (vs. health & social care)												
Economics			.11			**-.21***			-.06			.06
			(.08)			**(.10)**			(.08)			(.07)
Engineering			.03			.11			-.16			**-.20***
			(.10)			(.11)			(.10)			**(.09)**
SVE degree program level (vs. level 4)												
Level 1			-.13			-.19			.02			.06
			(.11)			(.13)			(.10)			(.10)
Level 2			**-.23** **			.13			.04			-.07
			(.08)			(.10)			(.07)			(.07)
Level 3			-.13			-.18			.00			**-.25** **
			(.09)			(.11)			(.08)			**(.08)**
Explained variance [b]	R^2=.02	R^2=.14	R^2=.18	R^2=.02	R^2=.13	R^2=.20	R^2=.04	R^2=.11	R^2=.15	R^2=.11	R^2=.22	R^2=.29

Note: n=1438, N=61, * p<.05, **p<.01, *** p<.001. Two-tailed test. Shown: standardized regression coefficients with standard error in parentheses.

Model 1: sociodemographic characteristics.

Model 2: sociodemographic characteristics + social context variables.

Model 3: sociodemographic characteristics + social context variables + academic context variables.

[a] Unstandardized mean on a scale from 1 (very negative) to 5 (very positive). [b] Shown: student-level variance. [c] PVE = pre-vocational education, SVE = senior vocational education.

Antillean) have equal or more positive aspirations and general attitudes, but they expect less academic fit. The ethnic background coefficients remain significant after controlling for social and academic context variables in our models. We do not find a significant role of the level of parental education, except for a positive association between having parents who completed secondary education at most and students' expected institutional fit. Students with unemployed parents have more positive general attitudes towards education than students with working parents. Students who don't know if their parents work, which is likely an indication that they are not closely involved with their parents at the moment of measurement, expect a better academic fit. Male students report more negative educational attitudes, but this difference decreases when taking social and academic context variables into account. Financial problems in the family have no significant influence on students' educational attitudes in the models that include social and academic context variables. If we control for students' school-related social capital, we find an effect of year of birth, indicating that younger students have less positive educational attitudes upon transition.

The role of the social context

The encouragement and support of parents, peers and the community plays an important role in students' educational attitudes. Especially parental encouragement and support is strongly related to all four dimensions of students' attitudes upon transition to SVE. Peer support particularly influences students' general attitudes, while peer support is less related to students' aspirations. The coefficients of school-related support from parents, peers and the broader community remain substantial and significant in models with academic context variables added.

The role of the academic context

Academic context variables have a significant influence on students' educational attitudes. In particular, students' prior academic engagement, but also their contact with classmates at their former school, associates with their educational attitudes. The perceived connection with teachers in the prior school is of less importance. Prior emotional engagement seems to affect students' educational attitudes negatively. The zero-order correlation between emotional engagement and attitudes is positive, but in a model that also includes other prior school experiences, the effect of prior emotional engagement on educational attitudes turns negative. Emotional engagement is a measure of students' overall perceived fit with the prior school, which may comprise various social and academic aspects of students' prior school experiences, such as the fit with classmates, teachers, or the curriculum. If we control for those specific aspects, a negative correlation between students' prior emotional engagement and their educational attitudes

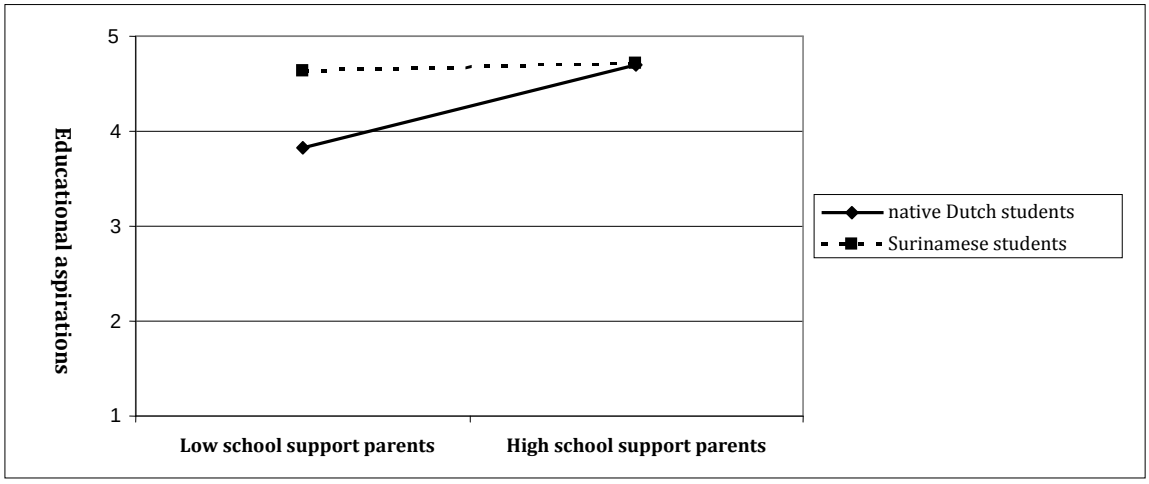
remains. Students attending schools in highly urbanized areas expect less fit with the institution than students transferring to schools in intermediate urbanized areas. Students enrolling in an economics program are less certain of their academic fit with the program, while engineering students value education in general less. A few differences between students in different degree levels are found for expected institutional fit and general attitudes. Students who enter SVE after dropping out of pre-vocational education are more motivated for their new academic program in SVE, while students who have a second try in SVE are more confident about their fit with the institution and program. Students transferring to SVE from other academic routes expect a better academic fit, and they value education in general more.

Interaction effects

Assessment of first order interactions between sociodemographic characteristics and social and academic context variables revealed two interesting patterns. Above, we reported positive associations with educational attitudes of both an ethnic minority background and the amount of school-related support from parents. However, in Chapter 1 we saw that ethnic minority students report lower levels of school-related support from their parents. Inclusion of interaction effects in our third models showed that the level of parental support plays a smaller role in the attitudes of ethnic minority students than of students with a native Dutch background. An example of this interaction effect is given in Figure 1 for students with a Surinamese background.

Figure 1:

interaction effect of *Surinamese background* and *school support parents* on students' educational aspirations upon transition to SVE.

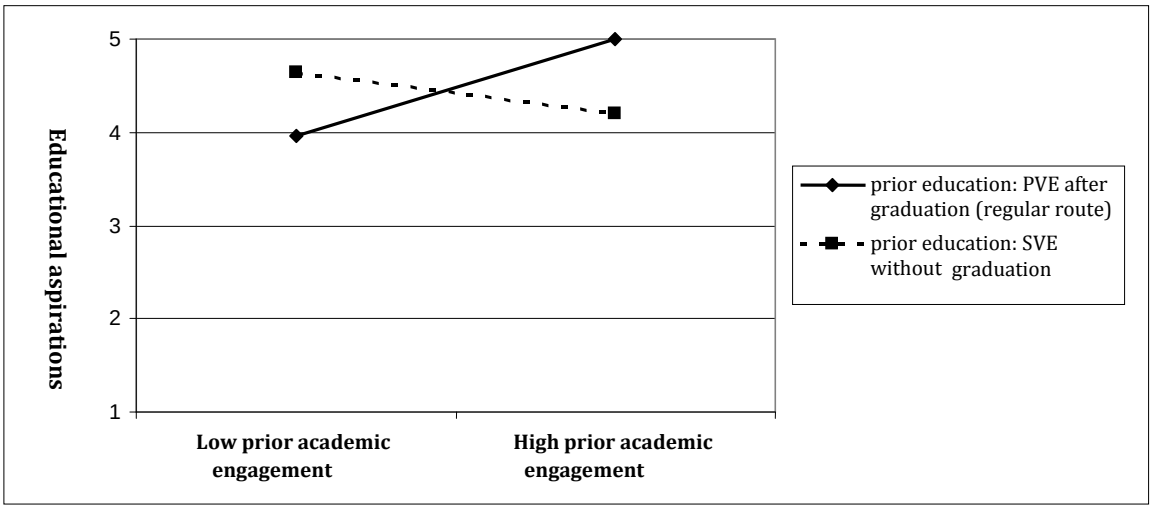


Note: plot based on 4 theoretical students who score zero on all other predictors

In the group of students with lower levels of parental school-support, Surinamese students report higher educational aspirations than Dutch majority students. Their aspirations are less affected by an increase of parental support than the aspirations of Dutch majority students. We found similar interaction effects of a Surinamese background with parental support on expected academic fit, and of Moroccan and Surinamese backgrounds with community support on expected institutional and academic fit. Moreover, similar patterns were found for the interaction of the educational level of students' parents with the school-related support from parents or the community, and of having financial problems or unemployed parents with parental support. For instance, the aspirations of students from poor families do not seem to benefit from increased parental support as much as the aspirations of students from more affluent families, and the same is true for the expected academic fit of students with unemployed parents or with parents who completed secondary education at most. In all cases, the educational attitudes of those students appear to be less affected by lower levels of support. An interaction effect in the opposite direction can be found among students with higher educated parents: they expect a better academic fit if they report better access to supportive resources in their community.

Figure 2:

interaction effect of *prior education: SVE without graduation* and *prior academic engagement* on students' educational aspirations upon transition to SVE.



Note: plot based on 4 theoretical students who score zero on all other predictors

PVE = pre-vocational education

SVE = senior vocational education

Figure 2 shows an example of the second pattern of interaction effects that we detected: an interaction effect of students' prior education with their personal experiences in that prior education on their educational attitudes. Whereas we find an overall positive effect of students' prior educational experiences on their educational attitudes upon transition, interactions between students' prior education and their experiences in that prior education indicate a negative relationship in some cases. Students who were earlier enrolled in an SVE program, without graduating from that program, have higher aspirations if they were less academically engaged in the prior program, and have lower aspirations if they were previously more engaged. A similar interaction was found for this particular group with the level of prior emotional engagement and with contact with teachers at the prior school, on their expected institutional fit, aspirations, and general attitudes.

DISCUSSION

Positive educational attitudes upon the transition to post-secondary vocational education are critical for school success after the transition. High dropout rates among particular sociodemographic groups may suggest that students from those groups enter their new school with more negative attitudes. However, this study adds to a growing number of studies that indicate that students from lower socioeconomic backgrounds or ethnic minority groups do not have more negative educational attitudes. On the contrary: while ethnic minority students are overrepresented in SVE dropout statistics in the Netherlands, those students report substantially higher aspirations and more positive general attitudes towards education. The same pattern is found for students from lower educated or poorer families. Thus, our results attest to the high ambitions among students hailing from those particular groups, which likely signifies a pursuit for upward social mobility. Like students with lower educated parents, many ethnic minority students, especially those growing up in first and second generation immigrant families, are often one of the first in their family to make the transition to post-secondary education, which tends to make them highly ambitious (Suárez-Orozco, Rhodes, & Milburn, 2009). Parents in those families are less experienced with the educational system, and may therefore find it difficult to support their children in their school careers (Stevens, Clycq, Timmerman, & Van Houtte, 2009). In Chapter 1, we found that ethnic minority students, students with lower educated parents, and students from poor families, characteristics that are often clustered within the same families, report significantly lower levels of support for their school careers in their social communities. Inevitably, these youth have learned to navigate the educational system by themselves, causing a certain educational independence that can work out both beneficial and detrimental to school success. As students

rely less on the support of relatives or significant others for their school career, they are more autonomous and self-supportive. But this also means that they receive less monitoring, guidance and correction from the people who know them best. This mechanism is illustrated by our finding that, compared to other groups, the educational attitudes of students from lower socioeconomic and ethnic minority communities are less related to the amount of school-related support in their environment. The attitudes of students in those groups remain very positive, regardless of sufficient or limited access to school-related support in their social networks.

Our findings imply that the potential negative effect of limited access to supportive resources on student achievement is not mediated by students' personal educational attitudes. This implication concords with the notion of the attitude-achievement gap, which describes a discrepancy between positive educational attitudes and negative achievement outcomes among disadvantaged students (Alexander et al., 1994; Downey et al., 2009). Furthermore, while lower levels of parental support seem to exert little negative influence over the educational expectations and aspirations of students from lower socioeconomic or ethnic minority communities, those lower levels of parental support may limit students' prospects to fulfill those. Lower educated parents may think they are not capable of supporting their children's school career, simply because they haven't completed many years of schooling themselves. However, our results indicate that it is not the actual educational level of the parents that counts, but the school-related support that they provide to their children. This result confirms Eccles' view that it is not the power of parents as role models that matters, but their role as direct socializers of achievement beliefs and attitudes (Eccles, 1983).

School transitions are critical turning points in students' school careers, and will often be met with both excitement and anxiety. A transition to a new school is no isolated event, but rather an important threshold embedded in students' educational life-course. Whether students perceive a transition as a welcome new start or a disturbing interruption, or perhaps both, depends on their personal educational history. Our findings indicate that students with negative experiences in a previous SVE program are more eager to make a new start. Conversely, students with positive experiences in a previous SVE program, who apparently did not succeed in the program and are required to make a new start, are more cynical about the prospects of their second try. These students may be especially at risk, as they apparently feel discouraged by the failure of the first try. Our findings stress the importance for educators to learn about the educational history of their students. Intake interviews with transferring students can be used to find out

about their prior school experiences, successes and failures, and to check for indicators of progressive disengagement from school.

CONCLUSION

Research on the educational attitudes of students in vocational tracks is scarce. This study contributes to earlier work on students' educational attitudes by expanding the focus to students transferring to post-secondary vocational education in Dutch urban areas. However, because of this specific context, we need to be careful to generalize our findings to other educational settings. Limitations of the current study pertain to the measures used, and the cross-sectional design. First, our data result from students' self-reports. While the information on students' graduation before their transition informs us about their success or failure in their prior school program, no objective measures of prior academic achievement were available to include in our analyses. Prior grades or standardized test scores could be powerful predictors of students' educational attitudes upon transition. Future research could benefit from inclusion of such more objective measures. Second, we used retrospective measures of students' experiences in their previous education that were assessed at the same time as their expectations, aspirations, and attitudes. Such design calls for awareness not to make causal inferences based on our data.

Earlier research on the educational attitudes of disadvantaged students has mainly concentrated on students from socioeconomically marginalized communities. Our study of students in vocational education adds to this perspective by focussing on the educational attitudes of students who may experience academic marginalization, as they do not transfer to higher education after high school. It is often suggested that placement in a vocational track could result in 'cooling out' of academic aspirations and expectations (Alexander, Bozick, & Entwisle, 2008; Arum & Shavit, 1995; Khattab, 2005). However, our study demonstrates that students in the Dutch vocational track do not show signs of cooled attitudes towards education. They start out in senior vocational education with great expectations. The challenge is to help all students turn these great expectations into great achievements.

Part II

Students' experiences in the first year of post-secondary vocational education

"...it is not reality itself that most directly determines children's expectancies, values and behavior, but rather their interpretation of that reality"
(Eccles, 1983, p. 79-80).

Chapter 3

Making the Connection: the Role of Social and Academic School Experiences in Students' Emotional Engagement in Post-Secondary Vocational Education*

ABSTRACT

This study examines the emotional engagement with school of a diverse sample of 909 students in post-secondary vocational education in the Netherlands. Using multilevel regression analysis, we assess the role of students' background characteristics and school experiences, and their interaction, in students' emotional engagement with school. At-risk students do not report lower levels of emotional engagement, except for students using (soft)drugs. While Dutch dropout prevention focuses on fostering a sense of belonging through enhancing teacher-student relationships, we do not find a significant role of perceived support from school staff in students' sense of belonging. A good relationship with classmates is more important to engage students in post-secondary vocational education. Perceiving an academic fit is most prominently related to the emotional engagement of vocational students, indicating that a sense of belonging should not only be defined in social, but also in academic terms.

* This chapter is based on:
Elffers, L., Oort, F.J. & Karsten, S. *(in press)* – Making the Connection: the Role of Social and Academic School Experiences in Students' Emotional Engagement with School in Post-Secondary Vocational Education. *Learning and Individual Differences*.

INTRODUCTION

Emotional engagement with school is an essential prerequisite for student effort, achievement and persistence in school (Anderman & Freeman, 2004; Audas & Willms, 2001; Finn, 1993; Fredricks, Blumenfeld, & Paris, 2004; Janosz, Le Blanc, Boulerice, & Tremblay, 2000; Libbey, 2004; Willms, 2003). Feeling part of the school community and perceiving school as a vital and valuable constituent of their lives enhances students' participation and achievement in school, and can protect students from dropout (Finn, 1993; Finn & Voelkl, 1993). Therefore, educational researchers and practitioners seek ways to enhance students' positive emotions towards school, especially among students who are at risk for dropout. In this study, we examine the emotional engagement with school among a diverse sample of students in Dutch senior vocational education, a sector confronted with high dropout rates. We assess the role of students' background characteristics and school experiences, and the interaction between these, in their emotional connection to school.

THEORETICAL BACKGROUND

The role of emotional engagement in school success

Students' emotions and attitudes towards school have been found to affect educational attainment in various educational settings (Alexander, Entwisle, & Kabbani, 2001; Downey, Ainsworth, & Qian, 2009; Ekstrom, Goertz, Pollack, & Rock, 1986; Fuligni, 1997; Libbey, 2004). The significant role of school emotions in educational attainment is generally explained by their impact on achievement-related behaviors and performance (Eccles, 1983; Finn, 1989, 1993; Wigfield, Tonks, & Lutz Klauda, 2009). In the school motivation literature, the interplay between students' emotions, behavior and performance has been studied mainly from a micro-level perspective, focusing on the domain-specific beliefs, goals, and values that students attach to specific tasks or classroom contexts (Ahmed, Minnaert, van der Werf, & Kuyper, 2010; Eccles, 1983; Robbins, Lauver, Le, Davis, & Langley, 2004; Wigfield et al., 2009). The school persistence literature tends to take a more general perspective by focusing on students' emotions towards their school as a whole (Janosz et al., 2000; Tinto, 1993). The interplay between those more general school emotions and students' behavior and performance in school is a central notion in school engagement theory as well (Audas & Willms, 2001; Finn, 1993; Fredricks et al., 2004; Willms, 2003). School engagement is usually conceptualized by two dimensions: *emotional engagement*, reflecting students' identification with school, and *behavioral engagement*, pertaining to students' participation in school (Finn, 1989, 1993). Finn's renowned participation-identification model (Finn, 1989) emphasizes the importance of emotional

engagement with school for positive school behavior and performance. If students identify with their school, they participate more actively in school activities. This participation reinforces academic achievement, which in turn stimulates identification. If students do not identify with school, they are more likely to engage in problem behavior or to physically withdraw from school, leading to negative achievement outcomes, and to further emotional and physical withdrawal. Thus, students can be involved in a self-reinforcing cycle of positive engagement and achievement in school. Likewise, they can be captured in a negative process of declining engagement and performance in school, which eventually culminates in dropout (Finn, 1989; Fredricks et al., 2004).

Defining emotional engagement

In this study, we focus on the emotional dimension of school engagement, which can be defined in more and less contextualized ways. The less context-specific type of emotional engagement relates to students' *general attitudes towards education* and their overall identification with their role as a student (Anderman & Freeman, 2004). The more context-specific type of emotional engagement relates to students' identification with a particular school context (Anderman & Freeman, 2004; Anderman & Kaplan, 2008; Fredricks et al., 2004). This identification can refer to the school as a social context, comprising all social actors that constitute the school community, which is defined as a *sense of belonging* in school (Finn, 1989; Fredricks et al., 2004). It can also refer to the school as an academic context, reflecting students' perceptions of the usefulness of their education for their career goals and potential. This is defined as students' *valuing* of their particular education (Finn, 1989; Fredricks et al., 2004). In our study, we take into account all three dimensions of emotional engagement with school: students' *sense of belonging*, *valuing* and *general educational attitudes*.

School experiences affecting students' emotional engagement

As emotional engagement with school is a prerequisite for school success, it is important to know which aspects of the school context promote or undermine engagement (Fredricks et al., 2004; Freeman, Anderman, & Jensen, 2007). We need to identify the "black box" processes through which bonding occurs (Wehlage, Rutter, Smith, Lesko, & Fernandez, 1989). Engagement results from the interaction of individual students with the school context (Fredricks et al., 2004). Students' differ in their perceptions of the institutional environment, and it is their perceived fit or mismatch with various aspects of that environment which most directly determines whether they identify with school or not (Eccles, 1983; Jang, Reeve, & Deci, 2010; Roeser, Urdan, & Stephens, 2009; Tinto, 1993). Therefore, we need to find out to what extent students' emotions towards school are affected by their perceived fit with various aspects of the school context: with the academic

program, the teachers, the classmates, and the school climate (Fredricks et al., 2004; Tinto, 1993; Wehlage et al., 1989). Both social and academic interactions with the various actors in the educational environment can play a role in students' emotional engagement (Anderman, 2003; Tinto, 1993), and social and academic interactions are often intertwined in educational contexts (Karp, Hughes, & O'Gara, 2010). Some studies emphasize the importance of the academic dimension for students' emotional engagement, for instance the perceived quality or relevance of the curriculum (Hausmann, Schofield, & Woods, 2007; Newmann, 1992; Pascarella & Chapman, 1983; Pascarella, Duby, & Iverson, 1983). Others stress the role of social interactions with classmates and school staff (e.g. Wentzel, 1998). In particular, supportive teacher-student relationships are a prominent factor in the student engagement literature (Anderman, 2003; Klem & Connell, 2007; Nichols, 2008; Tinto, 1993). Supportive teacher-student relationships may be especially important for the engagement of at-risk students who lack supportive ties outside school (Scientific Council for Government Policy, 2008; Wehlage et al., 1989). However, it is not always clear whether the caring relationship with teachers as experienced by students should be attributed to teachers' pedagogical caring about students' learning processes, or to the interpersonal or social-emotional aspects of caring (Freeman et al., 2007; Pascarella & Chapman, 1983). While the cited studies differ in the relative emphasis placed on the social or academic sources of engagement, most studies stress that both positive social and academic school experiences are needed to promote school engagement (Freeman et al., 2007; Tinto, 1993).

Individual differences in emotional engagement

Educational outcomes are often socially and ethnically patterned (Alexander et al., 2001; Dutch Ministry of Education Culture and Science, 2009). As school emotions affect educational attainment, it is relevant to examine to what extent differences in students' emotional engagement with school mirror differences in the educational outcomes across various sociodemographic groups. A number of studies identified differentiating effects of individual characteristics that are associated with an increased risk for dropout on student engagement. Some studies report that students from lower socioeconomic or ethnic minority backgrounds, or students with lower educated parents, experience a weaker sense of belonging in school (Alexander et al., 2001; Marks, 2000; OECD, 2006; Voelkl, 1995). Other studies indicate that girls tend to be more emotionally engaged in school than boys, who drop out more often (Anderman & Freeman, 2004; Marks, 2000). While the support for school that students encounter in their communities from significant others, such as parents and peers, promote school engagement (Finn, 1993; Marks, 2000; Ryan, 2000), students from disadvantaged socioeconomic backgrounds often lack access to sufficient supportive resources in

their home environment (Roderick, 1993). In contrast, a relative absence of personal background effects on students' emotional engagement has been noticed as well (Hausmann et al., 2007; Marks, 2000).

Emotional engagement in Dutch senior vocational education

Most research on student engagement is based on data from predominantly White middle-class samples from middle and (junior) high schools (Fredricks et al., 2004; Furrer & Skinner, 2003; Zimmer-Gembeck, Chipuer, Hanisch, Creed, & McGregor, 2006). By examining the emotional engagement of a diverse group of first year students in Dutch senior vocational education (SVE), this study expands the focus to a more diverse population, and to a relevant but thus far understudied educational setting. As the senior continuation of the vocational track in Dutch secondary education, SVE provides one to four year specialized, job-oriented vocational programs to students aged 16+. Dropout rates peak in the first year of SVE, accounting for 75% of school dropout in the Netherlands (CBS Statistics Netherlands, 2010; Dutch Ministry of Education Culture and Science, 2011; The Netherlands Institute for Social Research, 2008). The transition from a smaller, familiar school environment in pre-vocational secondary education to the larger SVE institutions appears difficult for many students. New classmates, more social and academic autonomy and responsibility, and less personal contact are often mentioned as potential hurdles for SVE freshmen. SVE schools serve a substantial proportion of students who can be labelled 'at-risk' based on personal background characteristics such as a low socioeconomic status, an ethnic minority background, having lower educated or unemployed parents, or coming from a poor or broken family (Dutch Ministry of Education Culture and Science, 2009; Kuhry, 1998; Scientific Council for Government Policy, 2008). Also, many students in SVE are confronted with an accumulation of difficult circumstances in their lives that may impede their school careers, for instance debts, intensive jobs, drug abuse, financial problems, delinquency, or pregnancy (Scientific Council for Government Policy, 2008). A recent national policy report on dropout prevention (Scientific Council for Government Policy, 2008) highlights the importance of an emotional connection to school for the school success of at-risk students in vocational education. It is argued that this emotional connection could be enhanced by creating practice-based learning environments, by reinforcing a school structure with clear rules and regulations, and, most importantly, by establishing supportive teacher-student relationships. With the current dataset, we are able to test the relationship of individual and institutional characteristics to students' emotional engagement with school in SVE. First, we examine whether at-risk and non-at-risk students in SVE differ in their emotional engagement with school. Next, we explore the role of students' school experiences in their emotional engagement in SVE. Last,

we assess interaction effects of individual background characteristics and school experiences on SVE students' emotional engagement.

METHODS

Sample

From a longitudinal study on student persistence in the first year in SVE, we selected all 909 students of whom we had information available on their emotional engagement, social and academic experiences in school, and individual background characteristics. From the total group of 40 SVE school boards in the Netherlands, 10 boards were invited for participation in the study, based on (1) their urban setting, to assure social and ethnic diversity of the sample, and (2) the range of degree programs offered, to enable data collection in various degree programs and levels within one school board. The five school boards that agreed to participate represent this selection well. Within each school board, first year groups were selected for participation from three vocational sectors (engineering, economics, and health and social care) at all four SVE degree levels (1: assistant level, 2: basic vocational level, 3: full professional level, 4: specialist level). Selection took place before the academic year started and before individual students were assigned to individual groups. At the second measurement occasion of the study, from which we present data here, 60 groups participated, with an average group size of 15 students. Table 1 provides the basic descriptives of our sample. Participation in the study was voluntary for all students. As questionnaires were completed in a classroom setting under supervision of a teacher, in practice all students in a class completed a questionnaire, and we received no reports of students not willing to participate. Hence, we have no reason to believe that specific groups of students are over- or underrepresented in our study. This is confirmed by the descriptive statistics in table 1, which correspond to available statistics of vocational education in urban areas (Dutch Ministry of Education Culture and Science, 2010; Dutch Ministry of Health Welfare and Sport, 2010; Knowledge Centre for Vocational Training and Labour Market, 2010; Kuhry, 1998; Scientific Council for Government Policy, 2008).

Table 1: descriptives of sample of 909 students in senior vocational education

Characteristics	%
SVE sector	
Economics	30
Engineering	33
Health & social care	37
SVE degree program level	
Level 1	13
Level 2	22
Level 3	33
Level 4	32
Prior education	
PVE with diploma	66
PVE without diploma	4
SVE with diploma	8
SVE without diploma	9
Other	13
Gender	
Female	54
Male	46
Ethnic identity	
Native Dutch background	53
Moroccan background	15
Turkish background	12
Surinamese background	9
Antillean background	2
Other ethnic background	9
Age	
16-17 years	62
18-19 years	30
Older than 19 years	8
Household	
Living with both parents	65
Living with one parent	24
Living alone	3
Living with other relatives / friends	8
Job status parents	
Both parents have a job	49
One parent has a job	23
Both parents are unemployed	14
Student doesn't know	14
Highest education parents	
Primary education or similar	9
Secondary education or similar	12
SVE or similar	20
Higher education or similar	18
Student doesn't know	41
Financial problems in family	20
Personal debts student	10
Student (or partner) is pregnant / has child(ren)	4
Student has been arrested by the police	17
Student uses (soft-)drugs	11
Extra job student	
no extra job	39
< 8 hours a week	19
8 – 15 hours a week	34
> 15 hours a week	8

Variables and measures

As outcome variables, we distinguished three types of emotional engagement with school: students' attitudes towards education in general (*general educational attitudes*: 7 items, α=.85, e.g. *I think it is important to go to school*), students' sense of belonging in their particular school (*sense of belonging*: 4 items, α=.90, e.g. *I feel at home at this school*), and students' valuing of their degree program (*valuing*: 6 items, α=.87, e.g. *What I learn in this degree program is useful for my future career*).

As explanatory variables, we distinguished social and academic aspects of students' school experiences, and of their personal background. The academic school experience variables included students' perceived fit with the academic program (*perceived fit academic program*: 10 items, α=.82, e.g. *I find the content of the program interesting*) and their perceptions of the academic support provided by school staff (*perceived academic support*: 9 items, α=.85, e.g. *Teachers support me well if I have questions about a task*). Moreover, two single item measures were used to specifically tap students' perceptions of the difficulty of the degree program (*perceived difficulty degree program*), and of the proportion of autonomous work in the program (*perceived proportion of autonomy*). Social school experience variables included students' perceived fit with classmates (*perceived fit classmates*: 6 items, α=.77, e.g. *I get along well with most of my classmates*), with the school climate (*perceived fit school climate*: 9 items, α=.82, e.g. *I feel safe at this school*), their perceptions of the social support provided by school staff (*perceived social support*: 10 items, α=.90, e.g. *School staff support me when I don't feel well*), and a single-item measure on the perceived strictness of school rules and regulations (*perceived strictness school rules*).

Variables concerning students' background included basic sociodemographic characteristics (age, gender, ethnic identity, household composition, job status parents, highest educational level parents, financial situation in the family) and academic characteristics (prior education, school, vocational sector, and level of current degree program), as well as personal circumstances that are associated with an increased risk for dropout: having a child / (partner) being pregnant, personal debts, drug abuse, having been arrested by the police, and having an extra job. Last, we included a measure on the amount of support for school that students encounter in their home environment from parents and peers (*school support in community*: 5 items, α=.70, e.g. *I can discuss school issues with my parents*).

Questionnaire

We developed a self-report questionnaire to suit the specific level and nature of SVE and its students. Items were partly inspired by previous questionnaires on school experiences and engagement in American and Dutch educational settings (Beekhoven, 2002; Goodenow & Grady, 1993; Pascarella & Chapman, 1983; Voelkl, 1995; Willms, 2003). The questionnaire was subjected to a pilot study before being

finalized. Calculation of Cronbach's alpha's and principle component analyses were used to examine the reliability and structure of the questionnaire. All items were measured with statements, to which students responded on a 5-point Likert-type scale (strongly disagree to strongly agree), except for the items on students' background characteristics. Both indicative and contra-indicative statements were included in the questionnaire. Three items, on students' perceptions of the difficulty of the degree program, the proportion of autonomy in the program, and the strictness of school rules and regulations, had an alternative scale, to enable respondents to report less optimal experiences on both the 'too much'- and the 'too little'-side of the spectrum.

Data collection

Data were collected at the start of the second semester of the academic year 2008/9. Students filled in a questionnaire in the classroom under supervision of their teacher. All teachers were informed about the purpose of the study, and they received an instructional handout. To guarantee respondents' privacy, questionnaires were not labelled for individual student names, and students could hand in their questionnaire directly in a blank envelope. A short introductory statement about the study was printed on the questionnaire, as well as a privacy statement in which the research team stated not to report on any identifiable personal data.

Data analysis

We screened the data for meeting the assumptions of regression analysis. A strong correlation (r =.7) was found between two predictors: *perceived academic support* and *perceived social support*. To prevent multicollinearity problems in our regression analyses, we merged these two scales into one variable *perceived support school staff* (α=.92). Missing values were limited (0-2% across all items), and as we detected no obvious patterns in missing values, we managed those through the expectation maximization algorithm (SPSS Inc., 2010). The intra-class correlation coefficient (ICC) indicated that a substantial part of the variance could be attributed to between-class differences, with ICC's ranging from .08 to .11 (Snijders & Bosker, 1999). Therefore, we conducted multilevel regression analyses, with class and student as two separate levels. To facilitate interpretation of the scores, variables were standardized to zero mean and unity variance. We performed sequential multiple regression analyses, distinguishing between predictor and outcome variables. In Model 1 we included student background characteristics, in Model 2 we added the school experiences of the student. We calculated the explained variance for both multilevel models (Snijders & Bosker, 1999). Last, we examined first order interaction effects of students' background characteristics and school experiences on their emotional engagement with school.

Table 2: regression coefficients of two models predicting students' emotional engagement in senior vocational education

	Sense of belonging ICC = .11 mean[a] = 3.51 SD = .72				**Valuing** ICC = .09 mean[a] = 4.03 SD = .65				**General educational attitudes** ICC = .08 mean[a] = 3.83 SD = .53			
	Model 1		**Model 2**		**Model 1**		**Model 2**		**Model 1**		**Model 2**	
	β (SE)	**p**	**β (SE)**	**p**	**β (SE)**	**p**	**β (SE)**	**p**	**β (SE)**	**p**	**β (SE)**	**p**
BACKGROUND STUDENT												
Year of birth	.04 (.04)	.360	.04 (.03)	.200	-.08 (.04)	.062	-.05 (.04)	.138	-.07 (.04)	.088	-.05 (.04)	.157
Male (vs. female)	.02 (.10)	.867	-.10 (.07)	.174	.14 (.10)	.151	.08 (.08)	.349	-.12 (.09)	.193	-.16 (.08)	.057
Ethnic identity (vs. native Dutch)		**.018***		.211		.873		.594		**.000*****		**.000*****
Moroccan background	**.22 (.11)***		.04 (.08)		.11 (.11)		-.05 (.09)		**.52 (.11)*****		**.41 (.10)*****	
Turkish background	.02 (.11)		.09 (.08)		-.01 (.11)		-.03 (.09)		**.60 (.11)*****		**.57 (.10)*****	
Surinamese background	-.23 (.13)		-.17 (.09)		.12 (.13)		.03 (.11)		**.38 (.12)****		**.36 (.11)*****	
Antillean background [c]	-.08 (.25)		.03 (.19)		.05 (.26)		.34 (.22)		**.73 (.25)****		**.89 (.22)*****	
Other ethnic background	-.19 (.12)		-.09 (.08)		.05 (.12)		.07 (.10)		**.53 (.12)*****		**.60 (.10)*****	
Prior education (vs. PVE with diploma) [d]		**.001*****		.204		.175		.684		.212		.324
PVE without diploma	**.42 (.17)***		.12 (.13)		**.39 (.18)***		.16 (.15)		**.38 (.17)***		.14 (.15)	
SVE with diploma	**.27 (.14)***		.18 (.09)		.13 (.13)		.04 (.11)		.05 (.12)		.01 (.11)	
SVE without diploma	**.46 (.12)*****		.15 (.09)		.16 (.13)		-.02 (.10)		-.05 (.12)		-.18 (.11)	
Other prior education	.16 (.10)		.10 (.08)		.14 (.10)		.09 (.09)		.08 (.10)		.02 (.09)	
Household (vs. living with two parents)		.222		.688		.798		.440		.768		.749
Living alone	.04 (.20)		.10 (.15)		-.16 (.21)		-.04 (.17)		.06 (.20)		.15 (.18)	
Living with one parent	**-.17 (.08)***		-.01 (.06)		.01 (.09)		.10 (.07)		-.07 (.08)		-.02 (.07)	
Living with other relatives/friends	-.03 (.12)		.10 (.09)		-.09 (.13)		.10 (.11)		-.07 (.12)		.08 (.11)	
Job status parents (vs. both parents have a job)		.251		.362		.135		.272		**.022***		**.040***
Both parents are unemployed	.16 (.11)		.05 (.09)		.14 (.12)		.05 (.10)		**.24 (.11)***		.16 (.10)	
One parent has a job	.03 (.08)		-.04 (.06)		**.18 (.08)***		.12 (.07)		-.01 (.08)		-.03 (.07)	
Student doesn't know	.20 (.11)		.12 (.08)		.18 (.12)		.14 (.10)		**.26 (.11)***		**.23 (.10)***	
Highest education parents (vs. SVE or similar)		**.025***		**.026***		.104		.129		.148		.152
Primary education	.03 (.13)		-.03 (.10)		.08 (.14)		.02 (.12)		.14 (.13)		.10 (.12)	
Secondary education	.13 (.11)		.00 (.09)		-.05 (.12)		-.12 (.10)		.18 (.11)		.15 (.10)	
Higher education	-.16 (.10)		-.08 (.07)		**-.20 (.10)***		-.15 (.08)		.08 (.10)		.12 (.09)	
Student doesn't know	-.16 (.09)		**-.19 (.07)****		-.15 (.09)		**-.16 (.08)***		-.05 (.09)		-.04 (.08)	

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(table 2 continued)

	Sense of belonging				**Valuing**				**General educational attitudes**			
	Model 1		**Model 2**		**Model 1**		**Model 2**		**Model 1**		**Model 2**	
Financial problems family (vs. no problems)	-.01 (.08)	.943	.00 (.06)	.947	.10 (.08)	.225	.12 (.07)	.084	.11 (.08)	.163	**.18 (.07)**	**.011***
Student (or partner) expects / has child(ren) (vs. no child or pregnancy)	-.00 (.16)	.993	.14 (.12)	.252	-.05 (.17)	.758	.13 (.14)	.347	-.14 (.16)	.401	.06 (.15)	.665
Personal debts student (vs. no debts)	**-.25 (.12)**	**.036***	-.10 (.09)	.249	-.17 (.12)	.162	-.15 (.10)	.144	-.19 (.12)	.115	-.15 (.11)	.148
Student uses (soft-)drugs (vs. no drugs use)	-.10 (.11)	.329	-.03 (.08)	.721	**-.27 (.11)**	**.015***	**-.19 (.09)**	**.034***	**-.35(.11)**	**.001****	**-.33 (.09)**	**.000*****
Student has been arrested by the police (vs. never arrested)	.15 (.09)	.102	**.14 (.07)**	**.034***	.03 (.09)	.755	.03 (.08)	.689	.05 (.09)	.550	.07 (.08)	.406
Extra job student (vs. no extra job)		.176		.613		.396		.648		.057		**.017***
< 8 hours a week	-.02 (.09)		-.01 (.07)		.06 (.09)		.04 (.07)		.13 (.09)		**.16 (.08)***	
8-15 hours a week	-.00 (.07)		.04 (.06)		.03 (.08)		.07 (.06)		.14 (.07)		**.16 (.07)***	
> 15 hours a week	**-.26 (.12)***		-.07 (.09)		-.16 (.12)		-.04 (.10)		-.13 (.12)		-.09 (.11)	
School support in community	**.24 (.03)**	**.000*****	.02 (.03)	.330	**.24 (.03)**	**.000*****	**.10 (.03)**	**.000*****	**.26 (.03)**	**.000*****	**.16 (.03)**	**.000*****
SVE school board (not specified here)		.054		.350		.369		.758		.246		.355
SVE sector (vs. health&social care)		.175		.726		**.015***		.407		.306		.112
Economics	.00 (.12)		.06 (.08)		-.08 (.11)		-.02 (.08)		-.06 (.09)		-.01 (.08)	
Engineering	.23 (.14)		.05 (.10)		**.27 (.13)***		.10 (.10)		-.18 (.12)		-.19 (.10)	
SVE degree program level (vs. level 2)		.643		.440		**.037***		.170		**.009****		**.000*****
Level 1	-.03 (.16)		.15 (.11)		**-.30 (.15)***		-.14 (.11)		-.01 (.13)		.05 (.11)	
Level 3	.08 (.13)		.08 (.09)		.12 (.12)		.04 (.08)		**-.20 (.10)***		**-.22 (.08)****	
Level 4	.14 (.12)		.10 (.08)		.13 (.11)		.11 (.08)		.15 (.09)		**.16 (.08)***	
SCHOOL EXPERIENCES												
Perceived fit academic program			**.37 (.03)**	**.000*****			**.58 (.04)**	**.000*****			**.18 (.04)**	**.000*****
Perceived support school staff			.03 (.04)	.366			-.03 (.04)	.545			.06 (.04)	.163
Perceived fit classmates			**.16 (.03)**	**.000*****			**.17 (.03)**	**.000*****			**.25 (.03)**	**.000*****

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(table 2 continued)

	Sense of belonging			**Valuing**			**General educational attitudes**		
	Model 1	**Model 2**		**Model 1**	**Model 2**		**Model 1**	**Model 2**	
Perceived fit school climate		**.31 (.03)**	**.000*****		**-.12 (.04)**	**.001*****		-.03 (.04)	.362
Perceived strictness school rules (vs. just right)			.602			.295			.475
very lenient		.07 (.07)			.09 (.08)			.09 (.08)	
very strict		.03 (.06)			-.06 (.07)			-.02 (.07)	
Perceived difficulty degree program (vs. just right)			.132			.916			**.001*****
very easy		-.09 (.06)			-.02 (.07)			.10 (.07)	
very difficult		-.11 (.07)			.01 (.08)			**-.26 (.09)****	
Perceived proportion of autonomy (vs. just right)			.186			.128			.057
very little autonomy		-.11 (.09)			-.05 (.10)			.07 (10)	
very much autonomy		-.09 (.06)			**-.13 (.06)***			**-.14 (.07)***	
Explained variance [b]	R^2 = .16	R^2 = .54		R^2 = .13	R^2 = .42		R^2 = .19	R^2 = .37	

Note: n=909, N=60, * p<.05, ** p<.01, *** p<.001. Two-tailed test. Not shown: intercept.

[a] Mean on a scale from 1 (very negative) to 5 (very positive)

[b] shown: student level variance

[c] n=15.

[d] PVE = pre-vocational education, SVE = senior vocational education

RESULTS

Main effects

Table 2 shows the results for the two models. Model 1 indicates the standardized regression coefficients for a model that includes students' background characteristics only. Model 2 shows the coefficients for a model with the school experience variables added. Model 2 explains substantially more variance than model 1. First year students in SVE generally report positive emotional engagement with school, with means ranging from 3.51 to 4.03 on a scale from 1 to 5. Students' valuing of their SVE education is particularly high. Engineering students value their education most, while students at the lowest SVE level value their education less, but both effects disappear when we control for school experiences in Model 2. We find some positive effects of having an ethnic minority background, particularly on students' general educational attitudes, and of coming from other prior educational routes than the regular route from pre-vocational education (PVE) to SVE, i.e. without having graduated in PVE, or after having attended another SVE program prior to the current program. The latter effect disappears when we take students' school experiences into account, which is the case for many effects of background characteristics on students' sense of belonging. Effects of student background characteristics that remain significant after controlling for school experiences are a negative effect of using (soft)drugs, and of not knowing the job status of parents, and positive effects of school support in students' community. Not knowing the educational level of parents, and living in a family with financial problems both gain impact in a model that includes school experience variables.

Model 2 indicates that school experiences have a strong influence on students' emotional engagement with school, especially on their sense of belonging. The perceived fit with the academic program is the most important predictor of students' sense of belonging and valuing, followed by the perceived fit with classmates. Support from school staff does not significantly predict students' emotional engagement in a model with other school experiences taken into account. The perceived fit with the school climate is an important predictor of sense of belonging, but this variable appears to be negatively related to students' valuing of their education. However, the fit with school climate shows a positive correlation with valuing in a zero order correlational model. Its positive influence is suppressed when the other school experience variables, with which the school climate variable is correlated, are added to the model. Experiencing (too) much autonomy in the program negatively affects students' valuing and general educational attitudes towards education, and experiencing that the program is very difficult negatively affects general attitudes as well. We do not find a

significant effect of students' perceptions of the strictness of school rules and regulations on emotional engagement.

Interaction effects

To investigate whether the effects of school experiences on students' emotional engagement with school vary between different groups of students, we estimated interaction effects of all individual characteristics of students with the school experience variables. Here, we discuss the interaction effects that were significant at the 5% level. Moroccan students' perceived fit with the academic program and with the school climate affects their sense of belonging less than for native Dutch students. We find similar patterns for student with other ethnic minority backgrounds, but none of those are significant at $p<.05$. Similarly, the perceived fit with the academic program affects the general educational attitudes of students with personal financial debts less strongly than for students without debts. Perceived academic fit plays a more prominent role in the sense of belonging of students who use drugs, and of students who have an extra job for more than 8 hours a week. The clearest pattern of interaction effects was found for perceived fit with classmates. For older students the fit with classmates is less important for them to value their education, whereas this fit strongly affects the valuing of students who have been arrested by the police, who use (soft)drugs, who expect or have (a) child(ren), or who have financial debts. The perceived fit with classmates affects the general educational attitudes of students with low educated parents more than of students with higher educated parents. We also find some negative effects of positive school experiences for certain groups of students. If students use (soft)drugs, have financial debts, or live on their own, positive experiences with the support they encounter from school staff negatively affects their attitudes towards education in general. Likewise, positively perceived support from school staff negatively affects the valuing among students from families with financial problems, as well as the sense of belonging among students with a Moroccan background. Negative effects on students' general educational attitudes were also found for a positive fit with the school climate among students who use (soft)drugs and students with personal financial debts.

DISCUSSION

School experiences matter

Our results show that students' emotional engagement with school is closely related to their school experiences. School experiences matter for students to perceive a sense of belonging in school, to value their education, and to hold positive attitudes towards education in general. The latter is a more

decontextualized measure of emotional engagement with school, and it is therefore not surprising that general educational attitudes are less related to current school experiences than aspects of emotional engagement that refer to the particular school and degree program.

Strong emotional engagement with school among ethnic minority students

Ethnic minority students report particularly positive general attitudes towards education, which is in line with findings in earlier studies (Alexander et al., 2001; Downey et al., 2009; Kao & Tienda, 1998; Mickelson, 1990; Van der Veen & Peetsma, 2006). The positive educational attitudes of minority youth have attracted the attention of researchers for a longer time, as minority youth have an increased risk for dropout. A study on the attitudes of ethnic minority students in the US showed that these attitudes were less affected by students' experiences in school (Alexander, Entwisle, & Bedinger, 1994). In our study, we find a similar pattern for students with a Moroccan background, a group that is overrepresented in dropout statistics in the Netherlands. Moroccan students report a stronger sense of belonging, but this sense of belonging is less related to academic and social experiences in school than among students with a native Dutch background. In our regression model, Moroccan students' sense of belonging benefits less from positive experiences, but it is equally less affected by negative school experiences. Similar but non-significant interaction effects are found for students with other ethnic minority backgrounds.

At-risk students' emotional engagement with school

Dutch dropout rates are socially and ethnically patterned. Students from lower socioeconomic backgrounds, ethnic minority backgrounds, or students with problematic personal circumstances, such as drug abuse or delinquency, have an increased risk to drop out. Our study shows that the social and ethnic patterns found in Dutch dropout statistics are not straightforwardly reflected in students' emotional engagement with school. In general, at-risk students do not report significantly lower levels of emotional engagement with school. In some cases opposite patterns occur. Not only do we find significantly more positive general educational attitudes among ethnic minority students, we also find more positive attitudes among students from families with financial problems or with unemployed parents. We may interpret this result as an indication that those students attach additional value to education as a means to pursue upward social mobility. We also observe an increased sense of belonging among students who have been arrested by the police, indicating that school is a pleasant, or maybe even safe, haven for those students. School experiences seem to partially explain differences in emotional engagement relating to student background characteristics. For instance, the significant effect of school support in students'

community, prior educational background, single parent household, personal financial debts, or an intensive job, on students' sense of belonging disappears when controlling for school experiences. Likewise, the negative scores on *valuing* among students with higher educated parents, probably induced by a lesser valuing of SVE education compared to higher education in those families, is not significant anymore once students' experiences in their degree program are considered. However, school experiences do not account for all individual differences in students' emotional engagement. Students using (soft)drugs value their SVE program and education in general less, and students who don't know what educational level their parents attained are less emotionally engaged on the whole. The effect of not knowing the educational level of parents even increases when taking students' school experiences into account. As much as 41% of the students in our sample do not know the educational background of their parents, suggesting that sharing educational experiences is a rare event in those families. It is possible that not knowing what education parents completed is a proxy for lower levels of parental education. Parents who have completed more years of education themselves, are often better equipped to provide support for their children's school careers than lower educated parents (Alexander et al., 1994; Roderick, 1993). This could be an explanation for the negative relationship of unknown parental education with emotional engagement. Parents have a guiding role in their interaction with their children about school matters (Alexander et al., 2001). The important role of support for school in students' home environment in our study underline this idea. If students can talk with their parents and peers about school experiences, they value their education more, and they report more positive attitudes towards education in general.

The role of support from school staff

Sharing educational experiences, values, and support for school work is an important socializing process that shapes students' emotions and attitudes towards their education (Eccles, 1983). Students lacking such sources of support in their community may be more dependent of school staff to attach meaning to education and to their experiences in that education (Enthoven, 2007). From that perspective, we might expect students with lower educated parents, students living without their parents or with a single parent, or students reporting a lack of support for school at home, to be more dependent of the support provided by school staff to develop emotional engagement with school. However, in our study, the support from school staff is conspicuous by its absent role in students' emotional engagement. Apparently, when controlling for students' perceived fit with the academic program, with classmates, and with the school climate, the support provided by school staff does not significantly contribute to students' sense of belonging, valuing or general educational attitudes. Neither do we find

indications of additional importance of support from school staff for at-risk students' emotional engagement with school. However, we need to take into account some important considerations when interpreting this result. Above, we explained that social and academic experiences are intertwined in school contexts. The high correlation between the scales of perceived academic support and perceived social support from school staff confirms that it can be difficult to clearly discriminate between the academic or social domains of school experiences. Likewise, we should consider that, while the scale on perceived fit with the academic program doesn't explicitly concern teachers, the program is delivered by those teachers. If students report a positive fit with the academic program, the teachers apparently do a good job in teaching classes that are appreciated for their design and content. A similar interweaving is likely at work with the measure 'perceived fit with the school climate', which concerns the perceived atmosphere, safety, and rules and regulations at school. School staff have a key role in shaping this school climate. Our results should therefore not be interpreted as an indication that school staff don't matter for students' emotional engagement. Nevertheless, our results indicate that the perceived support from school staff is not the primary force that drives students' emotional engagement in SVE. This result concords with the view of Cotterell (2007) that teacher support should be defined more from the perspective of the teaching role, instead of solely describing it by "soft" phrases like nurturance. Teachers support their students by providing direction and guidance inside and outside the classroom. We also found some negative interaction effects for perceived support from school staff, indicating that high levels of perceived support from school staff are negatively related to the emotional engagement of students with a Moroccan background, students using (soft)drugs, students having financial debts, students living in poor families, and students living on their own. Perhaps, this negative relationship indicates that while students recognize that their teachers try their best to help them, teachers' support does not effectively meet the needs of those particular students. This interpretation suggests that a gap needs to be bridged between the support as needed by specific groups of students and the support provided by schools. Another explanation could be to think of this relationship in reverse order. Students with low levels of engagement in school may turn to staff to get help and support more regularly, which could explain the high scores on perceived support from school staff.

The importance of classmates

Researchers have focused more on teachers than on peers as socializing forces of student engagement (Ryan, 2000). A recent policy report in the Netherlands emphasizes the role of the teacher as the main avenue for students to establish a solid school connection as well (Scientific Council for Government Policy, 2008).

However, our study illustrates that classmates should be considered as an additional source for students' emotional engagement with school. A positively perceived relationship with classmates appears to be particularly important for students who habe been arrested by the police, who use drugs, have debts, have children, or who have lower educated parents. Adolescents often prefer their peers rather than school staff for discussing personal concerns (Cotterell, 2007). This might apply in particular to students who use drugs, who have been arrested by the police, or who have gotten into financial debts, as those behaviors tend to be associated with peer pressure mechanisms. Our results can be interpreted as an appeal for organizing more projects on peer tutoring and counseling in SVE.

Conclusion

We conducted our study in post-secondary vocational education, a sector often overlooked in educational research. Relatively little is known about the educational attitudes and emotions of students who do not go to college after high school. With this study, we hope to contribute to filling this gap. However, the focus on post-secondary vocational education calls for awareness of the specific educational context of our study, which limits the generalizability of our results to other educational settings. Our data show strong relationships between students' school experiences and their emotional engagement, indicating that school experiences matter for students to feel connected to their education. However, we need to take into consideration that both the explanatory and outcome variables measure students' emotional response to their school environment. We should be aware of common method bias in our data (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). In particular, respondents' tendency to report consistent attitudes throughout all sections of the questionnaire, and the notion of positive or negative affectivity, which refers to respondents' fundamental emotional dispositions, may affect students' scores on our questionnaire. Also, we must keep in mind that the design of the current study is cross-sectional. While we distinguished explanatory and outcome variables in our models, no inferences on causality can be made on the basis of the current data. Future research could benefit from the continuation of our longitudinal project, which allows for the assessment of causal relationships between institutional and student characteristics, emotional and behavioral engagement, and performance and persistence in school.

Our study demonstrates that experiencing an academic connection is the principal key to emotional engagement with school in SVE. This result underlines the view that a sense of belonging should not only be conceptualized in relational terms, but also in academic terms (Martin & Dowson, 2009). Students do not only connect with human beings in the educational environment, but also with the very school and education itself. SVE curricula have been redesigned dramatically in the past decade, resulting in competency-based curricula, with more autonomy and

responsibility for SVE students. Our results confirm that investing in a high-quality curriculum is the best way to engage SVE students. SVE programs appear to succeed in engaging their students, as in general students in our study value their education highly. Yet, our results give a warning not to push the level of autonomy and challenge in SVE too far. Too high levels of perceived autonomy associate with less valuing of education, and perceptions of a highly challenging program relate to more negative educational attitudes. As SVE serves the lower achieving proportion of the Dutch post-secondary student population, with a substantial percentage of at-risk students, some might be tempted to believe that these students are less academically motivated, and that they primarily need extensive social-emotional support to succeed in school. The respondents in our study unequivocally demonstrate that students in senior vocational education perceive their school primarily as a place for learning: without the academic click, there will be no connection.

Chapter 4

Staying on Track: Behavioral Engagement of At-Risk and Non-At-Risk Students in Post-Secondary Vocational Education*

ABSTRACT

Behavioral disengagement from school is a proximal predictor of dropout. Therefore, the enhancement of behavioral engagement is a useful point of entry for dropout prevention. In this study, we examine the behavioral engagement of at-risk and non-at-risk students in Dutch senior vocational education (SVE), a sector confronted with high dropout rates. Using multilevel regression analyses, we assess the role of students' background characteristics and perceived fit with the school environment in their behavioral engagement. Findings indicate that students in highly urbanized areas are significantly less engaged in school. The perceived proportion of autonomous work is most prominently related to students' behavioral engagement. Whereas in general, SVE students are more engaged if their program requires little autonomous work from students, engineering students appear to favor autonomous work forms.

* This chapter is based on:
Elffers, L. *(under revision)* – Staying on Track: Behavioral Engagement of At-Risk and Non-At-Risk Students in Post-Secondary Vocational Education

INTRODUCTION

The prevalence of school dropout is a major problem in many Western societies. Dropping out of school increases the chance of unemployment and poverty in later life, and can incite frustration and disappointment (Bridgeland, DiIuliou, & Morison, 2006; Research Centre for Education and the Labour Market, 2009). Various student characteristics, such as a low socioeconomic status or an ethnic minority background, have been found to signify an increased risk for dropout (Ekstrom, Goertz, Pollack, & Rock, 1986; Rumberger, 1987; Wehlage, Rutter, Smith, Lesko, & Fernandez, 1989). However, such risk indicators fail to elucidate the proximal mechanisms that push or pull students out of school, and do not allow for interventions to enhance the school careers of at-risk students (Alexander, Entwisle, & Kabbani, 2001; Finn, 1993; Rumberger, 1987). Therefore, researchers try to uncover the factors associated with an increased risk for dropout that are more manipulable (Finn & Voelkl, 1993). A proximal predictor of dropout that has been identified across diverse educational settings is behavioral disengagement in school (Finn & Rock, 1997; Fredricks, Blumenfeld, & Paris, 2004; Janosz, LeBlanc, Boulerice, & Tremblay, 2000; Rumberger, 1987). Behavioral engagement refers to the active involvement of students in school, such as regular attendance of classes, arriving in class on time, paying attention to the teacher, and completing assigned work (Finn, 1993). Behavioral engagement is a prerequisite for performance and persistence in school (Ekstrom et al., 1986; Finn, 1989; Finn & Rock, 1997), and high levels of behavioral engagement may explain why some at-risk students succeed in school whereas others don't (Finn, 1993; Finn & Voelkl, 1993). Therefore, behavioral engagement has been labeled "the most proximal point of entry" (Connell, Spencer, & Aber, 1994, p. 504) and "the most promising approach" (Appleton, Christenson, Kim, & Reschly, 2006, p. 427) for dropout prevention.

To design school-based interventions that enhance the school careers of all students, we need to determine how behavioral engagement is related to school and classroom contexts, and whether it is for instance more important to alter teacher-student relationships, the curriculum, or both, to increase students' engagement in school (Finn, 1993; Fredricks et al., 2004). However, individuals may differ substantially in their perceptions of the institutional context (Roeser, Urdan, & Stephens, 2009), and it is students' personal interpretation of the context, or their perceived fit with that context, that most directly determines their behavior (Eccles, 1983; Jang, Reeve, & Deci, 2010; Roeser et al., 2009; Tinto, 1993; Wessel, Ryan, & Oswald, 2008). Some aspects of the institutional context may be particularly important for the engagement of at-risk students. For instance, as students from disadvantaged backgrounds often have less access to supportive resources in their home environment (Roderick, 1993; Roderick & Camburn, 1999), their engagement in school may be more dependent on support from teachers and school staff (Fredricks et al., 2004; Furrer & Skinner, 2003; Scientific

Council for Government Policy, 2008). Therefore, it is important to study the correlates of school engagement among students from various backgrounds. However, most research on student engagement has been conducted with data from predominantly White middle-class samples (Fredricks et al., 2004; Furrer & Skinner, 2003; Wang, Selman, Dishion, & Stormshak, 2010; Zimmer-Gembeck, Chipuer, Hanisch, Creed, & McGregor, 2006).

In this study, we expand the focus to other populations. We study the role of students' personal background and perceived fit with various aspects of the school environment on their behavioral engagement in senior vocational education (SVE) in the Netherlands. SVE is the senior continuation of the vocational track in Dutch secondary education, offering specialized job-oriented vocational programs for students aged 16 years and older. A substantial proportion of SVE-students can be labelled at-risk for dropout on the basis of sociodemographic characteristics, such as coming from a lower socioeconomic or ethnic minority background, or, to a lesser extent, on the basis of conditions outside school, such as teenage pregnancy or delinquency (Dutch Ministry of Education Culture and Science, 2009; Kuhry, 1998; Scientific Council for Government Policy, 2008). Dropout in the Netherlands peaks in SVE (Dutch Ministry of Education Culture and Science, 2011b), suggesting that many students in SVE are in a process of disengagement from school that may culminate in dropout. Hence, SVE provides a very relevant, but thus far understudied, context to study the correlates of behavioral engagement in school. Below, we will set out the theoretical framework that guided the selection of variables in our study.

THEORETICAL FRAMEWORK

Behavioral engagement

The concept of behavioral engagement refers to the behavioral dimension of the multidimensional construct of school engagement, which comprises students' behavioral and emotional dispositions to school (Fredricks et al., 2004). The emotional dimension of school engagement refers to students' school-related attitudes, interests, and values, whereas behavioral engagement pertains to their active participation in the school setting. Behavioral engagement is assumed to form the starting point of a self-reinforcing cycle of engagement and performance in school (Finn, 1989). Four consecutive levels of behavioral engagement have been distinguished, that range from elementary involvement in class activities to participation in extracurricular activities and school governance (Finn, 1989). As participation in extracurricular activities or student councils is rare in SVE schools, we will focus on participation in class-related activities only in this study.

Student background characteristics associated with dropout

As behavioral disengagement is a precursor of dropout, it is important to examine whether differences in behavioral engagement between certain groups of students mirror differences in their propensity to drop out. Sociodemographic background characteristics are the most commonly used indicators of the risk for dropout. Students from lower socioeconomic backgrounds, indicated by lower levels of parental education and employment and restricted financial resources in the family, are overrepresented in dropout statistics (Alexander et al., 2001; Battin-Pearson, Newcomb, Abbott, Hill, Catalano, & Hawkins, 2000; Ekstrom et al., 1986; Rumberger, 1987; Rumberger & Lim, 2008; Wehlage et al., 1989). Ethnic minority students drop out at higher rates than native students (Dutch Ministry of Education Culture and Science, 2011a; Ekstrom et al., 1986). Other sociodemographic risk indicators are growing up in a single parent home or living alone (Barrington & Hendricks, 1989; Dutch Ministry of Education Culture and Science, 2011a), being male and being of older age (Battin-Pearson et al., 2000; Dutch Ministry of Education Culture and Science, 2011a; Ekstrom et al., 1986; Rumberger, 1987; Rumberger & Lim, 2008). Various studies point towards the limited access to supportive resources to assist students in their school careers, such as encouragement and support from family and friends, as an explanation for the differences in dropout rates between sociodemographic groups (Alexander, Entwisle, & Bedinger, 1994; Audas & Willms, 2001; Kao & Tienda, 1998; Roderick, 1993). Next to sociodemographic factors, students' personal circumstances and behaviors outside school affect the probability to drop out (Finn, 1993). Pregnancy and parenthood, the use of drugs, delinquent behavior, personal debts and intensive jobs next to school have all been found to increase the risk for dropout (Dutch Ministry of Education Culture and Science, 2011a; Ekstrom et al., 1986; Lee & Staff, 2007; Roebuck, French, & Dennis, 2004; ter Bogt, van Lieshout, Doornwaard, & Eijkemans, 2009; Verhagen, van Heijst, Jurrius, Calkoen, & Koot, 2010). Last, the risk for dropout differs according to educational track and school district. Students in lower level programs in SVE drop out more often, as do students in economics and engineering programs (Dutch Ministry of Education Culture and Science, 2011a). Also, if students have dropped out of a program before, have repeated a grade, or changed schools, they are more likely to drop out (Astone & McLanahan, 1991; Jimerson, Anderson, & Whipple, 2002). Students in highly urbanized school districts drop out more often that students in less urbanized or rural school districts (Dutch Ministry of Education Culture and Science, 2011a).

The role of school experiences

School engagement evolves from the interaction between the individual student and the school context (Fredricks et al., 2004). It is important to find out which

aspects of the school context help or hamper students' behavioral engagement in school. However, effects of institutional characteristics on educational outcomes are generally small, and appear to be mediated by the experiences that students have in the school environment (Pascarella & Terenzini, 2005; Roeser et al., 2009). Various studies attest to the centrality of students' individual experiences as critical determinants of a range of educational outcomes, over and above objective characteristics of the institutional context (Eccles, 1983; Furrer & Skinner, 2003; Jang et al., 2010; Wessel et al., 2008). For instance, Tinto's renowned model of institutional departure revolves around students' perceptions of the degree to which their experiences in the school environment match their needs and interests (Tinto, 1993). If students perceive a mismatch between the institutional environment and their personal needs and interests, withdrawal is likely (Eccles & Midgley, 1989; Finn, 1993; Miller, Leinhardt, & Zigmond, 1988; Tinto, 1993). In this study, we adopt a similar perspective, by taking students' perceived fit with their school environment as our point of departure.

Students engage in social and academic interactions with various actors in the school environment. Their behavioral engagement can be promoted or discouraged by their perceived fit with fellow students, school staff, the curriculum, and the school climate (Freeman, Anderman, & Jensen, 2007; Tinto, 1993; Wang et al., 2010; Wehlage et al., 1989). Previous research suggests that student engagement is particularly promoted if the school environment meets their "basic needs" for autonomy, relatedness, and competence (Connell & Wellborn, 1991; Reeve, Deci, & Ryan, 2004; Zimmer-Gembeck et al., 2006). An autonomy supportive school environment that encourages students to self-direct their learning processes is more likely to incite active class participation and task completion (Jang et al., 2010; Marks, 2000; National Research Council & Institute of Medicine, 2004; Zimmer-Gembeck et al., 2006). However, self-directed learning processes cannot be successful without structured guidance (Jang et al., 2010; National Research Council & Institute of Medicine, 2004; Scientific Council for Government Policy, 2008). A structured environment, with clear rules and expectations, enhances student engagement (Finn, 1993; Newmann, 1992; Wang et al., 2010), and may be particularly essential for students who come from a less structured home environment (Scientific Council for Government Policy, 2008). The optimal mix of autonomy support and structure has yet to be determined (Fredricks et al., 2004), and is topic of public debates in the Netherlands. The recent transformation of SVE programs into competency-based curricula that require more student autonomy has led to complaints from students, teachers, and parents about a lack of guidance and structure (Commissie Dijsselbloem, 2008).

The need for relatedness refers to the human need to feel part of a group (Baumeister & Leary, 1995; Wehlage et al., 1989). Positive perceptions of the dominant culture of the institution, and positive interactions with key actors in the

institutional environment have been found to promote students' behavioral engagement (Furrer & Skinner, 2003; Newmann, 1992; Roeser et al., 2009; Steinberg, Dornbusch, & Brown, 1992; Tinto, 1993). A sense of relatedness, especially to teachers, can serve as an important resource for students who face difficulties in their school careers (Furrer & Skinner, 2003; Roeser et al., 2009; Scientific Council for Government Policy, 2008). A recent national policy report about dropout prevention highlights the importance of a sense of relatedness for the school success of at-risk students, as well as the crucial role of teachers to establish such relatedness (Scientific Council for Government Policy, 2008).
The need for competence refers to the experience of academic fit. If students perceive the academic curriculum as relevant and helpful in terms of their educational and career goals, and if they perceive that they have what it takes to succeed, they are more likely to actively engage in class work (Crumpton & Gregory, 2011; Tinto, 1993).

RESEARCH QUESTIONS

In this study, we examine the behavioral engagement of a diverse sample of students in SVE, including a substantial proportion of students with background characteristics that are associated with an increased risk for dropout. Research question 1, *Do student background characteristics associated with an increased risk for dropout relate to lower levels of behavioral engagement in SVE?,* assesses differences in behavioral engagement between at-risk and non-at-risk students. To distinguish between at-risk and non-at-risk students, we include sociodemographic indicators, personal conditions and behaviors outside school, educational status characteristics, and a measure on students' perceived access to supportive resources outside school. Research question 2, *To what extent is behavioral engagement in SVE related to students' perceived fit with the school environment?*, examines the relationship between students' perceptions of the school environment and their behavioral engagement. We look at students' perceived fit with the academic program, teachers, classmates, and the school climate. Moreover, we take into account three separate variables to specifically measure the perceived proportion of autonomous work in the program, the perceived strictness of school rules, and the perceived difficulty of the program. Last, we estimate interaction effects of student background characteristics and perceived fit with the school environment on students' behavioral engagement, to answer research question 3: *Does the relationship between the perceived fit with the school environment and behavioral engagement differ between at-risk and non-at-risk students?*

METHODS

Sample and data collection

The data in this study come from a longitudinal study on student persistence in the first year in SVE. From this study, we selected all 909 students of whom data were available regarding their behavioral engagement, school experiences, and individual background characteristics. To obtain a diverse sample of at-risk and non-at-risk students, out of the total of 40 regional SVE school boards in the Netherlands, 10 school boards that are located in highly and intermediate urban areas were invited for participation in the study, of which 5 agreed to participate. Within each school board, first year groups were selected from engineering, economics, and health & social care programs at all four SVE degree levels (1: assistant level, 2: basic vocational level, 3: full professional level, 4: specialist level). The groups were selected during the summer break before individual students were assigned to the groups. The data for this study are from the second data collection wave, in which 60 groups participated with an average group size of 15 students. Data were collected at the start of the spring semester in 2009. The questionnaires were completed in a classroom setting under supervision of a teacher. All teachers were informed about the purpose of the study, and received an instructional handout. A short introductory statement about the purpose of the study was printed on the questionnaire, as well as a short privacy statement to assure students that no identifiable personal data would be disclosed. Students handed in their questionnaire in a blank envelope. Although participation in the study was voluntary for all students, we received no reports of students not willing to participate. The descriptives of the sample in Table 1 below indicate that our sample corresponds satisfactorily to available statistics of vocational education and urban schools in the Netherlands (Dutch Ministry of Education Culture and Science, 2011b; Dutch Ministry of Health Welfare and Sport, 2010; Knowledge Centre for Vocational Training and Labour Market, 2010; Kuhry, 1998; Scientific Council for Government Policy, 2008).

Table 1: descriptives of sample of 909 students in senior vocational education

Characteristics	%
Regional school board	
School board 1 (highly urbanized area)	20
School board 2 (highly urbanized area)	20
School board 3 (highly urbanized area)	20
School board 4 (intermediate urbanized area)	8
School board 5 (intermediate urbanized area)	33
SVE sector	
Economics	30
Engineering	33
Health & social care	37

table 1 continues on next page

(table 1 continued)

SVE degree program level	
Level 1	13
Level 2	22
Level 3	33
Level 4	32
Prior education	
PVE with diploma	66
PVE without diploma	4
SVE with diploma	8
SVE without diploma	9
Other	13
Gender	
Female	54
Male	46
Ethnic identity	
Native Dutch background	53
Moroccan background	15
Turkish background	12
Surinamese background	9
Antillean background	2
Other ethnic background	9
Age	
16-17 years	62
18-19 years	30
Older than 19 years	8
Household	
Living with both parents	65
Living with one parent	24
Living alone	3
Living with other relatives / friends	8
Job status parents	
Both parents have a job	49
One parent has a job	23
Both parents are unemployed	14
Student doesn't know	14
Highest education parents	
Secondary education or less	21
SVE or similar	20
Higher education or similar	18
Student doesn't know	41
Financial problems in family	20
Personal debts student	10
Student (or partner) is pregnant / has child(ren)	4
Student has been arrested by the police	17
Student uses (soft-)drugs	11
Extra job student	
no extra job	39
< 8 hours a week	19
8 – 15 hours a week	34
> 15 hours a week	8

Variables and measures

The outcome variable, behavioral engagement, was measured using a scale consisting of 8 items (α=.76, e.g. *I attend most classes;* and *During class, I often engage in other activities than class work, such as chatting, msn, texting, internet* (reversed)). The explanatory variables comprised measures of students' social and academic school experiences and background. Academic school experience measures included students' perceived fit with the academic program (*perceived fit academic program*: 10 items, α=.82, e.g. *I find the content of the program interesting*), and their perceptions of the academic support provided by school staff (*perceived academic support*: 9 items, α=.85, e.g. *Teachers support me well if I have questions about a task*). Moreover, two single item measures were used to specifically tap students' perceptions of the difficulty of the degree program (*perceived difficulty degree program*), and of the proportion of autonomous work in the program (*perceived proportion of autonomous work*). Social school experience variables included students' perceived fit with classmates (*perceived fit classmates*: 6 items, α=.77, e.g. *I get along well with most of my classmates*), with the school climate (*perceived fit school climate*: 9 items, α=.82, e.g. *I feel safe at this school*), their perceptions of the social support provided by school staff (*perceived social support*: 10 items, α=.90, e.g. *School staff support me when I don't feel well*), and a single-item measure on the perceived strictness of school rules and regulations (*perceived strictness school rules*). Variables concerning students' background included students' self-reported sociodemographic background characteristics (age, gender, ethnic identity, household composition, job status parents, highest educational level parents, financial status of the family), a measure of perceived supportive resources in students' home environment (*school support in community*: 5 items, α=.70, e.g. *I can discuss school issues with my parents*), and measures concerning personal circumstances and behaviors outside school that are associated with an increased risk for dropout: having a child / (partner) being pregnant, personal debts, drug abuse, having been arrested by the police, and having an extra job. Last, we included school-related background characteristics of all students (prior education, regional school board, vocational sector, and level of current degree program).

All data were collected using a self-report questionnaire that was developed to suit the specific context of SVE and its students. Items were partly based on previous questionnaires on school experiences and engagement in American and Dutch educational settings (Beekhoven, 2002; Goodenow & Grady, 1993; Pascarella & Chapman, 1983; Voelkl, 1995; Willms, 2003). The questionnaire was subjected to a pilot study before being finalized. Principle component analyses were used to examine the structure of the questionnaire, and Cronbach's alpha's were calculated. All items were measured with statements, to which students responded on a 5-point Likert-type scale (strongly disagree to strongly agree), except for the

items on students' background characteristics. Three items, on students' perceptions of the difficulty of the degree program, the proportion of autonomous work in the program, and the strictness of school rules and regulations, had an alternative scale, to enable respondents to report less optimal experiences on both the 'too much'- and the 'too little'-side of the spectrum.

Statistical analysis

We screened the data for meeting the assumptions of regression analysis. A strong correlation (r =.7) was found between two predictors: *perceived academic support* and *perceived social support*. To prevent multicollinearity problems in our regression analyses, we merged these two scales into one variable *perceived support school staff* (α=.92). Missing values were limited (<2% across all items). As we detected no obvious patterns in missing values, we applied the expectation maximization algorithm (SPSS Inc., 2010). The intra-class correlation coefficient of .04 indicated that part of the variance could be attributed to between-class differences (Snijders & Bosker, 1999). Therefore, we conducted multilevel regression analyses with class and student as two separate levels. To facilitate interpretation of the scores, variables were standardized to zero mean and unity variance. In Model 1 we only included student background characteristics, in Model 2 we added the school experience variables. Last, we examined first order interaction effects between background characteristics and school experiences on students' behavioral engagement in school.

Table 2: two regression models predicting students' behavioral engagement in senior vocational education

	Behavioral engagement ICC = .04 mean [a] = 3.82 SD = .53			
	Model 1		**Model 2**	
	β (SE)	**p**	**β (SE)**	**p**
BACKGROUND STUDENT				
Sociodemographic background				
Year of birth	**-.08 (.04)**	**.036***	-.05 (.04)	.142
Male (vs. female)	.17 (.09)	.079	.15 (.09)	.094
Ethnic identity (vs. native Dutch)		.646		.774
Moroccan background	-.02 (.11)		-.09 (.10)	
Turkish background	.07 (.11)		.07 (.10)	
Surinamese background	.06 (.13)		.02 (.12)	
Antillean background [c]	-.38 (.25)		-.16 (.24)	
Other ethnic background	-.01 (.12)		.02 (.11)	
Household (vs. living with two parents)		.624		.979
Living alone	-.12 (.20)		-.06 (.19)	
Living with one parent	-.08 (.08)		-.03 (.08)	
Living with other relatives/friends	-.13 (.13)		-.02 (.12)	

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(table 2 continued)	**Model 1**		**Model 2**	
Job status parents (vs. both parents have a job)		**.018***		.062
Both parents are unemployed	**.35 (.11)****		**.28 (.10)****	
One parent has a job	.10 (.08)		.10 (.08)	
Student doesn't know	.12 (.11)		.10 (.11)	
Highest education parents (vs. SVE or similar)		.993		.903
Secondary education or less	.02 (.10)		-.01 (.10)	
Higher education	.01 (.10)		.04 (.09)	
Student doesn't know	.03 (.09)		.04 (.09)	
Financial difficulties family (vs. no difficulties)	-.03 (.08)	.717	-.02 (.08)	.836
Supportive resources in home community				
Encouragement and support parents and peers	**.29 (.03)**	**.000*****	**.20 (.03)**	**.000*****
Circumstances and behavior outside school				
Student (or partner) expects/has child(ren) (vs. not)	.10 (.17)	.553	.26 (.16)	.105
Personal debts student (vs. no debts)	**-.28 (.12)**	**.022***	**-.24 (.11)**	**.035***
Student uses (soft-)drugs (vs. no drugs use)	**-.38 (.11)**	**.000*****	**-.34 (.10)**	**.001*****
Student has been arrested by the police (vs. not)	-.18 (.09)	.057	-.16 (.08)	.058
Extra job student (vs. no extra job)		.509		.553
< 8 hours a week	-.04 (.09)		-.03 (.08)	
8-15 hours a week	-.00 (.07)		.03 (.07)	
> 15 hours a week	-.17 (.12)		-.13 (.11)	
School-related background				
Prior education (vs. PVE with diploma) [d]		.680		.213
PVE without diploma	.05 (.17)		-.17 (.16)	
SVE with diploma	-.05 (.13)		-.10 (.12)	
SVE without diploma	-.16 (.12)		**-.25 (.12)***	
Other prior education	.03 (.10)		-.01 (.10)	
Regional school board (vs. school board 5)		**.009****		**.004****
school board 4 (intermediate urbanized area)	.03 (.13)		-.07 (.12)	
school board 3 (highly urbanized area)	**-.28 (.11)***		**-.27 (.09)****	
school board 2 (highly urbanized area)	**-.22 (.10)***		**-.27 (.09)****	
school board 1 (highly urbanized area)	**-.35 (.11)*****		**-.36 (.09)*****	
SVE sector (vs. health&social care)		.951		.731
Economics	-.03 (.09)		.01 (.08)	
Engineering	-.02 (.12)		-.06 (.11)	
SVE degree program level (vs. level 4)		.992		.866
Level 1	.04 (.13)		.04 (.12)	
Level 2	.02 (.09)		-.04 (.08)	
Level 3	.02 (.10)		-.04 (.09)	
SCHOOL EXPERIENCES				
Perceived fit academic program			**.22 (.04)**	**.000*****
Perceived support school staff			**.15 (.05)**	**.002****
Perceived fit classmates			**.15 (.03)**	**.000*****
Perceived fit school climate			**-.12 (.04)**	**.003****
Perceived strictness school rules (vs. just right)				.498
very lenient			.06 (.09)	
very strict			-.06 (.08)	
Perceived difficulty degree program (vs. just right)				.279
very easy			.10 (.07)	
very difficult			-.04 (.09)	
Perceived proportion autonomous work (vs. right)				**.005****
very little			**.28 (.11)****	
very much			-.09 (.07)	
Explained variance [b]	R^2 = .19		R^2 = .29	

Note: n=909, N=60, * p<.05, ** p<.01, *** p<.001. Two-tailed test. Not shown: intercept.

[a] Mean on a scale from 1 (very negative) to 5 (very positive)

[b] shown: student level variance

[c] n=15.

[d] PVE = pre-vocational education, SVE = senior vocational education

RESULTS

Main effects

Table 2 above presents the results for the two models. Model 1 shows the standardized regression coefficients for a model that includes students' background characteristics only. Model 2 shows the coefficients for a model with school experience variables added. We find a few differences in behavioral engagement that relate to students' sociodemographic background characteristics. Younger students report slightly less behavioral engagement, but this difference disappears as soon as their school experiences are taken into account. If both parents are unemployed, students score higher on behavioral engagement. Perceived encouragement and support from parents and peers has a significant positive association with behavioral engagement. Students who have debts and students who use drugs are significantly less engaged in school. When controlling for school experiences in Model 2, we find a negative relationship between prior dropout from an SVE program and behavioral engagement in the current program. Last, we find that students in school boards in highly urbanized areas are less engaged than students from school boards in intermediate urbanized areas.

School experiences play a prominent role in engagement. Students' behavioral engagement is positively related to their perceptions of the support from school staff, the perceived fit with classmates, and in particular to the perceived fit with the academic program. Perceived fit with the school climate appears to be negatively related to behavioral engagement. However, the fit with school climate shows a small positive correlation with behavioral engagement in a zero order correlation model. Apparently, its positive influence is suppressed when the other school experience variables are added to the model. The perceived proportion of autonomous work in the program plays a significant role in behavioral engagement: students are more engaged if they perceive that there is limited opportunity for autonomous working in the program. Behavioral engagement is not significantly related to students' perceptions of the difficulty of the program or the strictness of school rules.

Interaction effects

We examined interaction effects between all student background characteristics and school experience measures. Below, we highlight two interesting patterns of interaction effects that were identified. In general, the interaction effects indicate that the role of school experiences in students' behavioral engagement varies substantially between students from different backgrounds. For instance, while some students are *less* engaged in the case of a difficult program (Turkish students: β=-.81, $p<.05$, level 1 students: β=-.83, $p<.05$), others appear to be *more* engaged if they think that their program is difficult (other ethnic backgrounds: β=.75, $p<.05$,

living with other relative or friends: β=.73, p<.05). Similarly, some students participate *more* if they perceive the program as easy (family with financial difficulties: β=.39, p<.05, single parent families: β=.36, p<.05), whereas others participate *less* when they think that the program is easy (prior education PVE without diploma: β=-.86, p<.01). An equally divergent picture is found with regard to the perceived amount of autonomous work that is required in SVE programs. Students in engineering programs are *more* engaged if they perceive that they are required to work autonomously a lot (β=.46, p<.01), whereas students in health & social care are *less* engaged in the case of much perceived autonomy (β=-.33, p<.01), and more engaged if they experience little autonomy (β=.45, p<.01).

Another pattern of interaction effects indicates that the behavioral engagement of some groups of at-risk students is less affected by positive school experiences. Examples of this pattern are negative interaction effects with respect to perceived fit with the academic program (other ethnic background: β=-.43, p<.001; living with other relatives or friends: β=-.26, p<.05; living with a single parent: β=-.14, p<.05), and with respect to perceived support school staff (Surinamese students: β=-.36, p<.001; other ethnic backgrounds: β=-.25, p<.05; financial difficulties: β=-.17, p<.05; living with other relatives and friends: β=-.36, p<.01; parental education unknown: β=.-.17, p<.05).

DISCUSSION

Behavioral engagement of at-risk and non-at-risk students

With a few notable exceptions, individual background characteristics that are associated with an increased risk for dropout are not associated with lower levels of behavioral engagement in school. Although behavioral disengagement is considered a proximal predictor of dropout, the dropout risk that seems to be embedded in the backgrounds of certain students is not mirrored in differences in behavioral engagement in our study. Exceptions are the significantly lower engagement of students who use (soft)drugs and students with debts. The devastating impact of drugs on school careers has been reported in various studies (Roebuck et al., 2004; ter Bogt et al., 2009). The negative influence of debts has mostly been described from the perspective of intensive jobs that distract students with financial problems from school (Lee & Staff, 2007; Verhagen et al., 2010). However, our results reveal a negative relationship between debts and school engagement after controlling for working hours next to school. This finding suggests that debts may not only form a practical, but also an emotional burden for students, which negatively affects their school career. The significant correlation between school support in the community and behavioral engagement confirms the importance of supportive resources outside school for students' engagement

inside school. The inclusion of a measure of supportive resources may explain why individual sociodemographic characteristics play a limited role in our models. Students with two unemployed parents are significantly more engaged in school. It could be that parents who do not work fulltime have better opportunities to actively monitor their children's participation in school, such as getting up in the morning, leaving for school in time, and making homework. Another possible explanation is that students from unemployed parents work extra hard in school to avoid future unemployment for themselves. Last, we find a worrisome result with respect to students who have been previously enrolled in an SVE program without successfully finishing this program: their significantly lower behavioral engagement suggests that they are losing track once again.

The lower engagement of students in large cities

We find a remarkable difference in the behavioral engagement between students from school boards in highly urbanized and intermediate urbanized areas. Students in highly urbanized areas report significantly less engagement in school. This difference aligns with regional differences in dropout rates in the Netherlands (Dutch Ministry of Education Culture and Science, 2011a). These differences hold after controlling for students' background characteristics and school experiences. SVE school boards comprise a number of different school locations that are managed by one central board of directors. It is possible that organizational features of school boards can explain the differences between the five school boards in our study. However, as the three school boards in highly urbanized areas cluster in their lower scores on behavioral engagement, it may be more plausible to interpret the school board variable in our study as an indicator of the neighborhood where students go to school. Youth in highly urbanized areas are more often confronted with multiple risk-increasing circumstances, such as poverty, broken families, crime and drugs (Scientific Council for Government Policy, 2008). Whereas our models estimate the unique contribution of each of those individual student characteristics to the explanation of variance in behavioral engagement, a combination of several risk factors may weigh more than the sum of its parts. An accumulation of risk factors among students in large cities may account for the negative effects of the three school boards in highly urbanized areas in our model. In addition, school populations in large cities comprise more at-risk students, which results in an accumulation of at-risk students within schools. Including measures of the composition of school populations in future research is useful to test whether the proportion of at-risk students in the student population can explain differences in the behavioral engagement between schools.

The importance of an interesting and activating academic program

School experiences play an important role in students' behavioral engagement. In particular, if students experience that the academic program is interesting, and that the proportion of autonomous work that is required in the program is limited, they report higher levels of behavioral engagement. It is remarkable that a single measure of the perceived proportion of autonomous work in the program is more strongly related to behavioral engagement than any of the other school experience variables. Although adolescent students are assumed to develop a growing preference and ability to work autonomously (Eccles & Midgley, 1989; Fredricks et al., 2004), the students in our study are more actively engaged if their program requires less autonomy. In public debates about recent educational reforms in the Netherlands, male adolescents have been said to experience particular difficulty with the increased autonomy in competency-based programs. Contrary to this view, we find that increased levels of autonomy are associated with lower behavioral engagement among female students only, and that male students are less engaged if there is little opportunity to work autonomously. Also, students in engineering programs, which predominantly attract male students, appear to prefer more autonomy in their programs. These findings raise several questions, for instance about the understanding of 'autonomous work', which may differ substantially between programs and students. For instance, students in engineering programs may carry out clearly defined assignments individually in a workshop setting more often, whereas health & social care programs may include more open assignments and group collaboration. Such potential differences have important consequences for the role of autonomous work forms in school programs, and for students' experiences with autonomy in school. Moreover, eventhough more directive instruction and close supervision may increase participation in the classroom, schools might want to teach students to self-regulate their learning processes nevertheless, as part of the curriculum. Even so, our findings underline that schools need to be careful not to push the level of autonomy in their programs too far.

Divergent role of school experiences for at-risk and non-at-risk students

The relationship between school experiences and behavioral engagement differs according to students' background characteristics. What appears to stimulate active participation among one group of students, may reduce the engagement of others. Education is not a matter of one-size-fits-all, and a diverse student body calls upon schools to tailor their programs and guidance towards the needs of individual students. One pattern of interaction effects warrants attention in particular. The behavioral engagement of certain groups of at-risk students seems to 'benefit' less from positive school experiences. We found several indications of a weakened relationship between positive school experiences and behavioral

engagement among at-risk students in our data. For instance, while positive perceptions of the support provided by school staff generally associate with higher levels of behavioral engagement, this relationship is significantly weaker for some at-risk students. We could interpret this result as an indication that support from school staff, or even a sense of relatedness in school, is less important for the school engagement of at-risk students than has been previously suggested (Furrer & Skinner, 2003; Scientific Council for Government Policy, 2008). An alternative interpretation is that, even if some at-risk students perceive that teachers and school staff are supportive, this support does not help them to become increasingly engaged in school to the same extent as other, non-at-risk, students. The weakened relationship between school experiences and behavioral engagement among certain groups of at-risk students is an important topic for future research.

Limitations and continuation

This study has some methodological limitations that need to be considered. First, as all measures are based on students' self-report, we need to be aware of common method bias, which refers to respondents' tendency to report consistent attitudes throughout all sections of the questionnaire (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Second, given the crosssectional nature of our data, no causal inferences can be made. It is likely that most relationships between school experiences and behavioral engagement are reciprocal. Future research can benefit from the continuation of our longitudinal project on student persistence in SVE, which will yield data that not only allow for assessment of relationships between school experiences and engagement over a longer period of time, but also for the examination of relationships between school engagement and dropout in SVE. If we understand which aspects of the school experience particularly help or hinder students' engagement and persistence in school, we can assist all students, both at-risk and non-at-risk, better to stay on track in school.

Part III

Students' attainment in the first year of post-secondary vocational education

"Laws may regulate the structure of the educational system, but student perspectives and experiences substantially influence academic and social outcomes" (Appleton, Christenson & Furlong, 2008, p. 369).

Chapter 5

Jumping Over Their Own Shadow: the Interplay of Students' School Engagement and Performance Across the Transition to Post-Secondary Vocational Education*

ABSTRACT

In this study, we examine the interplay between student engagement and performance across the transition to senior vocational education (SVE) in the Netherlands. Dropout in the first year after the transition to SVE is high, suggesting that many first year students are in a process of gradual disengagement from school. Using multilevel structural equation modeling, we assess the development of emotional engagement, behavioral engagement and performance over time. Results indicate that emotional engagement has a stronger direct impact on performance than behavioral engagement. Pre-transition behavioral engagement affects post-transition engagement, underlining the continuity in students' school careers across contexts. However, pre-transition emotional engagement does not affect post-transition emotional engagement, suggesting that a transfer to a new school environment allows emotionally disengaged students to start with a clean slate.

* This chapter is based on:
Elffers, L. & Oort, F.J. *(submitted*) – Jumping Over Their Own Shadow – the Interplay of Students' School Engagement and Performance Across the Transition to Post-Secondary Vocational Education

INTRODUCTION

In the Netherlands, many students drop out in the first year after the transition to post-secondary vocational education (Dutch Ministry of Education Culture and Science, 2010). Dropout can be viewed as the final stage of a process of gradual disengagement from school, which may have its roots in earlier school years (Alexander, Entwisle, & Kabbani, 2001). Although the transition to a new school or program provides an opportunity to start with a clean slate, earlier disengagement may cast its shadow over students' engagement and performance after a transition (Finn, 1993; Rumberger, 1995). In this study, we examine students' school engagement and performance across the transition to post-secondary vocational education in the Netherlands. Departing from the participation-identification model (Finn, 1989), we apply multilevel structural equation modeling to explore the interplay of engagement and performance over time, and the role of pre-transition engagement on post-transition outcomes.

THEORETICAL BACKGROUND

School engagement and its interplay with performance

School engagement is a multidimensional construct that comprises, at least, an emotional and behavioral dimension (Appleton, Christenson, & Furlong, 2008; Finn, 1993; Fredricks, Blumenfeld, & Paris, 2004). Emotional engagement refers to students' emotional dispositions to school, such as a sense of belonging in school and valuing of education, whereas behavioral engagement refers to students' participation in social and academic activities in the school context (Finn, 1993; Fredricks et al., 2004). Emotional and behavioral engagement are hypothesized to affect academic performance in a mutually reinforcing way (Appleton et al., 2008; Finn, 1989; Fredricks et al., 2004). However, the direct and indirect paths along which engagement and performance interact and develop are not entirely clear. A direct effect of behavioral engagement on academic performance has been established in various studies (Finn & Rock, 1997; Janosz, Le Blanc, Boulerice, & Tremblay, 2000; Rumberger, 1987), but the relationship between emotional engagement and academic performance is less clear (Fredricks et al., 2004). The participation-identification model (Finn, 1989, 1993) suggests that behavioral engagement affects performance directly, which in turn leads to emotional engagement. Emotional engagement promotes further behavioral engagement. Hence, according to the model, academic performance mediates the influence of behavioral engagement on emotional engagement, and emotional engagement affects academic performance indirectly through its effect on behavioral engagement. However, recent studies report alternative relationships between engagement and performance. For instance, a typological study of dropouts points

out that students can be emotionally disengaged eventhough their performance is good (Janosz, LeBlanc, Boulerice, & Tremblay, 2000), and a sense of belonging in school has been shown to directly predict school performance (Samdal, Wold, & Bronis, 1999). These findings suggest that alternative pathways from engagement to performance and vice versa need to be considered to accurately describe the developmental cycle of engagement and performance in school.

School engagement across time and contexts

Whereas most children enter the school system eager to engage in school activities, some students remain highly engaged throughout the school years, while others become gradually disengaged (Alexander et al., 2001; Wehlage & Rutter, 1986). Similar to being involved in a self-reinforcing cycle of positive engagement and performance in school, students can be caught in a negative process of declining engagement and performance (Appleton et al., 2008; Finn, 1989; Fredricks et al., 2004). Fading concentration in the classroom or growing truancy are overt symptoms of a process of disengagement that may have its roots in earlier school years (Alexander et al., 2001). Although a transition to a next grade, new program, or different school may enable students to break out of a spiral of disengagement (Elder Jr, Kirkpatrick Johnson, & Crosnoe, 2003; Langenkamp, 2010), previous disengagement can impede students' engagement in a new grade, program or school (Finn, 1993; Rumberger, 1995). In contrast, Tinto (1993) states that what happens after the transition to a new school environment is more important for students' engagement after the transition than what has previously occurred in their school careers. Hence, it is not yet clear how context-dependent school engagement really is, or what the influence of engagement in one context is on engagement in another context.

OBJECTIVES OF THIS STUDY

Empirical research on the development of engagement is scarce. Most studies of engagement are based on cross-sectional data, and do not allow for disentangling the contribution of emotional and behavioral engagement to performance in school (Fredricks et al., 2004). The single model that describes the continuity and change in engagement and performance over time, as well as the unique contribution of emotional and behavioral engagement to academic performance, is the participation-identification model (Finn, 1989; Fredricks et al., 2004). However, this model appears to overlook some potentially important relationships between engagement and performance, such as a direct effect of emotional engagement on performance, and of behavioral engagement on emotional engagement. Moreover, most studies of student engagement have been conducted with data from predominantly White middle-class samples from middle and high schools, which

makes it difficult to generalize findings to other student populations (Fredricks et al., 2004). With this study, we aim to contribute to the existing body of research by examining the interplay of engagement and performance across the transition to senior vocational education (SVE) in the Netherlands. SVE is the senior continuation of the lowest track in Dutch secondary education, and provides specialized vocational programs for students of 16 years and older. Dropout rates peak in the first year after the transition to SVE (CBS Statistics Netherlands, 2010), suggesting that many students are in a process of disengagement from school in the first year in SVE. As SVE schools, and especially those in urban areas, serve a substantial proportion of students from lower socioeconomic backgrounds and ethnic minority groups, a study of school engagement among SVE students enables us to expand the scope to those groups (Dutch Ministry of Education Culture and Science, 2009; Kuhry, 1998; Scientific Council for Government Policy, 2008). Using structural equation modeling techniques, we model the interplay of emotional and behavioral engagement and academic performance over the course of the first year after the transition. Next, we assess the impact of pre-transition engagement on post-transition engagement, and explore the effects of students' sociodemographic and educational route.

METHODS

Participants and procedure

We analyzed data from a longitudinal study on student persistence in the first year in SVE. To obtain a diverse sample, out of the 40 regional SVE school boards in the Netherlands, we invited 10 school boards that are located in highly and intermediate urbanized areas to participate in the study. Five school boards agreed to participate. From each school board, first year groups were selected from engineering, economics, and health & social care programs at all four SVE degree levels (1: assistant level; 2: basic vocational level; 3: full professional level; 4: specialist level). The groups were selected during the summer break, before individual students were assigned to groups. Measurements took place at three time points in the academic year 2008/9: at the start of the first semester, at the start of the second semester, and at the end of the second semester. Information on students' background and pre-transition engagement was collected at the first measurement occasion, which took place directly at the start of the academic year. At the second measurement, information about students' engagement and performance in the first semester after the transition to SVE was collected. At the third measurement, students reported on their engagement and performance in the second semester. Participation in the study was voluntary for students, but we received no reports that students declined to participate. For a path analysis of the

interplay of engagement and performance over time, a sufficient number of cases with complete data on all three measurements was required. However, selection of students with complete data on all three measurements yielded a restricted sample of 491 students. Therefore, we used the expectation maximization algorithm to impute data for cases with missing values on either the first or second measurement only (SPSS Inc., 2010). The resulting sample included 628 students with complete data, from 55 classes. Basic descriptive statistics of the sample are given in table 1 below. Other than a slight overrepresentation of female students (58%), the sample corresponds to available statistics of vocational education and urban schools in the Netherlands (Dutch Ministry of Education Culture and Science, 2011; Dutch Ministry of Health Welfare and Sport, 2010; Knowledge Centre for Vocational Training and Labour Market, 2010; Kuhry, 1998).

Measures

Data were collected using self-report questionnaires that were completed in a classroom setting under supervision of a teacher. Questionnaire items were inspired by engagement definitions and measures from previous studies (Finn, 1993; Fredricks et al., 2004; Goodenow & Grady, 1993; Voelkl, 1995; Willms, 2003), and were phrased to suit the specific context of SVE and its students. All items consisted of statements to which students responded on a 5-point Likert-type scale (strongly disagree to strongly agree), except for the items on students' background characteristics. We defined emotional engagement in line with the concept of identification with school (Finn, 1989): students' sense of belonging in school (*belonging*: 4 items; α=.90; e.g. *I feel at home at this school*), students' valuing of their education (*valuing*: 6 items; α=.87; e.g. *What I learn in this program is useful for my future career*), and students' attitudes towards education and their role as a student in general (*attitudes*: 7 items, α =.85; e.g. *I think it is important to go to school*). Behavioral engagement was defined in line with the concept of participation in school (Finn, 1989), but as participation in extracurricular activities or student councils is rare in SVE schools, we included measures of behavioral engagement in class-related activities only (*behavioral engagement*: 8 items; α=.76; e.g. *I attend most classes*). Since SVE does not have a standardized testing or grading system, no comparable objective measures of student performance were available. Therefore, we used a self-report measure of performance (*performance*: 4 items; α=.81, e.g. *Compared to my classmates, my performance in school is very poor / poor / average / good / very good*).

We used two retrospective measures of pre-transition engagement: *prior emotional engagement* (3 items, α=.88, e.g. *I felt at home at my previous school*) and *prior behavioral engagement* (6 items, α=.77, e.g. *I used to skip classes often at my previous school* (reversed)). Control variables included students' *sector* and *level* in SVE, as well as their *age*, *gender*, and *ethnicity*. First year students in SVE come

from many different academic routes: most students enroll directly after graduating from pre-vocational education (PVE), but students without a PVE diploma are allowed to enroll in the lowest SVE level. Moreover, a substantial group of the first year students are SVE dropouts who make a new start, or graduates from a lower level program in SVE who continue their education at a higher SVE level. Therefore, to account for students' academic attainment prior to the start in their current SVE program, we included an indicator of their academic route prior to transferring to the current program (*prior education*: PVE with graduation, PVE without graduation, SVE with graduation, SVE without graduation, other).

Analytic plan

Intra-class correlation coefficients (ICC) indicate that small to substantial proportions of the variance of the engagement and performance measures can be attributed to between-class differences, with ICC's ranging from .02 to .13 (Snijders & Bosker, 1999). We accounted for the multilevel structure of the data by using robust maximum likelihood estimation, as implemented in the Mplus software for structural equation modeling ("type=complex", see: Muthén & Muthén, 2010). Our analyses comprised three steps. First, we fitted a model that estimates relationships between post-transition emotional engagement, behavioral engagement, and performance. The variable *emotional engagement* was modeled as a latent variable with three indicators: *belonging*; *valuing*; and *attitudes*. The initial model was based on the participation-identification model (Finn, 1989), but we additionally estimated direct effects of emotional engagement on performance, performance on behavioral engagement, and behavioral engagement on emotional engagement. Next, we added the pre-transition engagement measures *prior emotional engagement* and *prior behavioral engagement*, by modeling direct effects of pre-transition emotional engagement on post-transition emotional engagement, and of pre-transition behavioral engagement on post-transition behavioral engagement. Last, we explored the effects of students' prior education, SVE sector and level, age, gender, and ethnicity.

Table 1:
descriptives of sample of 628 first year students in senior vocational education

Characteristic		%
Age		
	16-17 years	64
	18-19 years	27
	> 19 years	9
Gender		
	Female	58
	Male	42
Ethnic background		
	Native Dutch background	53
	Moroccan background	16
	Turkish background	12
	Surinamese background	8
	Other ethnic background	13
Prior education		
	PVE with diploma	69
	PVE without diploma	11
	SVE with diploma	8
	SVE without diploma	7
	Other	12
SVE sector		
	Economics	27
	Engineering	29
	Health & social care	44
SVE degree level		
	Level 1	10
	Level 2	32
	Level 3	27
	Level 4	32

RESULTS

Table 2 shows the means, standard deviations and ICC's of emotional engagement, behavioral engagement, and performance in the first and second semester of the first year in SVE. We observe little change in the means and standard deviations, but a substantial decrease in ICC's between the first and the second semester. For example, while 13% of the variance of *belonging* can be attributed to between-class differences in the first semester, this proportion has dropped substantially to 2% in the second semester.

Table 2: descriptives of emotional engagement, behavioral engagement, and performance in the first and second semester of the first year in SVE

Variable	M	SD	ICC
First semester			
Emotional engagement:			
Belonging	3.51	.67	.13
Valuing	4.05	.57	.09
Attitudes	3.80	.64	.07
Behavioral engagement	3.87	.49	.04
Performance	3.87	.57	.03
Second semester			
Emotional engagement:			
Belonging	3.49	.73	.02
Valuing	3.98	.67	.02
Attitudes	3.72	.74	.07
Behavioral engagement	3.75	.57	.03
Performance	3.77	.69	.02

Note:
M = mean, on a scale from 1 (very negative) to 5 (very positive)
SD = standard deviation
ICC = intra-class correlation coefficient

Before adding pre-transition engagement measures to the model, we constructed a model with post-transition variables only, to first establish an optimal model describing the interplay of post-transition engagement and performance. Table 3 gives the fit results of the models that we describe here. First, we compared a model without cross effects (Model 1) to a model with cross effects of first semester behavioral engagement on second semester emotional engagement, and of first semester emotional engagement on second semester behavioral engagement (Model 2). These cross effects were not significant, and their inclusion did not improve model fit (X^2 difference = 4.303; df=2; p=.12; see: Satorra & Bentler, 1999). Therefore, we proceeded without cross effects. In Model 1, we found that the observed covariance between emotional engagement and

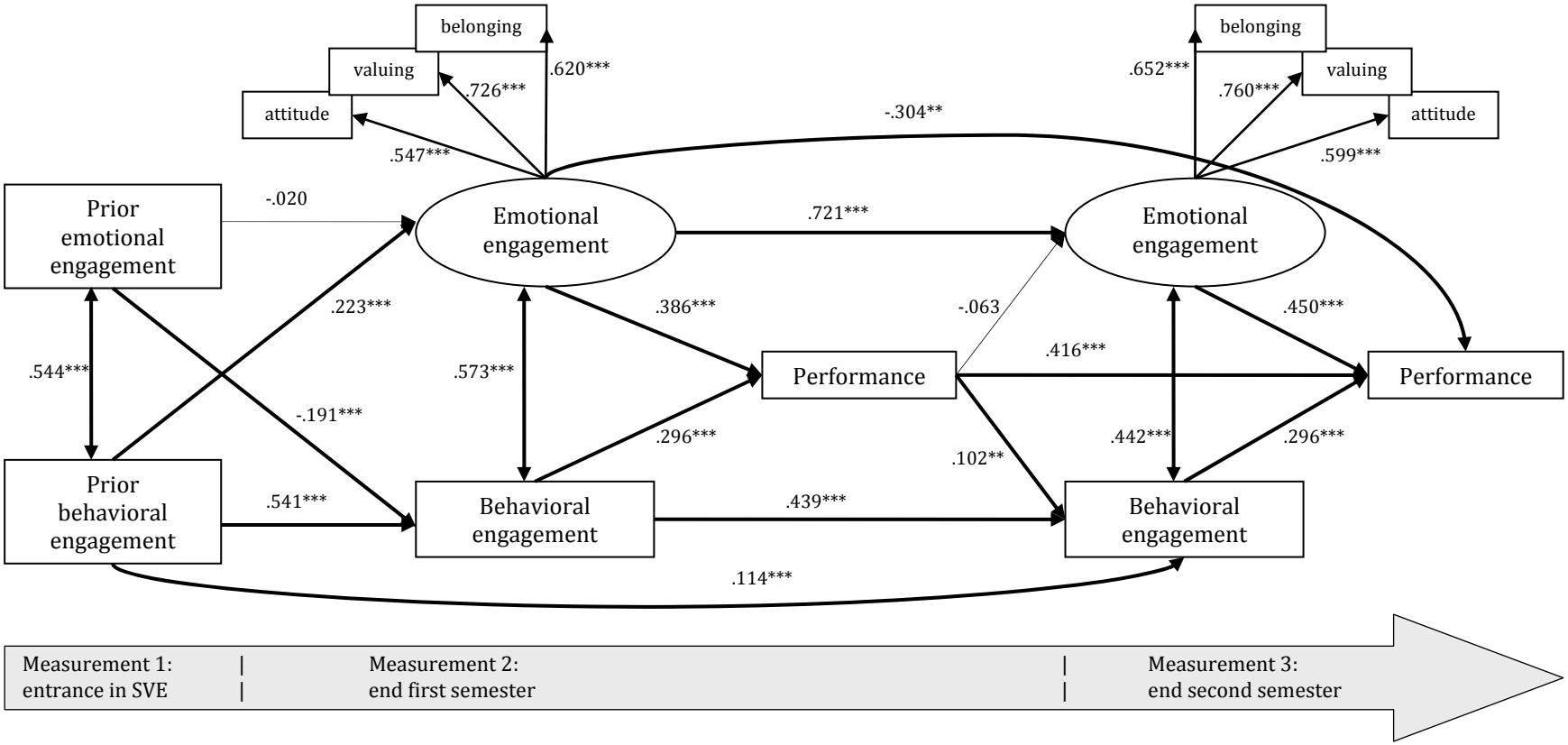
performance was not sufficiently explained by the model parameters. A modification index indicated that inclusion of a direct effect of first semester emotional engagement on second semester performance would improve the model fit significantly. After this modification, the post-transition model was established (Model 3). To this model, we added pre-transition measures of engagement: prior emotional engagement and prior behavioral engagement (Model 4). Modification indices suggested that the fit could be further improved by inclusion of crossed effects of prior emotional engagement on first semester behavioral engagement, and of prior behavioral engagement on first semester emotional engagement (Model 5). Last, we added the background variables *age*, *gender*, *ethnicity*, *SVE sector*, *SVE level*, and *prior education* one by one. However, none of these variables yielded significant effects, so we did not include those in the final model. Figure 1 shows the parameter estimates of the final model, Model 5, which we discuss in the next section.

Table 3: fit results of structural equation models

Model	Description	X^2	df	RMSEA	C.I. of RMSEA
1	no cross effects emotional engagement and behavioral engagement	74.695	25	.056	.042 - .071
2	cross effects emotional engagement and behavioral engagement	72.194	23	.058	.043 - .074
3	direct effect emotional engagement 1st semester on performance 2nd semester	56.577	24	.046	.031 - .062
4	inclusion prior emotional and behavioral engagement without cross effects	123.454	42	.056	.044 - .067
5	inclusion prior emotional and behavioral engagement with cross effects	92.197	39	.047	.034 - .059

Note: n=628; N=55.
X^2 = chi square
df = degrees of freedom
RMSEA = root mean square error of approximation
C.I. of RMSEA = 90% confidence interval of RMSEA

Figure 1: standardized parameter estimates of multilevel path model describing the interplay of engagement and performance across the transition to Dutch senior vocational education



Note: n= 628; N=55; * p<.05; ** p<.01; *** p<.001; X^2= 92.197; df=39; RMSEA = .047. Not shown: residual variances.

DISCUSSION

The importance of emotional engagement for performance in SVE

Emotional engagement was successfully identified as a latent construct consisting of three dimensions. The dimension *attitudes* has a lower factor loading than *belonging* and *valuing*. This is probably due to a difference in context-dependency: *belonging* and *valuing* relate to the particular school and program that students attend, whereas *attitudes* refers to students' orientation towards education in general.

Emotional and behavioral engagement are significantly correlated, but both dimensions of engagement make a unique and substantial contribution to performance in SVE. While the participation-identification model does not include a direct effect of emotional engagement on performance (Finn, 1989), our findings indicate that emotional engagement has a direct effect on performance that is larger than the direct effect of behavioral engagement on performance. The strong direct and indirect effects of emotional engagement on performance even necessitate inclusion of an additional, negative, effect of emotional engagement in the first semester on performance in the second semester, to correct for an overestimation of the total effect. Performance has a mediating role in the relationship between behavioral and emotional engagement. However, other than the participation-identification model suggests, it is not the effect of behavioral engagement on emotional engagement, but the effect of emotional engagement on behavioral engagement that is partially mediated by performance. Other than hypothesized in the participation-identification model, a model with a direct cross effect of emotional engagement on behavioral engagement did not fit our data well. Our results confirm the important influence of behavioral engagement on school performance, but they attest to the direct impact of emotional engagement on school performance in particular.

Interpretation from the perspective of the context and design of this study

We need to consider the nature of the performance measure in our study as well as the specific context of SVE when interpreting the differences between our findings and previous findings about the role of emotional engagement in students' performance. First, as SVE does not employ standardized test scores or grades, we used a self-report measure of performance. Previous studies have shown that self-reported performance is a reliable indicator of students' actual performance (Samdal et al., 1999). Nevertheless, self-report performance measures are subjective, and are therefore more affect-laden than grades or test scores. This may explain why the performance variable in our study is more closely related to the emotional engagement measure (see also: Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Second, the transition to SVE marks a transfer from a more

general vocational curriculum in secondary education to a specific job-oriented program that prepares students for the labor market. This specialization may enhance students' emotional engagement, as the relevance of the curriculum for students' future career becomes more evident. Moreover, this specialization may reinforce the role of emotional engagement as a prerequisite for students' performance in SVE. Students choose to enroll in an SVE program that suits their professional plans and interests. If a student cannot identify with the curriculum, there are more opportunities to opt out and transfer to another program in SVE than in secondary education.

An important next step in our research will be to link the current findings to students' persistence records. The design of the current study required respondents' presence in a program until the third measurement at the end of the second semester. As many students drop out or transfer to another program or school over the course of the first year in SVE, this requirement results in an underrepresentation of students who dropped out before the end of the year. Examining differences between students who persisted and students who quit the program can shed more light on the relationship between engagement and persistence in school.

Continuity and change in engagement across the transition

Our findings underline that a school transition is not an isolated event, but is embedded in the educational life course of students (Elder Jr et al., 2003; Pallas, 2003). In the case of behavioral engagement, our study emphasizes the continuity in engagement across time and contexts. If students were behaviorally engaged in a previous program, they are more likely to be engaged in their new program, emotionally as well as behaviorally. Not only does pre-transition behavioral engagement affect behavioral engagement shortly after the transition, it has an additional direct effect on behavioral engagement at the end of the first year after the transition, net of its effects on earlier post-transition engagement. The transition to a new school or program seems a relatively small step in a continuous trajectory of behavioral engagement. In the case of emotional engagement however, we see a more complex picture. Whereas emotional engagement in the first semester is highly predictive of emotional engagement in the second semester, our findings indicate that emotional engagement in a new context is not related to emotional engagement in a previous context. Hence, in terms of emotional engagement, a transition to a new school environment serves as a fresh new start. However, if students were emotionally engaged in their previous school, the transition to a new school or program is met with a slight drop in behavioral engagement. We did not find an effect of pre-transition attainment to post-transition engagement and performance.

Monitoring and enhancing school engagement

Given the prominent role of emotional engagement in performance, it is recommended that schools monitor and enhance students' emotional engagement. However, whereas behavioral (dis)engagement can be monitored by teachers and parents, for instance by keeping track of students' class attendance, on-task behavior, and homework completion, emotional (dis)engagement is more difficult to detect. Behind a facade of regular participation in school, a process of emotional disengagement may unfold (Janosz et al., 2000). Instead of assuming emotional engagement on the basis of students' behavior in school, it is more helpful to ask students directly whether they feel at home at school, and whether they think that what they learn in school helps them to achieve their goals. If the answer is negative, schools need to discuss with students how their emotional engagement could be enhanced. The high ICC's indicate that students' emotional engagement is more affected by the class environment earlier in the school year. While the decreasing ICC's over time suggest that students' emotions become more independent over the course of the year, emotional engagement earlier in the school year is highly predictive of emotional engagement later in the school year. Once established, students' level of emotional engagement appears to remain highly constant over time as long as they stay in the same environment. However, as our findings indicate that emotional engagement in a new context is not related to emotional engagement in the previous context, a transfer to a different class or program can prevent emotionally disengaged students from losing the connection with school to the point that they drop out of school. Contrary to emotional engagement, behavioral engagement in a previous context does predict students' engagement in a new context. This finding demonstrates that it is important for schools to learn about students' prior school experiences, and to discuss with them ways to continue or redirect their educational pathway in a positive direction. This longitudinal study has a limited time frame of one year, using retrospective measures to assess students' pre-transition experiences. A more extended time frame would yield more insight in the development of engagement and performance across multiple school years and contexts.

Emotional engagement, behavioral engagement and performance interact in a self-reinforcing cycle (Finn, 1989). Our findings indicate that school transitions can be little more than a small hurdle in this cycle, that might slightly frustrate the positive course of school engagement for a while. At the same time, we find that transitions can form a turning point for students who wish to jump over their own shadow and make a fresh new start. Identification of the key moments in students' school careers that allow some students to break out of a spiral of disengagement, while helping others to maintain or re-establish their engagement with school, is crucial to enable all students to keep the wheel spinning in the right direction.

Chapter 6

Veni Vidi Vici? A Multifaceted Perspective on School Dropout in the First Year of Post-Secondary Vocational Education in the Netherlands*

ABSTRACT

School dropout in senior vocational education (SVE) accounts for 75% of all dropout in the Netherlands. Half of all dropout in SVE occurs in the first year. In this study, we use logistic regression analysis to examine multiple sources of influence, from both the home and school environment, on dropout in the first year in SVE. Results indicate that students' personal characteristics and circumstances outside school play a prominent role in predicting dropout in the first semester after the transition to SVE, but not in predicting dropout later in the school year. Positive school experiences, in particular the perceived value of education, as well as students' behavioral engagement and performance affect dropout considerably. High aspirations upon entrance help students to succeed in the first months after the transition, but increase the likelihood of dropping out in the second semester. High expectations appear to backfire on ethnic minority students in particular.

* This chapter is based on:
Elffers, L. & Oort, F.J. *(under review*) – Veni Vidi Vici? A Multifaceted Perspective on School Dropout in the First Year of Post-Secondary Vocational Education in the Netherlands

INTRODUCTION

The dropout problem in the Netherlands

The problem of school dropout confronts many Western economies (Field, Kuczera, & Pont, 2007). High dropout rates involve a loss of skilled workers, earnings and revenues, and greater demands on financial aid and social services (Bridgeland, DiIoliou, & Morison, 2006). For individual students, dropping out of school increases the risk of future unemployment, working in low-wage jobs, and unstable careers (Research Centre for Education and the Labor Market, 2009), and the decision to drop out is often accompanied by frustration and disappointment (Bridgeland et al., 2006). In the Netherlands, the percentage of dropouts, defined as citizens under the age of 25 who are not enrolled in any form of education and who have not obtained the minimal qualification level deemed necessary to enter the labor market, was 16% in the year 2000. In agreement with the economic development agenda of the European Union, Dutch government developed a national dropout prevention program to reduce dropout rates to 8% in 2020 (Dutch Ministry of Education Culture and Science, 2010). 75% Of Dutch school dropout occurs in senior vocational education (Dutch Ministry of Education Culture and Science, 2011a). Senior vocational education (SVE) is the senior continuation of the vocational track in secondary education, and provides specialized vocational programs for students aged 16 years and older. SVE programs take one to four years to complete, but after five years, approximately 25% of SVE students have left the educational system without a diploma (CBS Statistics Netherlands, 2011). Half of all dropout in SVE occurs in the first year (Dutch Ministry of Education Culture and Science, 2011b), suggesting that the transition to SVE is difficult for many students. Dutch government has declared that, in the coming years, the focus of its dropout prevention program will be on SVE (Dutch Ministry of Education Culture and Science, 2010).

Searching for the roots of dropout

The key to effective dropout prevention is to gain better insight in the roots of dropout (Dutch Education Inspectorate, 2009). Dropout statistics demonstrate that students' sociodemographic characteristics are important indicators of the risk to drop out (Dutch Ministry of Education Culture and Science, 2009), but they are not the proximal causes of dropout, nor do they inform us about the mechanisms underlying the risk that they signify (Alexander, Entwisle, & Kabbani, 2001). To reduce the dropout problem, it is necessary to uncover those mechanisms, and to focus on factors that allow for interventions from schools or the government (Wehlage, Rutter, Smith, Lesko, & Fernandez, 1989). However, a narrow focus on the school context bears the risk of overlooking the role of other contexts, such as family and peers, and of individual factors in dropout (Janosz, LeBlanc, Boulerice, &

Tremblay, 2000). It is only by integrating the multiple contexts that frame students' school careers that we are able to understand the complex ecologies shaping the pathway to dropout (Battin-Pearson, Newcomb, Abbott, Hill, Catalano, & Hawkins, 2000; Janosz et al., 2000; Rumberger, 1995; Wehlage et al., 1989). Therefore, in this study, we adopt a multifaceted perspective to examine the determinants of dropout in the first year in SVE. Using logistic regression analysis, we study the influence of students' social and educational background, attitudes upon entrance in SVE, and school experiences and performance in the first year in SVE on dropout.

THEORETICAL FRAMEWORK

Predictors of dropout relating to students' background outside school

Sociodemographic background characteristics are common indicators of the risk for dropout. Dutch dropout statistics indicate that male students, students from ethnic minority backgrounds, students growing up in broken families, students coming from lower socioeconomic communities, and older students are more likely to drop out of school (Dutch Ministry of Education Culture and Science, 2009). A considerable amount of Dutch dropouts can be labelled 'overloaded students', due to an accumulation of problems in their lives outside school that impede their school career (Scientific Council for Government Policy, 2008). Students can be engaged in risk behavior or complex circumstances outside school, such as pregnancy and parenthood, the use of drugs, delinquency, problematic debts, and intensive jobs next to school, which increases the risk to drop out (Dutch Ministry of Education Culture and Science, 2011a; Ekstrom, Goertz, Pollack, & Rock, 1986; Lee & Staff, 2007; Roebuck, French, & Dennis, 2004; ter Bogt, van Lieshout, Doornwaard, & Eijkemans, 2009; Verhagen, van Heijst, Jurrius, Calkoen, & Koot, 2010). While such circumstances are not necessarily associated with social class or family background (Wehlage et al., 1989), those circumstances that have been found to increase the risk for dropout occur more often among students from lower socioeconomic backgrounds (e.g. Lee & Staff, 2007; Singh, Darroch, & Frost, 2001). Although the impact of sociodemographic characteristics on dropout has been demonstrated in several studies (Alexander et al., 2001; Ekstrom et al., 1986), it is likely that the strength of this relationship depends on what other factors are taken into account (Rumberger & Lim, 2008). For instance, various studies suggest that the risk for dropout signified by certain sociodemographic characteristics, such as an ethnic minority background or lower socioeconomic status, traces back to differences in access to supportive resources that assist students in their school careers, such as encouragement and support from family and friends (Alexander, Entwisle, & Bedinger, 1994; Audas & Willms, 2001; Kao & Tienda, 1998; Roderick,

1993). The influence of family and peers as socializing agents in adolescent students' development is widely recognized nowadays (Rumberger, 1995), and various scholars attest to the importance of taking into account these sources of influence when studying the processes leading to students' decision to stay or leave school (Alexander et al., 2001; Janosz et al., 2000).

Predictors of dropout relating to students' experiences inside school

For long, the role of the school as an important sphere of influence in students' school careers has been largely ignored in favor of a focus on students' personal and social attributes (Wehlage & Rutter, 1986). In the 1980's, several scholars called for more attention for the role of students' experiences in the school environment in their educational plans and progress (Eccles & Midgley, 1989; Miller, Leinhardt, & Zigmond, 1988; Wehlage & Rutter, 1986). Two influential theoretical models have been developed in that period, which both revolve around students' perceived fit with the school environment as the primary determinant of their progress and persistence in school. The first, Tinto's model of institutional departure, describes the path towards students' persistence or departure after the transition to post-secondary education (Tinto, 1993). Tinto hypothesized that students' school commitment upon entrance predicts their social and academic integration in the new institutional environment. According to the model, students who manage to integrate into the institutional environment will stay committed, and are therefore more likely to persist in school. The commitment of students who fail to integrate in the new school environment will decrease, and those students will eventually depart. The second model is Finn's participation-identification model (Finn, 1989), which describes how students' active participation in school results in good performance, which in turn leads to positive identification with the school environment, with the value of education, and with their role as a student. Subsequently, positive identification reinforces active participation in the classroom, thus forming a self-reinforcing cycle of behavioral and emotional engagement and performance in school. If students' fail to participate, their performance and identification will drop, drawing the student into a cycle of declining engagement and performance, which eventually culminates in dropout.

Combining the home and school context: a comprehensive model of dropout

The theoretical frameworks of Tinto and Finn have contributed substantially to the appreciation of the importance of students' experiences in school for their decision to stay or leave. However, neither of the models considers the role of social forces outside school, such as the family and peers (Alexander, Bozick, & Entwisle, 2008; Janosz et al., 2000). Several researchers have stressed that combining multiple sources of influence, such as the family, school, community, and peers, in one

model of school dropout is a challenging but essential next step to advance our understanding of the multiple pathways leading to dropout (Alexander et al., 2008; Battin-Pearson et al., 2000; Janosz et al., 2000; Rumberger, 1995). Moreover, dropout should not be perceived of as an event that takes place at one particular point in time, but rather as a process of gradual disengagement from school that may have its roots in earlier school years (Alexander et al., 2001; Finn, 1993). Efforts to identify the proximal predictors that immediately precede the decision to drop out, such as declines in performance, may conceal the many factors that contribute to the dropout process over a longer course (Battin-Pearson et al., 2000; Rumberger & Lim, 2008). Integration of distal and proximal factors from both the home and school context, and examination of their interactions with individual attributes, will yield a more complete picture of the dropout process (Janosz et al., 2000; Rumberger, 1995). In this study, we take a step towards a more comprehensive model in examining the predictors of dropout over the course of the first year in senior vocational education in the Netherlands. Using stepwise logistic regression analyses, we are able to assess the role of (1) students' background characteristics outside school, including their access to supportive resources from family, peers and the community, (2) students' educational experiences and attainment prior to the transition to SVE, (3) students' expectations, aspirations and attitudes upon entrance in SVE, (4) students' experiences with their school and program in SVE, and (5) students' behavior and performance in SVE. Due to the diverse student population and the frequent occurrence of dropout, the context of the first year in SVE provides an excellent opportunity to examine the multiple sources of dropout.

METHODS

Participants and data

The data used in this study come from a longitudinal research project in which a cohort of students is followed from the moment of entrance in SVE until the start of the second year. Students completed self-report questionnaires under supervision of a classroom teacher. Questionnaires were filled in at three moments: directly upon entrance in SVE, at the end of the first semester, and at the end of the second semester. Schools reported on students' enrollment status after each measurement occasion. To obtain a sociodemographically diverse sample, out of the total of 40 regional SVE school boards in the Netherlands, 10 school boards that are located in highly and intermediate urban areas were invited for participation in the study, of which 5 school boards agreed to participate. From each school board, first year groups were selected from engineering, economics, and health & social care programs at all four SVE degree levels (1: assistant level, 2:

basic vocational level, 3: full professional level, 4: specialist level). The groups were selected during the summer break, before individual students were assigned to the groups. Participation in the study was voluntary for all students, but we received no reports of students not willing to participate. For this study, we selected all students who were present at the first measurement, and who were either present on the subsequent measurement occasions and/or of whom information was available on their enrollment status. The resulting sample consisted of 1377 students at the first measurement, 832 students at the second measurement, and 456 students at the third measurement. Table 1 shows the descriptives of the sample. These descriptives correspond to available statistics of vocational education and urban schools in the Netherlands (Dutch Ministry of Education Culture and Science, 2011b; Dutch Ministry of Health Welfare and Sport, 2010; Knowledge Centre for Vocational Training and Labour Market, 2010; Kuhry, 1998; Scientific Council for Government Policy, 2008), indicating that our sample is representative of the SVE population in urban schools.

Outcome variables

After the second and third measurement, we checked which students from the initial sample did not complete a questionnaire a second or third time. Schools were asked to report on the enrollment status of those students. First, schools were asked to indicate if the student was still enrolled in the program. If so, students received the code 'no dropout'. If students were not enrolled in the program anymore, schools were asked to report on the exit status of the student as documented in the school administration. Several students in level 1 degree programs, which take 6 to 12 months to complete, graduated within the year of data collection. Graduation was also coded as 'no dropout'. In 11 cases, there were special medical or practical reasons for discontinuation of the program, such as hospitalization or migration. Those special cases were excluded from the study. In 68 cases, the school was not able to report on a student's enrollment status. Those cases were excluded from the sample as well. Last, we asked the schools to report on the enrollment status after the summer break, at the start of the second year, of all students who persisted until the end of the first year in SVE. Thus, we have three assessments of dropout in the first year in SVE: *1st semester dropout*, *2nd semester dropout*, and *summer break dropout*, enabling the assessment of dropout early and later in the school year. Table 2 shows the sample size and the success and dropout percentages for each assessment. In total, 19% of the initial group of 1377 students dropped out over the course of the first year in SVE.

Table 1: descriptives of sample of 1377 SVE students

Variable	%
School board	
School board 1	11
School board 2	17
School board 3	21
School board 4	20
School board 5	31
Sector	
Economics	34
Engineering	29
Health & social care	37
Level degree program	
Level 1	13
Level 2	33
Level 3	23
Level 4	31
Age	
Age 16-17	58
Age 18-19	30
Age 20 and older	12
Gender	
Male	46
Female	54
Ethnicity	
Native Dutch background	52
Ethnic minority background	48
Household	
Living with 2 parents	65
Living with 1 parent	25
Living with other persons	7
Living alone	3
Job status parents	
Both parents work	49
One parent works	22
Parents both unemployed	14
Job status parents unknown	15
Parental education level	
Parents' education ≤ secondary school	21
Parents' education SVE	21
Parents' education HE	19
Parents' education unknown	40
Difficult financial circumstances family	18
Pregnancy and/or parenthood	3
Debts	8
Police contacts	16
Drugs	10
Extra job	58
Prior education	
PVE with diploma	63
PVE without diploma	5
SVE with diploma	10
SVE without diploma	9
Other prior education	13

Table 2: respondents and dropout in the first year in SVE

	Measurement 1: start 1st semester	Measurement 2: start 2nd semester	Measurement 3: end 2nd semester
Respondents			
Number of students	1437	846 [a]	461 [b]
Number of students with unknown enrollment status	55	10	3
Number of special dropout cases	5	4	2
Number of students included in the analyses	1377	832	456
Dropout	Dropout 1st semester	Dropout 2nd semester	Dropout summer break
Percentage of students who stayed	91%	83%	80%
Percentage of students who graduated	0%	5%	11%
Percentage of students who dropped out, per measurement	9%	12%	9%
Cumulative percentage dropout throughout the academic year	9%	16%	19%

Note:
[a] students who were present at measurement 1 and 2
[b] students who were present at measurement 1, 2 and 3

Predictor variables

We distinguished 7 sets of predictor variables. The first predictor set comprises students' personal background, and consists of students' sociodemographic characteristics (age, gender, ethnic identity, household composition, job status parents, highest educational level parents, financial status of the family), personal circumstances and behaviors outside school that are associated with an increased risk for dropout (pregnancy/parenthood, personal debts, drugs, police contacts, extra job outside school), and students' access to supportive resources: the amount of encouragement and support regarding their school careers that students receive from their parents (*support parents:* 5 items; α=.67; e.g. *I can talk to my parents/guardians about my school experiences*), from peers (*support peers*: 4 items; α=.68; e.g. *My friends and I talk about school matters*), and from their community in general (*support community:* 2 items; α=.73; e.g. *Outside school, there are enough people with whom I can discuss school matters*). All student characteristics were measured on the first measurement occasion. Characteristics that could change over the course of the school year, such as household composition or pregnancy/parenthood, were measured at each measurement occasion. In those cases, the measure that precedes a dropout measure most directly was used for analysis.

The second predictor set consists of measures of students' prior school experiences and attainment: *prior emotional engagement* (e.g. *I felt at home at my previous school*, 3 items, α=.88), *prior behavioral engagement* (e.g. *I worked hard at my previous school*, 6 items, α=.77), and students' prior educational attainment (*pre-vocational education with diploma*; *pre-vocational education without diploma; SVE with diploma; SVE without diploma; other*).

The third predictor set consists of measures of students' attitudes towards their new school and education at the moment of entrance. Two measures assessed students' expected fit with their new educational environment: *expected institutional fit* (e.g. *I think I will feel at home at this school*, 3 items, α=.87), and *expected academic fit* (e.g. *I think this degree program suits me well*, 7 items, α=.80). The variable *educational aspirations* (e.g. *I really wish to graduate from this degree program*, 3 items, α=.74) reflects students' academic ambitions, and *general educational attitudes* (e.g. *I think it is important to go to school*, 7 items, α=.80) refers to students' general perception of education as a means to pursue their career goals.

The fourth predictor set comprises measures of students' emotional engagement in the first semester in SVE. This includes a replication of the variable *general educational attitudes* (e.g. *I think it is important to go to school*, 7 items, α=.80) to measure students' identification with education now that they go to school in SVE, and two measures referring to students' identification with the particular SVE environment: students' sense of belonging in their particular school (*sense of*

belonging: 4 items, α=.90, e.g. *I feel at home at this school*), and students' valuing of their particular program (*valuing*: 6 items, α=.87, e.g. *What I learn in this degree program is useful for my future career*).
The fifth predictor set consists of students' *behavioral engagement* (8 items; α=.76; e.g. *I attend most classes*), and *performance* (4 items; α=.81; e.g. *Compared to my classmates, my performance in school is very poor / poor / average / good / very good*) in the first semester in SVE.
The variables from sets 4 and 5 were measured again at the end of the second semester (set 6: emotional engagement in the second semester; set 7: behavioral engagement and performance in the second semester). As control variables, we included indicators of students' *regional school board* (numbered 1 to 5), *SVE sector* (engineering, economics, and health & social care), and *program degree level* (level 1 to 4).

Statistical analysis
We performed three series of logistic regression analyses: one for each dropout assessment. To account for possible differences between groups of students, we included the variables *regional school board*, *SVE sector*, and *program degree level* in all models. To explain *1st semester dropout*, we used data from the first measurement occasion in the first week in SVE. This means that predictor sets 1 to 3 were included in the models only, as students did not yet have any experiences in SVE to report. For the explanation of *2nd semester dropout*, we added predictor sets 4 and 5, referring to students' experiences in SVE in the first semester. For the explanation of *summer break dropout,* we added predictor sets 6 and 7, referring to students' experiences in SVE in the second semester. In all three series of analyses, we added the predictor sets one by one to the model. At every step, we used the stepwise forward likelihood ratio algorithm to select the predictors that contribute significantly to the classification of dropout cases (SPSS Inc., 2010). As an additional check, we performed a backwards procedure to verify the predictor selection. In addition, we explored the effects of interactions of age, gender, and ethnicity with all predictor variables, by testing whether these interaction effects were selected in a forward predictor selection procedure.

RESULTS
Table 3 gives an overview of bivariate correlations of all predictor variables with the three dropout variables. We find that characteristics of students' social and educational background, as well as students' attitudes upon entrance in SVE, are stronger correlated with dropout in the 1st semester than with dropout later in the academic year. Students' school experiences in SVE are stronger correlated with dropout in the summer break after the first year, than with dropout before the end of the first year.

Table 3: bivariate correlations of predictor variables with dropout

	Dropout 1st semester	Dropout 2nd semester	Dropout summer break
Control variables			
School board 1	.012	-.044	-.021
School board 2	-.004	-.046	.088
School board 3	**.149*** **	.103	.042
School board 4	-.008	**-.079***	-.013
School board 5	**-.130*** **	**-.093****	-.087
Economics	**.061***	.011	-.063
Engineering	.029	.055	**.159*** **
Health & social care	**-.088*** **	-.063	-.088
Level 1	.038	**.120*** **	**.170*** **
Level 2	**.063***	-.036	-.078
Level 3	**-.071****	-.058	-.015
Level 4	-.028	.002	-.018
Predictor set 1: personal background			
Year of birth	**-.131*** **	-.037	-.017
Male gender	**.091*** **	.052	**.162*** **
Ethnic minority background	**.128*** **	**.076***	**.101***
Living with 2 parents	**-.153*** **	**-.076***	**-.103***
Living with 1 parent	.038	.047	.051
Living with other persons	**.103*** **	.058	**.092***
Living alone	**.172*** **	.007	.009
Both parents work	**-.057***	-.056	-.019
One parent works	.000	.002	-.027
Parents both unemployed	.030	.028	.037
Job status parents unknown	.051	.049	.022
Parents' education ≤ secondary school	.005	-.013	.000
Parents' education SVE	.009	-.014	-.072
Parents' education HE	-.024	-.024	.018
Parents' education unknown	.008	.041	.042
Difficult financial circumstances family	.029	.047	.045
Pregnancy and/or parenthood	**.087*** **	.030	-.016
Debts	**.189*** **	**.117*** **	.025
Police contacts	**.101*** **	**.077***	.091
Drugs	**.083****	.052	.068
Extra job	**-.057***	-.039	-.057
Parental support	**-.159*** **	-.053	-.041
Peer support	**-.121*** **	-.022	-.069
Community support	**-.089*** **	-.028	-.013
Predictor set 2: educational background			
Prior emotional engagement	-.037	-.057	-.005
Prior behavioral engagement	**-.085****	**-.072***	.000
PVE with diploma	**-.113*** **	**-.097****	-.024
PVE without diploma	**.096*** **	.020	.090
SVE with diploma	.004	.009	.047
SVE without diploma	**.104*** **	**.081***	-.050
Other prior education	.007	.050	-.012

(table 3 continues on next page)

(table 3 continued)

Predictor set 3: attitudes upon entrance			
Expected emotional fit	**-.076****	-.020	-.011
Expected academic fit	**-.097****	-.059	.001
Aspirations at start	**-.100*****	.047	-.043
Attitudes at start	-.032	-.035	-.015
Predictor set 4: school experiences 1st semester			
Emotional engagement – sense of belonging		**-.096****	-.033
Emotional engagement – valuing		**-.173*****	-.054
Emotional engagement – educational attitudes		**-.082***	-.015
Predictor set 5: behavior and performance 1st semester			
Behavioral engagement		**-.195*****	-.072
Performance		**-.244*****	**-.142****
Predictor set 6: school experiences 2nd semester			
Emotional engagement – sense of belonging			**-.195*****
Emotional engagement – valuing			**-.266*****
Emotional engagement – educational attitudes			**-.138****
Predictor set 7: behavior and performance 2nd semester			
Behavioral engagement			**-.266*****
Performance			**-.265*****

Note: * p<.05, ** p<.01, *** p<.001.

Table 4: predictors of dropout in first semester after the transition to SVE

	Model 1		Model 2		Model 3	
	odds ratio	95% C.I.	odds ratio	95% C.I.	odds ratio	95% C.I.
Constant	*.017****		*.020****		*.015****	
Control variables						
School board *(vs. school board 5)*						
School board 1	**3.526****	1.571 – 7.913	**3.076****	1.376 – 6.879	**3.604****	1.586 – 8.193
School board 2	1.488	.698 – 3.173	1.599	.747 – 3.424	1.562	.720 – 3.389
School board 3	**3.593*****	1.825 – 7.074	**3.672*****	1.876 – 7.188	**3.775*****	1.887 – 7.553
School board 4	.997	.462 – 2.150	1.012	.469 – 2.184	1.001	.456 – 2.200
Sector *(vs. health & social care)*						
Economics	.992	.550 - 1.787	1.036	.575 – 1.865	1.023	.564 – 1.858
Engineering	.952	.465 – 1.949	.935	.456 – 1.919	.906	.436 – 1.883
Level *(vs. level 4)*						
Level 1	.815	.426 – 1.556	.640	.318 – 1.288	.645	.317 – 1.312
Level 2	1.207	.731 – 1.994	1.160	.696 – 1.933	1.210	.724 – 2.021
Level 3	.584	.300 – 1.140	.608	.312 – 1.184	.600	.305 – 1.179
Personal background						
Male *(vs. female)*	**1.910***	1.099 – 3.321	**1.918***	1.105 – 3.332	**1.753***	1.003 – 3.065
Ethnic minority *(vs. native Dutch)*	**1.921****	1.181 – 3.126			**2.061****	1.252 – 3.392
Student has debts *(vs. no debts)*	**2.620*****	1.513 – 4.534	**2.233****	1.267 – 3.938	**2.595*****	1.477 – 4.558
Student uses drugs *(vs. no drugs)*	**2.138****	1.200 – 3.811			**2.274****	1.259 – 4.105
Living alone *(vs. living with 2 parents)*	**4.311*****	2.059 – 9.022	**5.045*****	2.278 – 11.172	**4.887*****	2.282 – 10.464
Living with other persons *(vs. living with 2 parents)*	**2.494****	1.325 – 4.692	**3.090*****	1.583 – 6.030	**2.423****	1.271 – 4.619
Living with 1 parent *(vs. living with 2 parents)*			**1.707***	1.060 – 2.750		
Support parents			**.801***	.645 – .995		
Support peers	**.726*****	.598 – .880	**.759****	.617 – .934	**.754****	.617 - .922
Educational background						
PVE without diploma *(vs. PVE with diploma)* [a]			**2.555***	1.233 – 5.291	**2.660****	1.265 – 5.594
SVE without diploma *(vs. PVE with diploma)* [a]			**1.851***	1.032 – 3.319		
Attitudes upon entrance						
Aspirations					**.677*****	.561 - .817
Model statistics	R^2 (H&L) = .16 R^2 (C&S) = .09 R^2 (N) = .20 X^2 = 130.826*** (df 16)		R^2 (H&L) = .17 R^2 (C&S) = .10 R^2 (N) = .21 X^2 = 137.269*** (df 18)		R^2 (H&L) = .19 R^2 (C&S) = .10 R^2 (N) = .23 X^2 = 151.716*** (df 18)	

Note: n=1377, * p<.05, ** p<.01, *** p<.001. Stepwise forward procedure, criterion for variable entry: p<.05, criterion for variable removal p>.10, based on likelihood ratio.

[a] PVE = pre-vocational education, SVE = senior vocational education. C.I.: confidence interval; R^2 (H&L): Hosmer & Lemeshow test; R^2 (C&S): Cox & Schnell's R^2; R^2 (N): Nagelkerke's R^2.

Table 5: predictors of dropout in second semester after the transition to SVE

	Model 1, 2 and 3 [a]		**Model 4**		**Model 5**	
	odds ratio	95% C.I.	odds ratio	95% C.I.	odds ratio	95% C.I.
Constant	*.081****		*.068****		*.060****	
Control variables						
School board *(vs. school board 5)*						
School board 1	.956	.343 – 2.665	1.118	.388 – 3.227	1.384	.485 – 3.955
School board 2	.975	.460 – 2.067	1.069	.501 – 2.284	.889	.409 – 1.931
School board 3	**2.175***	1.169 – 4.049	**1.935***	1.023 – 3.661	**1.927***	1.006 – 3.690
School board 4	**2.383****	1.244 – 4.566	**2.328***	1.198 – 4.526	**2.113***	1.067 – 4.183
Sector *(vs. health & social care)*						
Economics	1.061	.602 – 1.869	1.059	.593 – 1.890	1.076	.594 – 1.951
Engineering	1.250	.720 – 2.172	1.542	.869 – 2.736	1.269	.708 – 2.273
Level *(vs. level 4)*						
Level 1	1.758	.947 – 3.264	1.686	.892 – 3.186	**2.204***	1.143 – 4.252
Level 2	.757	.430 – 1.333	.720	.401 – 1.292	.910	.502 – 1.649
Level 3	.600	.308 – 1.167	.653	.331 – 1.288	.849	.421 – 1.710
Personal background						
Student has debts *(vs. no debts)*	**2.096***	1.127 – 3.900	**2.216***	1.167 – 4.207		
Educational background (n/a) [b]						
Attitudes upon entrance						
Aspirations			**1.284***	1.010 – 1.632	**1.367***	1.068 – 1.750
School experiences 1st semester						
Emotional engagement: valuing			**.602*****	.491 - .737		
Behavior & performance 1st semester						
Behavioral engagement					**.753***	.580 - .977
Performance					**.510*****	.389 - .669
Model statistics	R^2 (H&L) = .06 R^2 (C&S) = .04 R^2 (N) = .08 X^2 = 35.331*** (df 10)		R^2 (H&L) = .10 R^2 (C&S) = .07 R^2 (N) = .14 X^2 = 60.477*** (df 12)		R^2 (H&L) = .14 R^2 (C&S) = .10 R^2 (N) = .19 X^2 = 84.670*** (df 12)	

Note: n=832, * p<.05, ** p<.01, *** p<.001.
Stepwise forward procedure, criterion for variable entry: p<.05, criterion for variable removal p>.10, based on likelihood ratio.
[a] Model 1,2 and 3 did not yield different results, and are therefore presented in one column
[b] n/a: no variables from this predictor group were selected in the models.
C.I.: confidence interval; R^2 (H&L): Hosmer & Lemeshow test; R^2 (C&S): Cox & Schnell's R^2; R^2 (N): Nagelkerke's R^2.

Table 6: predictors of dropout over summer after the first year in SVE

	Model 1, 2, 3, and 4 [a]		**Model 5**		**Model 6**		**Model 7**	
	odds ratio	95% C.I.	odds ratio	95% C.I.	odds ratio	95% C.I.	odds ratio	95% C.I.
Constant	*.032****		*.025****		*.027****		*.016****	
Control variables								
School board *(vs. school board 5)*								
School board 1	1.804	.440 – 7.389	2.396	.578 – 9.937	1.526	.323 – 7.210	1.563	.323 – 7.557
School board 2	2.427	.875 – 6.732	1.946	.696 – 5.446	2.090	.728 – 6.003	1.940	.629 – 5.985
School board 3	1.843	.713 – 4.765	1.886	.723 – 4.922	1.652	.626 – 4.364	1.545	.542 – 4.407
School board 4	1.292	.403 – 4.136	1.122	.342 – 3.678	1.062	.307 – 3.674	.864	.246 – 3.029
Sector *(vs. health & social care)*								
Economics	1.041	.395 – 2.748	.965	.361 – 2.582	.963	.343 – 2.709	1.205	.408 – 3.558
Engineering	**2.585***	1.159 – 5.765	**2.708***	1.174 – 6.244	**2.778***	1.184 – 6.518	**3.297****	1.324 – 8.208
Level *(vs. level 4)*								
Level 1	**3.251***	1.227 – 8.619	**3.825****	1.409 – 10.380	**3.776***	1.345 – 10.601	**3.982***	1.331– 11.913
Level 2	1.068	.406 – 2.808	1.126	.421 – 3.011	1.040	.374 – 2.892	1.109	.372 – 3.304
Level 3	1.372	.511 – 3.679	1.662	.609 – 4.531	1.634	.575 – 4.641	1.733	.579 – 5.181
Personal background								
Living with other persons *(vs. 2 parents)*			**3.266***	1.208 – 8.831			**4.149****	1.411– 12.195
Educational background (n/a)[b]								
Attitudes upon entrance								
Expected academic fit							**1.660***	1.087 – 2.537
School experiences 1st semester (n/a)[b]								
Behavior & performance 1st semester								
Performance			**.583****	.412 - .825				
School experiences 2nd semester								
Emotional engagement: valuing					**.442*****	.318 - .614	**.529*****	.358 - .781
Behavior & performance 2nd semester								
Behavioral engagement							**.633***	.400 – 1.001
Performance							**.602***	.374 - .971
Model statistics	R^2 (H&L) = .08 R^2 (C&S) = .05 R^2 (N) = .10 X^2 = 22.247** (df 9)		R^2 (H&L) = .13 R^2 (C&S) = .07 R^2 (N) = .16 X^2=35.085***(df 11)		R^2 (H&L) = .18 R^2 (C&S) = .10 R^2 (N) = .23 X^2 = 49.645*** (df 10)		R^2 (H&L) = .27 R^2 (C&S) = .15 R^2 (N) = .33 X^2 = 74.292*** (df 14)	

Note: n=456, * p<.05, ** p<.01, *** p<.001. Stepwise forward procedure, criterion for variable entry: p<.05, criterion for variable removal p>.10, based on likelihood ratio.

[a] Model 1,2, 3 and 4 did not yield different results, and are therefore presented in one column

[b] n/a: no variables from this predictor group were selected in the models.

C.I.: confidence interval; R^2 (H&L): Hosmer & Lemeshow test; R^2 (C&S): Cox & Schnell's R^2; R^2 (N): Nagelkerke's R^2.

Dropout in the first semester

Table 4 shows the results of the logistic regression analyses of dropout in the first semester in SVE. Overall, the dropout odds in the first semester after the transition to SVE are 0.10. The odds are higher for male students, for students from ethnic minority groups, for students who do not live with both of their parents, for students who use drugs or have debts, and for students who did not graduate from their previous school or program. Support from parents and peers lowers the odds, as do high aspirations at the start of the program. In Model 2, an ethnic minority background and the use of drugs do not affect dropout significantly. The significant effects of *support parents*, *living with one parent* and *SVE without diploma* disappear as soon as *aspirations* are taken into account in Model 3. The odds ratios differ substantially between school boards. Forward and backward selection procedures yielded similar results. Analyses of interaction effects showed a differential effect of *living alone* for male and female students. For male students, the odds ratio is 0.040 ($p<.001$), for female students it is 21.669 ($p<.001$). In addition, we find a differential effect of *living with other persons* between native Dutch students (odds ratio = 9.895, $p<.001$) and ethnic minority students (odds ratio = 0.204, $p<.05$).

Dropout in the second semester

Table 5 shows the logistic regression models for dropout in the second semester in SVE. The overall dropout odds in the second semester of the first year in SVE are 0.13. We find that, apart from an effect of debts in models 1 to 4, personal and educational background characteristics do not predict dropout in the second semester. The effect of debts disappears when *behavioral engagement* and *performance* are taken into account. Positive emotional and behavioral engagement and performance decrease the dropout odds ratio, but the effect of *emotional engagement* disappears when *behavioral engagement* and *performance* are included in Model 5. With indicators of students' experiences, behavior and performance in school included, we see that higher aspirations increase dropout odds in the second semester, which is opposite to the decrease in odds ratio by *aspirations* in the first semester. This conversion from a positive to a negative correlation is also found in the zero order correlations of aspirations with dropout in Table 3. In Model 5, which includes measures of students' behavior and performance, we find that the odds to drop out are higher for students in level 1 degree programs. As with first semester dropout, odds ratios in the second semester differ between school boards. A backwards predictor selection procedure yields a similar set of predictors as the forward procedure. However, in a backward procedure, *debts* and *valuing* are retained in Model 5, and *behavioral engagement* is not, indicating that both *debts* and *valuing* are correlated with *behavioral engagement*. Examination of interaction effects indicates a differential

effect of *general educational attitudes* upon entrance between native Dutch students (odds ratio = 1.357, n.s.) and ethnic minority students (odds ratio = 0.496, p<.01). With this interaction effect included, the predictor selection in Model 5 resembles the selection in a backwards selected model: *behavioral engagement* is not selected, while *debts* and *valuing* are preserved as significant predictors of dropout in the model.

Dropout over the summer break

Table 6 shows the results of the logistic regression analysis of dropout over the summer break between the first and second year in SVE. The overall odds to drop out over the summer break are 0.10. None of the variables in Models 1 to 4 predict dropout over the summer break. Nor students' personal and educational background, nor their attitudes upon entrance, nor their experiences in the first semester predict dropout over the summer break, except for students' living situation. Students who live with other people than their family are more likely to drop out. In Model 7, which includes measures of students' engagement and performance in the second semester, we find that high expectations of the academic fit with the SVE program at the start of the academic year increase the odds to drop out over the summer break. Students' *valuing* of their education lowers the odds to drop out, as do students' *behavioral engagement* and *performance*. Students in *level 1* and *engineering* programs are less likely to return to the same program after the summer break. A backwards selection procedure with all seven predictor sets yielded a slightly different predictor selection than a forward selection procedure. *General educational attitudes* in the first semester is included (odds ratio = 1.516, p<.05), and performance in the first semester (odds ratio = 0.618, p<.05) is selected instead of performance in the second semester, indicating a correlation between those predictors. Two interaction effects were found with respect to students' ethnic background. The odds ratio of *valuing* in the second semester for ethnic minority students is 3.168 (p<.05), while for native Dutch students the odds ratio is 0.211 (p<.001). Selection of this interaction effect yields an additional main effect of *ethnic minority* (odds ratio = 3.445, p<.05). A similar differential pattern is found for the interaction between *expected academic fit* and *ethnicity*: the odds ratio for ethnic minority students is 4.712 (p<.01), while for native Dutch students it is 0.509 (n.s.). As a consequence of the selection of this interaction effect, the main effect of *expected academic fit* disappears, and *SVE without diploma* is additionally selected (odds ratio = 3.491, p<.05).

DISCUSSION

Predictors of dropout relating to students' background outside school

Student background characteristics play a prominent role in predicting dropout in the first semester after the transition to SVE, but not in predicting dropout later in the school year. These results are in line with earlier findings that students from disadvantaged backgrounds encounter particular difficulty in making a school transition (Roderick, 1993). The explanation that limited access to supportive resources among disadvantaged students accounts for this difficulty (Roderick, 1993) seems to be confirmed with respect to ethnic minority students in our study. Ethnic minority students have an increased risk to drop out in the first semester, but in a model that includes a measure of the support that students receive from their parents, the effect of an ethnic minority background on dropout is not significant. A difference in the amount of parental support seems a logical explanation for the prominent influence of students' living situation, and in particular for the impact of not living with one or both parent(s), on dropout. However, inclusion of parental support does not decrease the impact of students' living situation on dropout. Next to the support from parents, peers are an important supportive resource for students in SVE, reflecting the growing importance of the peer group in late adolescence (Cotterell, 2007). Having debts affects dropout substantially in both the first and second semester. The negative effect of debts on students' school careers cannot be explained by the necessity to work many hours to pay off debts, as an extra job outside school does not affect dropout. Instead, students with debts appear to participate less in SVE, as the effect of debts on dropout declines once students' behavioral engagement is taken into account. The proportion of Dutch adolescents who have gotten into debts, as well as the amount of those debts, have increased in the past decades (Verhagen et al., 2010). High debts place a heavy burden on students, in both practical and emotional terms. It is likely that debts signify problematic personal circumstances in general, which undermine students' ability to focus on their school career. In fact, this can be said of most background characteristics that affect dropout in the first semester. The use of drugs, having debts, not living with parents, and a less school-oriented peer group point towards personal circumstances that may lead students' focus away from school (Scientific Council for Government Policy, 2008).

Predictors of dropout relating to students' experiences inside school

Students who enter SVE after dropping out from a previous school or program, are more likely to drop out shortly after starting in SVE. Prior dropout may indicate that students are less well equipped to succeed in school. Moreover, prior dropout implies that students have been out of school for a while, which can make it hard to get back into the daily rhythm of school life. It is not surprising that behavioral

engagement and performance have a strong impact on dropout in SVE, as deteriorating participation and performance are unmistakable signs of a process of progressive disengagement from school (Finn, 1989). Emotional engagement in school affects drop out as well. If a student values what she learns in school, she is more likely to persist. In the case of dropout over the summer break, students decide to withdraw eventhough they made it through the first year. The perceived value of the program for students' personal career goals has particular weight in that decision, but only in the case of native Dutch students. The effect of *valuing* on the likelihood to persist or to drop out is absent for ethnic minority students. Maybe ethnic minority students are less critical of their school experiences, which prevents them from taking corrective action if the SVE program does not match their abilities and interests (cf. Alexander et al., 1994). Ethnic minority students are less likely to drop out if they think education is important, as is indicated by their general educational attitudes upon entrance. Hence, it could also be that ethnic minority students are particularly inclined to persist, even if they turn out to dislike their SVE program.

High aspirations upon entrance in SVE decrease the odds to drop out in the first semester, but increase the odds to drop out in the second semester. Apparently, once students' experiences in SVE are taken into account, high aspirations have opposite effects. We find a similar effect of ethnic minority students' expectations that the SVE program, and the vocational sector for which the program prepares them, fits their interests and abilities. High expectations of an academic fit decrease the odds to drop out for native Dutch students, but increase dropout odds among ethnic minority students over the summer break. A gap between the expectations and attainment of ethnic minority students has been identified in several studies (e.g. Alexander et al., 1994; Downey, Ainsworth, & Qian, 2009). However, in this study, we do not find a weakened, but a negative relationship between expectations and attainment among ethnic minority students. Apparently, SVE experiences do not meet the high expectations of ethnic minority students, suggesting that many ethnic minority students have to contend with feelings of disappointment in SVE. Our findings call for further research into the educational aspirations, experiences and strategies of ethnic minority students.

Veni vidi vici

The findings in this study attest to the importance of integrating multiple sources of influence into a comprehensive model to explain the dropout process. Both family, peers, and the school context play a role in predicting dropout in SVE. Starting with a large set of predictors, the stepwise predictor selection procedure enabled us to obtain a parsimonious dropout model that includes the most prominent predictors of dropout from both the home and school context. Some of these aspects allow for interventions better than others. If students deal with

problematic personal circumstances outside school that demand their time and attention, it is difficult for a school to intervene. Individual problems, such as drugs and debts, may be symptoms of a larger, underlying problem. Yet, as debts stand out as a significant predictor of dropout, programs that teach adolescents to spend their money more sensibly could be helpful.

The gap between students' initial aspirations and expectations and their eventual attainment in the first year in SVE indicates that students need more help to transform their ambitions into concrete career steps. Students with restricted access to supportive resources and to knowledge of the educational system and career options, may benefit from such assistance in particular. Schools can help students to choose an SVE program that suits their interests and abilities best, and to adjust their plans and strategies to their experiences and progress in SVE. Moreover, pre-vocational schools that prepare students for the transition to SVE, parents, peers, and mentors can support students more extensively in their career planning. In addition to present mentoring programs that encourage students to establish long-term career goals, students could benefit from better guidance with respect to short-term options and choices in their school careers. Peer tutors, such as senior SVE students, can be especially helpful in this respect, given their experience in SVE, and given the responsiveness to peer support that SVE students display in our study. If we enable students to transfer to SVE with positive, yet realistic, prospects, this can make the pathway to and through SVE for all students a true *veni vidi vici*.

Summary and discussion

School dropout in the Netherlands peaks in the first year after the transition to senior vocational education (SVE). As the senior continuation of the vocational track in Dutch secondary education, SVE provides specialized vocational training to students aged 16 years and older. Half of all dropout in SVE occurs in the first year, indicating that the transition to SVE is difficult for many students. To enhance the school careers of SVE students, we need to find out what particular factors interfere with their school success after the transition to SVE. As there are multiple pathways that lead to dropout, several sources of influence, from both inside and outside the school, need to be considered. Yet, to facilitate dropout prevention, we need to identify factors that are malleable through school-based interventions in particular.

In this dissertation, I take a step-by-step approach to uncover distal and proximal processes that may contribute to student persistence or dropout after the transition to SVE. Following a cohort of 1438 students from the moment of entrance in SVE until the start of the second year, I examine students' entrance, experiences, and attainment in the first year in SVE. Various statistical techniques, including multilevel linear regression analysis, logistic regression analysis and structural equation modeling, are used to describe the various processes that constitute students' pathway to and through the first year in SVE. The dissertation comprises six consecutive studies, clustered in three parts. Part I concerns students' entrance in SVE. In Chapter 1, students' social and educational background upon the transition to SVE is studied, by looking at students' access to supportive resources in their home environment, as well as their school experiences prior to the transition to SVE. In Chapter 2, I examine students' educational attitudes, aspirations, and expectations upon entrance in SVE. Part II discusses students' experiences in the first year in SVE. In Chapters 3 and 4, I study the role of social and academic school experiences in students' emotional and behavioral engagement in SVE. Part III addresses students' attainment in the first year in SVE. In Chapter 5, the role of school engagement in students' performance across the transition to SVE is studied. In Chapter 6, I examine the determinants of dropout in the first year of SVE. In the next section, the main findings of the six individual studies are summarized.

SUMMARY OF MAIN FINDINGS

Part I: students' entrance in SVE

In **Chapter 1**, I examine to what extent the increased risk for dropout among particular groups of students can be interpreted from the perspective of differences in students' access to supportive resources, such as the opportunity to talk about school with parents or to receive help with homework, and from the perspective of differences in students' school experiences prior to the transition to SVE. Results indicate that sociodemographic indicators of an increased risk for dropout, such as an ethnic minority background, growing up in a poor family, or having unemployed or lower educated parents, are negatively correlated with access to parental support for education. Turkish and Moroccan students discuss school-related matters with their peer group more often than students from other ethnic backgrounds. Boys appear to have particular difficulty to access support for their school career from parents, peers or their community in general. Personal circumstances and behaviors outside school that are associated with an increased risk for dropout, such as delinquency, drugs, debts or intensive jobs, are related to a history of negative school experiences, indicating that those students are more likely to be in a process of disengagement from school while making the transition to SVE.

In **Chapter 2**, I assess students' expectations, aspirations, and general attitudes towards education upon the transition to SVE. Findings indicate that students start out in SVE with great expectations. At-risk students, who are students with an increased risk for dropout, do not have lower expectations, aspirations or more negative attitudes towards education than non-at-risk students. On the contrary, students from lower socioeconomic or ethnic minority backgrounds report particularly high aspirations and positive attitudes. The support that students receive from parents, peers, and the community correlates strongly with their educational attitudes, but the educational attitudes of students from lower socioeconomic or ethnic minority backgrounds are less related to the amount of support. Students who previously dropped out of SVE and who disliked their previous program are more eager to make a new start in SVE, whereas SVE dropouts who did like their previous program are more pessimistic about the prospects of their second try.

Part II: students' experiences in the first year in SVE

In **Chapter 3**, I study the role of social and academic school experiences in students' emotional engagement in the first year in SVE. Emotional engagement refers to students' sense of belonging in school, valuing of their SVE program, and their attitudes towards education in general. School experiences play an important role in students' emotional engagement. However, the emotional engagement of at-

risk students is less related to their school experiences than the emotional engagement of non-at-risk students. Both the perceived value of the program as well as the sense of belonging in school that students experience is primarily related to their academic experiences. Students who experience that much autonomy is required from them in the program value their program less. Support from school staff does not play a prominent role in students' emotional engagement in SVE, neither for at-risk nor for non-at-risk students.

In **Chapter 4**, I examine the behavioral engagement of at-risk and non-at-risk students in the first year in SVE. Behavioral engagement refers to students' active participation in school, such as regular class attendance, arriving in class on time, paying attention to teacher instructions, and completing assigned work. At-risk SVE students are as engaged in school as non-at-risk students, with two negative exceptions: students who use (soft)drugs and students who have debts. School experiences play a smaller role in the behavioral engagement of at-risk students. A supportive home environment is positively related to students' active participation in school. Students who go to school in highly urbanized regions are less engaged in school, even after controlling for student background characteristics. A perceived academic fit is prominently related to behavioral engagement. The less autonomy students experience in their program, the more engaged they are. However, students in engineering programs seem to favor autonomous working forms in school.

Part III: students' attainment in the first year in SVE

In **Chapter 5**, I study the interplay between students' engagement and performance in school across the transition to SVE. Findings indicate that emotional engagement is a prominent predictor of performance in SVE, even more so than behavioral engagement. Pre-transition behavioral engagement affects both students' behavioral engagement shortly after the transition to SVE, as well as their behavioral engagement later in the school year. This finding underlines the continuity of behavioral engagement across school contexts. By contrast, emotional engagement is much more context-dependent. Once established, students' emotional engagement remains fairly stable within one school context. But emotional engagement in one school context is not related to emotional engagement in a previous school context. Hence, a transition to a new school environment provides an opportunity for emotionally disengaged students to make a new start.

In **Chapter 6**, I assess the social and academic determinants of dropout in the first year in SVE. Student background characteristics play a prominent role in predicting dropout in the first semester after the transition to SVE, but not in predicting dropout later in the school year. However, debts are an important predictor of dropout across the entire first year in SVE. High aspirations help

students to get through the first semester after the transition, but they increase the likelihood of dropping out in the second semester. Expecting that the SVE program and the related profession fit their personal interests and abilities well decreases the risk to drop out for native Dutch students, but not for ethnic minority students. School engagement and performance have a strong impact on dropout. The perceived value of the program for their future career affects students' decision to return to the same program after the summer break in particular. Engineering students decide to leave their program during the summer break more often than students in other vocational sectors.

GENERAL DISCUSSION

Above, I summarized the main findings of the six studies that constitute this dissertation. Together, the six studies describe students' pathway to and through the first year in SVE. In the following section, I bring together the findings from the individual studies, to draw a bigger picture of the principles and pitfalls of a successful start in SVE. I review the role of the home and school context in students' engagement and attainment throughout the first year in SVE, and I discuss to what extent processes inside and outside school could help to explain the increased risk for dropout among specific groups of students. I highlight factors and processes that are especially amenable to school-based interventions, and discuss implications of the main findings for educational practice, policy, and research.

Meaningful education: a prerequisite for success in SVE

The results in this dissertation indicate that a successful start in SVE hinges upon students' experiences in the new school environment. Good contacts with teachers and classmates, and perceptions of a positive fit with the school and program enhance students' emotional and behavioral engagement in school, and presumably vice versa. After the transition to SVE, students need to (re-)establish a cycle of positive engagement and performance in their new school environment. More than anything else, this cycle is stirred by a perceived fit with the contents of the program. Students need to feel that the SVE program is interesting and meaningful to their personal career goals. This result corresponds with results from previous studies that stress the importance of the perceived utility value of academic work for students' progress in various school settings (Eccles, 1983; National Research Council & Institute of Medicine, 2004). The particular weight of the perceived value of the program in students' attainment in SVE echoes the vocational signature of SVE programs, which prepare students for a transfer to the job market. A practice-oriented focus in education, with academic tasks that are

clearly related to the workplace and the 'real world' outside school, has been advocated to increase the school engagement of more and less school-oriented students (Newmann, 1992; Scientific Council for Government Policy, 2008; Volman, 2011). The vocational orientation of SVE can foster students' appreciation of the value of education to their personal interests and career plans. The findings in this study indicate that, on average, first year students in SVE perceive their program as a meaningful step towards the realization of their career goals. Yet, the requirement to choose at a relatively young age between several highly specialized vocational programs in SVE bears the risk of regrets and academic mismatches, and, consequently, of dropout. The results confirm that a negative valuing of the program is a strong predictor of dropout in the first year in SVE.

Monitoring and managing emotional engagement in SVE

Emotional engagement in school, and students' valuing of their education in particular, has a strong direct effect on students' attainments in the first year in SVE. The impact of emotional engagement on performance and dropout is similar to the impact of behavioral engagement, and in some respects even larger. This finding emphasizes the importance of monitoring students' emotional engagement regularly. Emotional engagement cannot be inferred on the basis of behavior and performance in school. Physical withdrawal and deteriorating performance can be preceded by a process of emotional withdrawal, and acting upon overt signs of disengagement may come too late (Janosz, LeBlanc, Boulerice, & Tremblay, 2000). Whereas school behavior and performance can be monitored with tangible information, such as attendance rates or grades, emotional disengagement is more difficult to detect. Monitoring emotional engagement requires regular personal interactions with individual students (Christenson et al., 2010). Teachers, parents, and mentors need to ask students whether they feel at home at school, and whether they believe that their current program helps them to achieve their goals. If the answers are negative, it is necessary to search for ways to enhance students' emotional engagement. School engagement is not a static characteristic of a student, but the result of interactions between the student and the school environment (Eccles & Midgley, 1989; Fredricks, Blumenfeld, & Paris, 2004; Tinto, 1993; Wehlage, Rutter, Smith, Lesko, & Fernandez, 1989). As a consequence, school engagement can be changed more easily than individual traits or circumstances outside school that affect students' school success (Fredricks et al., 2004). The findings in this dissertation show that, more than behavioral engagement, emotional engagement is determined by students' interactions with the school environment. This suggests that emotional engagement is particularly amenable to a change of environment. Whereas behavioral (dis)engagement is largely sustained after transferring to another school context, this is not the case for emotional engagement. Emotional engagement in a previous school or program

does not predict emotional engagement in the new school or program in SVE. Hence, a timely transfer to a different program, group or school can counter a process of emotional disengagement before the negative spiral culminates in dropout (Finn, 1989).

Fostering school engagement in SVE: the role of student autonomy

The perceived amount of autonomous work in the program is of crucial importance for the emotional and behavioral engagement of students in SVE. Students who experience that they are required to work autonomously a lot, are less emotionally and behaviorally engaged. The recent restructuring of SVE programs into competency-based curricula has been criticized for asking too much autonomy and responsibility from students without providing sufficient guidance and structure (Basoski, Wiegers, & Overmeer, 2007). SVE programs need to prepare students for increased responsibilities and autonomy in future jobs or studies. Yet, the results in this dissertation give a warning not to push the level of student autonomy in SVE programs too far. The results do not corroborate the suggestion that boys have more difficulty than girls with the assigned level of autonomy in education (nrc.nl, 2009). In fact, boys in SVE appear to prefer autonomous work in their programs, while girls do not. However, we need to consider the gender divide in SVE sectors when interpreting this result. Engineering students, who are for 96% male in this study, are more behaviorally engaged if they are granted much autonomy in the program, whereas students in health & social care programs, for 92% female in this study, are more behaviorally engaged in programs that require less student autonomy. Differences in the understanding and implementation of autonomous work forms between vocational programs seem to account for gender-related differences in the relationship between autonomy and engagement in SVE. Given the prominent role of the perceived level of autonomy in school engagement, it is important to better understand and meet the specific needs and preferences regarding autonomous work forms across different student groups and vocational settings in SVE.

The weaker impact of the school context on at-risk students

School experiences affect students' engagement and attainment in the first year in SVE significantly. However, a weakened relationship between school experiences, engagement and attainment among at-risk students surfaces at various points in this dissertation. For instance, compared to non-at-risk students, positive experiences with teacher support, the academic program or the school climate contribute less to the school engagement of various groups of at-risk students. The same can be said of the role of emotional engagement in the attainment of ethnic minority students, who have an increased risk to drop out. Apparently, it is more difficult to influence the engagement and attainment of at-risk students in SVE

from within the school context. The weaker impact of the school context may be an important mechanism underlying an increased risk for dropout. The reason why the engagement and attainment of at-risk students are less affected by their interaction with the school environment remains an important topic for further research. One possible explanation is the presence of disturbing personal circumstances. If students deal with substantial problems or responsibilities outside school, they are simply not able to devote enough time and attention to school, whether they enjoy the school and program or not. Another explanation may relate to differences between at-risk and non-at-risk students with respect to the ability to strategically utilize the resources available in the school context (Enthoven & de Bruijn, 2009). At-risk students in SVE seem to appreciate the available resources in the school context, such as teacher support, but appear less adept to utilize those resources to their own benefit. Whereas non-at-risk students tend to initiate experiences and interactions in the school context that help them to succeed in school, at-risk students have been found to be more dependent of teachers and other school staff to utilize available resources in the school environment (Enthoven & de Bruijn, 2010). Instead of waiting for students to ask for assistance, schools need to reach out to at-risk students more actively to enable them to capitalize on the resources and opportunities provided in school. This recommendation would especially apply to the start of the first year in SVE, as the findings in this dissertation indicate that at-risk students struggle in the first semester after the transition to SVE in particular.

Dealing with disturbing circumstances outside school

Students who are confronted with problematic personal circumstances, or who engage in problem behavior outside school, drop out more often in the first year in SVE. Many individual risk factors in this study, such as not living together with parents or having debts, are presumably embedded in a life style or problematic conditions in general that interfere with pursuing a school career. Students who use drugs and students with debts appear to make the transition to SVE with one foot out the school door: in many cases, they were behaviorally disengaged prior to the transition to SVE, continue to be disengaged after the transition, and drop out before the end of the first year. The school context seems of minor importance in this dropout process, making it difficult for schools to intervene. Yet, one source of influence inside school enhances the school engagement of students who use drugs and students with debts in particular: the contact with classmates. Hence, peer tutoring projects are a potential avenue for schools to help maintain the connection with those students. Having debts stands out as an important predictor of behavioral disengagement and dropout in SVE. The negative impact of debts is an example of the detrimental effects of being 'overloaded' with personal problems outside school (Scientific Council for Government Policy, 2008). Debts place a

heavy emotional and practical burden on students, that can have a direct impact on their participation and performance in school. Alternatively, instead of a straightforward causal relationship between debts and dropout, both debts and dropout can be viewed as the outcomes of other underlying personal problems. That way, debts are interpreted as a *pars pro toto*, representing an accumulation of problematic personal conditions outside school. Even so, given the persistent negative effects of debts on success in the first year in SVE, debt prevention for school-aged youth appears a germane suggestion. It is alarming if underage students are confronted with debts to the extent that it impedes their school career. Financial management training for youth in secondary education, as well as limiting the opportunities for youth to spend money that they don't have, seems warranted.

Building a firm foundation for success: the need for supportive resources

The home context is an important source of influence in students' school career in SVE. Parents, peers, and other members of the social community outside school constitute a social network that provides students with supportive resources that assist them in their school career. Overall, at-risk students in this study report less access to such resources. Moreover, parental support was found to assert less influence over the educational plans of ethnic minority students, students with unemployed or lower educated parents, and students from poor families. These findings signify two important mechanisms underlying the increased dropout risk among certain student groups. Students from lower educated communities have less resources at their disposal to convey practical knowledge and experience that helps them to plan their educational career. Those students enact admirable autonomy in navigating the educational system, but receiving less guidance from the people that know them best may limit their prospects to realize their goals. In addition to differences in the availability of supportive resources, students differ in their capability to mobilize available resources to their own benefit (Lin, 2001). Boys in SVE seem to have more difficulty to identify or utilize supportive resources in their home environment, which may provide an explanation for their increased dropout risk. Sufficient access to supportive resources forms an important foundation for school success. Schools should encourage parents to get actively involved with their child's school career in SVE as much as possible. Teachers have been suggested to act as important supportive resource for students who receive little support at home (Scientific Council for Government Policy, 2008). In this study, the role of teacher support in students' school engagement in SVE is not exceptionally large, and is even smaller among at-risk students. This result suggests once again that teachers in SVE need to reach out to students more actively in order to establish strong and resourceful teacher-student relationships. In addition, the prominence of classmates as an important source of influence in

SVE in this study indicates that peer tutors could serve as valuable supportive resources for students. Last, external mentor projects extend students' social networks with additional supportive resources that can help them to navigate the school system.

Helping students to plan their route through SVE

Upon the transition to SVE, students need to select a vocational program that prepares them for a specific job or job sector. This choice requires insight into one's personal interests and abilities, as well as insight into the structure of the labor market and the educational system. First year SVE students often lack both (Dekker, 2011; Voncken, van der Kuip, Moerkamp, & Felix, 2000). This study points out that a strong determination to graduate from a particular program helps students to persevere in the first months after the transition to SVE. However, as students' experiences in SVE take further shape, their initial determination seems to backfire on them, suggesting that many students find their expectations unfulfilled. Ethnic minority students in SVE appear to encounter a mismatch between their initial expectations and their actual experiences in particular. These findings indicate that students, especially ethnic minority students, need more guidance in navigating the complex SVE system. Prior research has shown that SVE students have difficulty identifying a route through SVE that fits their more distal career goals, and sometimes their choice to enroll in a specific program in SVE seems random (Dekker, 2011). In addition to existing mentoring programs that help students to develop long-term career goals, SVE students could particularly benefit from intensive guidance regarding the proximal steps they need to take to pursue their goals, such as choosing a vocational sector, program, internship, or school project. SVE schools can help by organizing personal intake interviews with prospective students, but senior SVE students, peers, or external coaches could assist students in planning their route through SVE as well. The results show that, at the beginning of the academic year, students who dropped out of SVE earlier after experiencing a mismatch with the program, are more confident that they choose the right program the second time. Unfortunately, many of them are proven wrong and drop out again in the first year of their second try. Therefore, previous SVE dropouts may need assistance to find their niche more than any other student in SVE. In addition to current orientation programs at Level 1 ("AKA") and other reorientation programs for dropouts that are sometimes offered by schools, it is worth considering the introduction of a general orientation program in the first semester after the transition to SVE for students who are not ready to choose a specific program.

The transition to SVE: hurdle or opportunity?

The transition to SVE can be an unwelcome hurdle in the educational career of some students, while providing an exciting new step or an opportunity to start with a clean slate for others. Regardless of the enthusiasm or anxiety with which the transition to SVE is met, school transitions are difficult for all students, as they need to integrate into a new social and academic environment (Tinto, 1993). The results in this dissertation suggest that the increased risk for dropout among certain socio-demographic groups is related to their difficulty to cope with the transition to SVE. Ethnic minority students, boys, and students who do not live with their parents struggle more than other students to survive in the first months after the transition to SVE, while these differences fade after the first semester. Parental and peer support help students to persist in the first semester, but boys, some ethnic minority groups, and students who live on their own report to have less access to such resources. Hence, the requirement to make a school transition in order to obtain the mandatory basic qualification can be said to impose additional risk to the educational careers of several at-risk students in the vocational track. These students are in need of more intensive support from alternative resources, such as teachers, peer tutors, and mentors, to help them handle the demands of the transition to SVE. As each year thousands of students do not start in SVE after leaving pre-vocational education (PVE), such support should commence before students leave PVE (Scientific Council for Government Policy, 2008). An alternative option is to remove the transition altogether. The first results of an experiment ("VM2"), in which students continue in PVE until obtaining their SVE level 2 diploma, are hopeful: dropout in the VM2-programs is significantly lower (van Schoonhoven, Heijnens, & Bouwmans, 2011). Yet, a substantial proportion of students in VM2-programs still choose to leave the program prematurely to transfer to SVE (van Schoonhoven et al., 2011), illustrating that some students prefer a change of environment to continue their educational career. The findings in the present dissertation confirm that, in terms of emotional engagement, disengaged students could benefit from a transfer to a new school or program. The transition to SVE is an opportunity for students to make a fresh start in their educational career. To be able to capitalize on this opportunity, all students need to be equipped with sufficient social and academic support and guidance. Difficulty selecting a program in post-secondary education is not limited to SVE: first year students in higher education often regret their initial choice and need a second try too (de Jong, Webbink, & Roeleveld, 1997). To minimize the consequences of a wrong choice and subsequent dropout in the first year in post-secondary education, it is recommendable that all students, including PVE graduates, make the transition to post-secondary education with a basic qualification in their hands.

Reflection on the contributions of this dissertation

In this dissertation, I studied the entrance, experiences, and attainment of students in the first year of senior vocational education in the Netherlands. I examined various factors and processes inside and outside school that affect students' success in the first year in SVE. I discussed mechanisms that may account for the increased risk for dropout among specific groups of students. In doing so, I have focused on factors and processes that are amenable to change through school-based interventions in particular. Adopting a multifaceted perspective, including aspects from both the home and the school context, I reviewed the factors and processes that stand out as important sources of influence on students' engagement and attainment in the first year in SVE. By applying the internationally developed theoretical model of school engagement to the Dutch context of SVE, I assessed the universal or context-specific nature of school engagement processes. The comprehensive perspective adopted in this dissertation enabled the exploration of the multiple pathways that lead to dropout, which facilitates the development of differentiated dropout prevention strategies. Inherent to taking a comprehensive perspective in educational research is the call for further in-depth study of the processes that are described on a more aggregated level in this dissertation. For example, this study has shown that the multidimensional construct of school engagement provides a valuable framework to study the interaction between students and their educational environment. Future research that adopts a more micro-level perspective would contribute to a better understanding of social and academic processes inside and outside the classroom that enhance the development of school engagement in SVE. The prominent yet divergent role of student autonomy in school engagement calls for further research into the understanding and role of autonomous work forms and self-regulation processes across student groups and vocational settings in SVE. The results of this study emphasize that emotional engagement in school not only concerns developing a sense of belonging in school in social terms, but also in academic terms. Educational research from a micro-level perspective could elucidate the relationship between educational content and design on the one hand and students' perceptions of the meaningfulness of their education on the other. Another important topic for continued research is the development of educational plans and aspirations among students in the vocational track in education. The findings in this dissertation point at social inequalities in the formation and realization of educational aspirations. Further research into these inequalities is needed, and should take into account the role of the home and school context, as well as the influence of societal and labor market forces, which are beyond the scope of the present study.

To conclude

The pathway to school success is complex and dynamic. Some factors that impede students' school careers are outside the influence of education. This can be especially the case for students in regions with a high prevalence of socioeconomic disadvantages, who are well-represented in this study. Nevertheless, for those students as much as for any other student, students' perceived match between their preferences and needs, and the opportunities and facilities provided in the school environment, is a prerequisite for school success. Therefore, I conclude this dissertation with a quote from Vincent Tinto (1993, p. 51): *"What matters is the view of the student. Whether there are objective grounds for mismatch is not necessarily of direct importance to the issue of individual departure. In most situations, what matters is whether the individuals perceive themselves as being incongruent with the life of the institutions, not whether other observers would agree with that assessment."* Students' personal perspectives and experiences are the driving force behind educational outcomes (Appleton, Christenson, & Furlong, 2008). These should form the foundation of educational research, policy, and practice concerned with school success enhancement and dropout prevention. With this dissertation, I hope to contribute to building such foundation.

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Overview scale constructions[1] and original questionnaires

Support parents (α = .67)
My parents / guardians think it is important for me to graduate
My parents / guardians know how I am doing in school
I can talk to my parents / guardians about school matters
My parents / guardians help me with my school work sometimes
My parents / guardians have good contacts with my school

Support peers (α = .68)
Most of my friends go to school as well
My friends think it is important to graduate
My friends and I talk about school matters
My friends and I help each other with school work sometimes

Support community (α = .73)
Outside school, there are enough people who can help me with my school work
Outside school, there are enough people with whom I can discuss school matters

Support parents and peers (combined scale) (α = .70)
My parents / guardians know how I am doing in school
I can talk to my parents / guardians about school matters
My parents / guardians have good contacts with my school
Most of my friends go to school as well
My friends and I talk about school matters

Emotional engagement (previous school) (α = .88)
I felt at home at my previous school
My previous school suited me well
I had a good time at my previous school

Academic engagement (previous school) (α = .77)
I worked hard at my previous school
I received good grades at my previous school
I learned useful things at my previous school
I found most classes interesting at my previous school
The work forms at my previous school suited me well
I often skipped classes at my previous school (reversed)

Contact classmates (previous school) (α = .81)
I got along with most of my classmates at my previous school
I had many friends at my previous school
I was in a nice class at my previous school

[1] Items have been translated to English for this overview

I have been bullied at my previous school sometimes (reversed)
I sometimes felt alienated at my previous school (reversed)

Contact teachers (previous school) (α = .87)
I had good contacts with my teachers at my previous school
At my previous school, teachers showed interest in me
At my previous school, teachers were kind
At my previous school, teachers knew me well
At my previous school, teachers provided good academic support
At my previous school, teachers taught well

Expected institutional fit (α = .87)
I think I will feel at home at this school
I think my new school suits me well
I am happy to have chosen for this school

Expected academic fit (α = .80)
I think this degree program suits me well
I am happy to have chosen for this degree program
I think I can learn a lot in this degree program
I look forward to my new degree program
I have a clear picture of the contents of this degree program
I have a clear picture of the work I can do after graduating from this program
I doubt that this degree program suits me well (reversed)

Educational aspirations (α = .74)
I really wish to graduate from this degree program
I am confident that I will graduate from this degree program
I plan to work hard for this degree program

General educational attitudes (α = .80)
I think it is important to go to school
I like going to school
I'd rather be somewhere else than at school (reversed)
School is not my thing (reversed)
I prefer working over going to school (reversed)
I want to quit school as soon as possible (reversed)
I plan to continue studying after graduating from this degree program

Perceived fit academic program (α = .82)
I find the content of the program interesting
The content of the program is clearly linked to the working practice
The program helps me to get a clear picture of the work practice after school
I learn a lot in this program
The level of the program suits me well

The program provides sufficient practical training
The program provides sufficient theoretical training
The work sector for which I am trained in this program suits me well
The work forms in the program suit me well
There are enough classes and guidance provided by teachers

Perceived fit school climate (α = .82)
There is a good atmosphere in this school
I feel safe in this school
In this school, people treat each other kindly
In this school, people respect one another
The rules and regulations are clear in this school
The school treats all students fairly
There is enough peace and quiet in this school to be able to work
Most things are well-organized in this school
The school organizes enough nice activities outside class hours

Perceived social support (α = .90)
I receive sufficient attention from school staff
School staff support me when I don't feel well
School staff take my opinion seriously
School staff do everything in their power to help students
I have good contacts with my teachers
Most teachers are kind
Teachers show they are interested in me
Teachers make time for me
I can trust my teachers
I can come to teachers with questions and problems

Perceived academic support (α = .85)
Teachers teach well
The assignments are clear
Teachers support me well if I have questions about a task
There are enough opportunities for students' individual contributions in class
There are enough opportunities for students to choose classes, projects and assignments
Teachers support me well in my learning process
Teachers help me to get the most out of myself
Teachers make clear to me what I do well and what I need to work on
The school helps me to plan my career

Perceived fit classmates (α = .77)
I like my class (group)
I get along well with most of my classmates
I have a lot of friends in this school
At school, I sometimes feel left out (reversed)

At school, I get bullied sometimes (reversed)
I often have arguments at school (reversed)

Emotional engagement: sense of belonging (α = .77)
I feel at home at this school
This school suits me well
I feel like I am in the right place here
I am happy that I chose to enroll in this school

Emotional engagement: valuing (α = .87)
This degree program suits me well
I am happy that I chose to enroll in this degree program
I really wish to graduate from this degree program
I am determined to complete this degree program
What I learn in this degree program is useful for my future career
This degree program's diploma has significant value at the labor market

Emotional engagement: general educational attitudes (α = .80)
I think it is important to go to school
I like going to school
I plan to continue studying after graduating from this degree program
I'd rather be somewhere else than at school (reversed)
School is not my thing (reversed)
I prefer working over going to school (reversed)
I want to quit school as soon as possible (reversed)

Behavioral engagement (α = .76)
I attend most classes
I am often late for school (reversed)
I make all assignments
I am lagging behind in my school work (reversed)
I pay attention during class
During class, I often engage in other activities than working (chatting, msn, texting, browsing) (reversed)
I work hard for school
I do everything I can to receive good grades or evaluations

Performance (α = .81)
So far, my program results have been good
Compared to my classmates, my results are very poor/poor/average/good/very good
If I continue to perform like I do now, then I am sure I will graduate
I am bound to succeed in this degree program

Vragenlijst Schoolervaringen in het MBO - Meting 1

BELANGRIJK! VUL HIER EERST JE STUDENTNUMMER IN

Dit nummer staat b.v. op je schoolpas. Weet je je nummer niet? Vraag het dan aan je docent.

vul steeds **één** getal per hokje in
gebruik zoveel hokjes als je nodig hebt voor jouw nummer
schrijf **duidelijk**
schrijf **binnen** de hokjes

De Universiteit van Amsterdam doet onderzoek naar de schoolervaringen van MBO-studenten. Het komend schooljaar krijg je drie keer een vragenlijst over jouw ervaringen op school. Dit is de eerste vragenlijst.

Het invullen duurt 10 tot 20 minuten.

Je vult de vragenlijst **anoniem** in: niemand komt jouw naam te weten of kan straks terugzien welke antwoorden van jou zijn. Meer informatie hierover vind je aan het einde van de vragenlijst.

LET OP: Je kunt bij elke vraag maar één rondje inkleuren! Een voorbeeld zie je hieronder.

Zo invullen: ○ ● ○ ○ ○ Gebruik liefst een potlood en vul duidelijk in. Deze vragenlijst wordt door een computer verwerkt. Verbeter met gum of Tipp-Ex.

Over jou

1. **Wat is je geboortedatum?**

dag 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

○ ○

maand ○ jan ○ feb ○ maa ○ apr ○ mei ○ jun ○ jul ○ aug ○ sep ○ okt ○ nov ○ dec

jaar ○ 1987 ○ 1988 ○ 1989 ○ 1990 ○ 1991 ○ 1992 ○ 1993 ○ anders, namelijk: _____

2. **Ben je een man of vrouw?**

○ man

○ vrouw

3. **Welk onderwijs heb je hiervoor als laatste gevolgd?**

○ vmbo basisberoepsgericht

○ vmbo kaderberoepsgericht

○ vmbo gemengd

○ vmbo theoretisch

○ havo

○ mbo

○ praktijkonderwijs

○ anders

4. **Heb je een diploma gehaald op je laatst gevolgde opleiding?**

○ ja

○ nee

5. **Tot welke bevolkingsgroep reken jij jezelf? Ik noem mijzelf:**

○ Nederlands

○ Marokkaans

○ Nederlands - Marokkaans

○ Turks

○ Nederlands - Turks

○ Antilliaans

○ Nederlands - Antilliaans

○ Surinaams

○ Nederlands - Surinaams

○ anders, nl. _____

6. **Bij wie woon je in huis?**

○ ik woon alleen

○ bij één ouder / verzorger

○ bij beide ouders / verzorgers

○ bij andere familie

○ bij mijn partner

○ bij kennis(sen) / vriend(en)

○ wisselend: geen vast adres

○ anders

7. **Werken je ouders / verzorgers?**

Ouder / verzorger 1:	Ouder / verzorger 2:
○ ja	○ ja
○ nee	○ nee
○ weet ik niet	○ weet ik niet

8. **Wat is de hoogste opleiding die je ouders / verzorgers hebben gevolgd?**

Ouder / verzorger 1:	Ouder / verzorger 2:
○ geen	○ geen
○ lagere school	○ lagere school
○ middelbare school	○ middelbare school
○ mbo	○ mbo
○ hbo / universiteit	○ hbo / universiteit
○ weet ik niet	○ weet ik niet

9. **Hoe is de financiële situatie bij jou thuis?**

○ goed (we kunnen goed rondkomen)

○ niet zo goed (we kunnen moeilijk rondkomen)

○ het wisselt

○ weet ik niet

Jouw omgeving

	zeer oneens	oneens	neutraal	eens	zeer eens
10. Mijn ouders / verzorgers weten hoe het gaat op school	○	○	○	○	○
11. Mijn ouders / verzorgers vinden het belangrijk dat ik mijn diploma haal	○	○	○	○	○
12. Ik praat met mijn ouders / verzorgers over school	○	○	○	○	○
13. Mijn ouders / verzorgers helpen mij weleens met mijn schoolwerk	○	○	○	○	○
14. Mijn ouders / verzorgers hebben goed contact met mijn school	○	○	○	○	○
15. De meesten van mijn vrienden volgen ook een opleiding	○	○	○	○	○
16. Mijn vrienden vinden het belangrijk om een diploma te halen	○	○	○	○	○
17. Ik praat met mijn vrienden over school	○	○	○	○	○
18. Mijn vrienden en ik helpen elkaar weleens met schoolwerk	○	○	○	○	○
19. Buiten school zijn er genoeg mensen met wie ik kan praten over school	○	○	○	○	○
20. Buiten school zijn er genoeg mensen die mij kunnen helpen met schoolwerk	○	○	○	○	○
21. Buiten school zijn er genoeg mensen die mij helpen als ik persoonlijke problemen heb	○	○	○	○	○

Je vorige school

	zeer oneens	oneens	neutraal	eens	zeer eens
22. Op mijn vorige school had ik een goed contact met de docenten	○	○	○	○	○
23. Op mijn vorige school waren de docenten aardig	○	○	○	○	○
24. Op mijn vorige school toonden de docenten interesse in mij	○	○	○	○	○
25. Op mijn vorige school kenden de docenten mij goed	○	○	○	○	○
26. Op mijn vorige school kon ik goed opschieten met de meeste klasgenoten	○	○	○	○	○
27. Op mijn vorige school voelde ik mij weleens buitengesloten	○	○	○	○	○
28. Op mijn vorige school had ik vaak ruzie	○	○	○	○	○
29. Op mijn vorige school had ik veel vrienden	○	○	○	○	○
30. Op mijn vorige school zat ik in een leuke klas	○	○	○	○	○
31. Op mijn vorige school werd ik weleens gepest	○	○	○	○	○
32. Op mijn vorige school gaven de docenten goed les	○	○	○	○	○
33. Op mijn vorige school begeleidden de docenten mij goed bij het leren	○	○	○	○	○
34. Ik vond de meeste lesstof op mijn vorige school interessant	○	○	○	○	○
35. De manier van werken op mijn vorige school paste goed bij mij	○	○	○	○	○
36. Ik voelde mij thuis op mijn vorige school	○	○	○	○	○
37. Mijn vorige school paste goed bij mij	○	○	○	○	○

Je vorige school - vervolg

	zeer oneens	oneens	neutraal	eens	zeer eens
38. Ik vond het leuk op mijn vorige school	○	○	○	○	○
39. Op mijn vorige school spijbelde ik vaak	○	○	○	○	○
40. Op mijn vorige school werkte ik hard	○	○	○	○	○
41. Op mijn vorige school deed ik mee aan activiteiten buiten de les (bv. excursies, feestjes, toneel, schoolvoetbal)	○	○	○	○	○
42. Op mijn vorige school haalde ik meestal goede cijfers	○	○	○	○	○
43. Ik heb nuttige dingen geleerd op mijn vorige school	○	○	○	○	○

Over school in het algemeen

	zeer oneens	oneens	neutraal	eens	zeer eens
44. School is niks voor mij	○	○	○	○	○
45. Ik vind het leuk om naar school te gaan	○	○	○	○	○
46. Ik ga liever werken dan naar school	○	○	○	○	○
47. Ik vind het belangrijk om naar school te gaan	○	○	○	○	○
48. Ik ben liever ergens anders dan op school	○	○	○	○	○
49. Ik wil na deze opleiding nog verder studeren	○	○	○	○	○
50. Ik ga het liefst zo snel mogelijk van school af	○	○	○	○	○

Studiekeuze

	zeer oneens	oneens	neutraal	eens	zeer eens
51. Ik heb een duidelijk beeld van de inhoud van deze opleiding	○	○	○	○	○
52. Ik heb lang getwijfeld over mijn studiekeuze	○	○	○	○	○
53. Deze opleiding is echt iets voor mij	○	○	○	○	○
54. Ik twijfel of deze opleiding wel bij mij past	○	○	○	○	○
55. Ik heb een duidelijk beeld van het werk dat ik na deze opleiding kan doen	○	○	○	○	○

Verwachting nieuwe school en opleiding

	zeer oneens	oneens	neutraal	eens	zeer eens
56. Ik denk dat ik mij thuis zal voelen op deze school	○	○	○	○	○
57. Ik ben blij dat ik voor deze school heb gekozen	○	○	○	○	○
58. Ik denk dat deze school goed bij mij past	○	○	○	○	○
59. Ik zou liever op een andere school zitten	○	○	○	○	○
60. Ik heb zin in mijn nieuwe opleiding	○	○	○	○	○
61. Ik denk dat ik veel kan leren op deze opleiding	○	○	○	○	○
62. Ik ben blij dat ik voor deze opleiding heb gekozen	○	○	○	○	○

Verwachting nieuwe school en opleiding - vervolg

	zeer oneens	oneens	neutraal	eens	zeer eens
63. Ik wil graag mijn diploma halen op deze opleiding	○	○	○	○	○
64. Ik denk dat het mij lukt om mijn diploma te halen op deze opleiding	○	○	○	○	○
65. Ik ga hard werken voor deze opleiding	○	○	○	○	○
66. Ik wil op deze school ook meedoen aan activiteiten buiten de les (excursies, feestjes, debatten, etc.)	○	○	○	○	○

Tot slot

67. **Heb je kinderen?**

○ nee

○ ja, ik heb een kind / kinderen

○ ik ben in verwachting

○ mijn partner is in verwachting

68. **Heb je schulden?**

○ nee

○ ja, een beetje

○ ja, veel

69. **Heb je een bijbaan naast je opleiding?**

○ nee

○ ja, minder dan 8 uur per week

○ ja, 8 – 15 uur per week

○ ja, meer dan 15 uur per week

70. **Ben je weleens gearresteerd door de politie?**

○ nee

○ ja, ik ben niet veroordeeld

○ ja, ik moet binnenkort voorkomen

○ ja, ik moet binnenkort een straf uitvoeren

○ ja, ik doe momenteel een taakstraf

○ ja, ik heb een taakstraf gedaan

○ ja, ik heb celstraf uitgezeten

71. **Gebruik je weleens (soft)drugs?**

○ nooit

○ een paar keer per jaar

○ maandelijks

○ wekelijks

○ dagelijks

Je bent nu klaar. Bedankt voor het invullen!

Meer informatie over het anoniem invullen
Je vult de vragenlijst anoniem in. Dat betekent dat niemand kan weten wat jij precies hebt geantwoord. Jouw naam staat niet op de vragenlijst en is niet bekend in het onderzoek. De ingevulde vragenlijsten gaan direct in de envelop naar de onderzoeker van de Universiteit van Amsterdam. De school weet niet welke antwoorden jij hebt ingevuld.
Omdat je dit jaar drie keer een vragenlijst invult, moet de onderzoeker weten welke drie vragenlijsten bij één student horen. Daarom wordt je gevraagd om je studentnummer in te vullen. De onderzoeker ziet alleen dit nummer en heeft geen toegang tot bestanden waarin dit nummer aan je naam of andere gegevens kan worden gekoppeld.

Meer informatie over het onderzoek
Het onderzoek wordt uitgevoerd door een medewerker van de Universiteit van Amsterdam. Zij onderzoekt wat de schoolervaringen van MBO-studenten in het eerste leerjaar op het ROC zijn. Het onderzoek wordt uitgevoerd op meerdere ROC's in Nederland.

Vragenlijst Schoolervaringen in het MBO - Meting 2

BELANGRIJK! VUL HIER EERST JE STUDENTNUMMER IN

Dit nummer staat b.v. op je schoolpas. Weet je je nummer niet? Vraag het dan aan je docent.

vul steeds **één** getal per hokje in
gebruik zoveel hokjes als je nodig hebt voor jouw nummer
schrijf **duidelijk**
schrijf **binnen** de hokjes

De Universiteit van Amsterdam doet onderzoek naar de schoolervaringen van MBO-studenten. Dit schooljaar krijg je drie keer een vragenlijst over jouw ervaringen op school. De eerste vragenlijst heb je ingevuld aan het begin van het schooljaar. Dit is de tweede vragenlijst.

Het invullen duurt ongeveer 20 minuten.

Je vult de vragenlijst **anoniem** in: niemand komt jouw naam te weten of kan straks terugzien welke antwoorden van jou zijn. Meer informatie hierover vind je aan het einde van de vragenlijst.

LET OP: Je kunt bij elke vraag maar één rondje inkleuren! Een voorbeeld zie je hieronder.

Zo invullen: ○ ● ○ ○ ○ Gebruik liefst een potlood en vul duidelijk in. Deze vragenlijst wordt door een computer verwerkt. Verbeter met gum of Tipp-Ex.

De opleiding

	zeer oneens	oneens	neutraal	eens	zeer eens
1. De lesstof is interessant	○	○	○	○	○
2. De lesstof sluit goed aan op de beroepspraktijk	○	○	○	○	○
3. Ik leer veel op deze opleiding	○	○	○	○	○
4. Het niveau van de opleiding past bij mij	○	○	○	○	○
5. De opleiding besteedt voldoende aandacht aan de theorie	○	○	○	○	○
6. De opleiding besteedt voldoende aandacht aan de praktijk	○	○	○	○	○
7. Het werk waarvoor ik hier word opgeleid past goed bij mij	○	○	○	○	○
8. De opleiding is leuk	○	○	○	○	○
9. De manier van werken past goed bij mij	○	○	○	○	○
10. Er zijn genoeg les- en begeleidingsuren met docenten	○	○	○	○	○
11. Er is genoeg ruimte voor eigen inbreng van studenten in de les	○	○	○	○	○
12. Er is genoeg ruimte om zelf keuzes te maken voor vakken, projecten of opdrachten	○	○	○	○	○

productie & verwerking: **Elion.nl**

Les en begeleiding

	zeer oneens	oneens	neutraal	eens	zeer eens
13. De docenten geven goed les	○	○	○	○	○
14. De opdrachten zijn duidelijk	○	○	○	○	○
15. De docenten begeleiden mij goed bij het leren	○	○	○	○	○
16. De docenten helpen mij goed als ik vragen heb over de lesstof	○	○	○	○	○
17. De docenten helpen mij om het beste uit mezelf te halen	○	○	○	○	○
18. De docenten maken goed duidelijk wat ik al kan en waar ik nog aan moet werken	○	○	○	○	○
19. De school helpt mij bij het nadenken over mijn toekomst	○	○	○	○	○
20. Ik krijg in de opleiding een duidelijk beeld van het werk dat ik later kan doen	○	○	○	○	○

De school

	zeer oneens	oneens	neutraal	eens	zeer eens
21. Er heerst een goede sfeer op deze school	○	○	○	○	○
22. Ik voel me veilig op deze school	○	○	○	○	○
23. Op deze school gaat iedereen op een prettige manier met elkaar om	○	○	○	○	○
24. Op deze school respecteert iedereen elkaar	○	○	○	○	○
25. De school organiseert voldoende leuke activiteiten buiten de les (excursies, feesten, sport, toneel, debatten, etc.)	○	○	○	○	○
26. De regels op school zijn duidelijk	○	○	○	○	○
27. De school behandelt alle studenten rechtvaardig	○	○	○	○	○
28. Er is voldoende rust en orde op school om goed te kunnen leren	○	○	○	○	○
29. De meeste zaken zijn goed georganiseerd op deze school	○	○	○	○	○
30. Ik krijg voldoende aandacht van de school	○	○	○	○	○
31. De school steunt mij als het niet zo goed met mij gaat	○	○	○	○	○
32. De school neemt mijn mening serieus	○	○	○	○	○
33. De school doet er alles aan om studenten te helpen	○	○	○	○	○
34. De school let goed op de aanwezigheid van studenten	○	○	○	○	○

Contact met studenten

	zeer oneens	oneens	neutraal	eens	zeer eens
35. Ik zit in een leuke klas	○	○	○	○	○
36. Ik kan goed opschieten met de meeste klasgenoten	○	○	○	○	○
37. Ik heb veel vrienden op deze school	○	○	○	○	○
38. De meeste studenten hier zijn heel anders dan ik	○	○	○	○	○
39. Ik voel me weleens buitengesloten op school	○	○	○	○	○
40. Ik word weleens gepest op school	○	○	○	○	○
41. Ik heb vaak ruzie op school	○	○	○	○	○

productie & verwerking: **Elion.nl**

Contact met medewerkers van school

	zeer oneens	oneens	neutraal	eens	zeer eens
42. Ik heb een goed contact met de docenten	○	○	○	○	○
43. De meeste docenten zijn aardig	○	○	○	○	○
44. De docenten tonen interesse in mij	○	○	○	○	○
45. De docenten nemen de tijd voor mij	○	○	○	○	○
46. Ik kan mijn docenten in vertrouwen nemen	○	○	○	○	○
47. Ik kan met vragen en problemen goed terecht bij docenten	○	○	○	○	○
48. Ik kan met vragen en problemen goed terecht bij andere medewerkers op school	○	○	○	○	○
49. Ik heb een goed contact met mijn mentor	○	○	○	○	○

Jouw ervaring op de school

	zeer oneens	oneens	neutraal	eens	zeer eens
50. Ik voel me thuis op deze school	○	○	○	○	○
51. Deze school past goed bij mij	○	○	○	○	○
52. Ik zit hier goed op mijn plek	○	○	○	○	○
53. Ik ben blij dat ik voor deze school gekozen heb	○	○	○	○	○
54. Ik zou liever op een andere school zitten	○	○	○	○	○

Jouw ervaring op de opleiding

	zeer oneens	oneens	neutraal	eens	zeer eens
55. Deze opleiding past goed bij mij	○	○	○	○	○
56. Ik wil graag mijn diploma halen op deze opleiding	○	○	○	○	○
57. Het diploma van deze opleiding heeft veel waarde op de arbeidsmarkt	○	○	○	○	○
58. Ik ben blij dat ik voor deze opleiding heb gekozen	○	○	○	○	○
59. Wat ik leer op deze opleiding, kan ik later goed gebruiken in mijn werk	○	○	○	○	○
60. Ik ga deze opleiding zeker afmaken	○	○	○	○	○
61. Deze opleiding is tijdverspilling	○	○	○	○	○

Jij op school

	zeer oneens	oneens	neutraal	eens	zeer eens
62. Ik ben de meeste lesuren aanwezig	○	○	○	○	○
63. Ik kom vaak te laat op school	○	○	○	○	○
64. Ik maak alle opdrachten die ik moet doen	○	○	○	○	○
65. Ik loop achter met mijn schoolwerk	○	○	○	○	○
66. Ik let goed op in de lessen	○	○	○	○	○
67. Tijdens lesuren doe ik vaak andere dingen dan werken (kletsen, msn, sms, internet)	○	○	○	○	○
68. Ik werk hard voor school	○	○	○	○	○

Jij op school - vervolg

	zeer oneens	oneens	neutraal	eens	zeer eens
69. Ik doe er alles aan om goede cijfers of beoordelingen te halen	○	○	○	○	○
70. Ik probeer met zo min mogelijk werk mijn diploma te halen	○	○	○	○	○
71. Ik doe mee aan activiteiten buiten de les (b.v. excursies, feestjes, debatten, sport)	○	○	○	○	○
72. Ik bespreek weleens met docenten of de directie hoe de school verbeterd kan worden	○	○	○	○	○

Je resultaten

	zeer oneens	oneens	neutraal	eens	zeer eens
73. Mijn studieresultaten zijn tot nu toe goed	○	○	○	○	○
74. Het gaat zeker lukken om mijn diploma te halen op deze opleiding	○	○	○	○	○
75. Het kost mij moeite om goede resultaten te halen	○	○	○	○	○
76. Als ik doorga zoals nu, dan haal ik mijn diploma	○	○	○	○	○

Jouw mening over onderwijs in het algemeen

	zeer oneens	oneens	neutraal	eens	zeer eens
77. Ik vind het belangrijk om naar school te gaan	○	○	○	○	○
78. Ik vind het leuk om naar school te gaan	○	○	○	○	○
79. Ik wil na deze opleiding nog verder studeren	○	○	○	○	○
80. School is niks voor mij	○	○	○	○	○
81. Ik ben liever ergens anders dan op school	○	○	○	○	○
82. Ik ga liever werken dan naar school	○	○	○	○	○
83. Ik ga het liefst zo snel mogelijk van school af	○	○	○	○	○

Jouw omgeving

	zeer oneens	oneens	neutraal	eens	zeer eens
84. Mijn ouders / verzorgers weten hoe het gaat op school	○	○	○	○	○
85. Ik praat met mijn ouders / verzorgers over school	○	○	○	○	○
86. Mijn ouders / verzorgers hebben goed contact met school	○	○	○	○	○
87. De meesten van mijn vrienden volgen ook een opleiding	○	○	○	○	○
88. Ik praat met mijn vrienden over school	○	○	○	○	○

Geef je mening over de volgende zaken:

89. Ik vind de **regels op school:**

○ veel te streng
○ streng
○ precies goed
○ weinig streng
○ veel te weinig streng

90. Ik vind het **niveau van de opleiding:**

○ veel te makkelijk
○ makkelijk
○ precies goed
○ moeilijk
○ veel te moeilijk

91. Ik vind de **hoeveelheid zelfstandig werken in de opleiding:**

- ○ veel te veel
- ○ veel
- ○ precies goed
- ○ weinig
- ○ veel te weinig

92. In vergelijking met mijn klasgenoten zijn **mijn studieresultaten:**

- ○ heel goed
- ○ goed
- ○ gemiddeld
- ○ niet zo goed
- ○ slecht

Over jou

93. Wat is je geboortedatum?

☐☐ - ☐☐ - ☐☐☐☐

94. Heb je momenteel een bijbaan naast je opleiding?

LET OP: je stage voor school telt **niet** mee

- ○ nee
- ○ ja, voor minder dan 8 uur per week
- ○ ja, voor 8 – 15 uur per week
- ○ ja, voor meer dan 15 uur per week

95. Bij wie woon je momenteel in huis?

- ○ ik woon alleen
- ○ bij één ouder / verzorger
- ○ bij beide ouders / verzorgers
- ○ bij andere familie
- ○ bij mijn partner
- ○ bij kennis(sen) / vriend(en)
- ○ wisselend: geen vast adres
- ○ anders

96. Hoe is momenteel de financiële situatie thuis?

- ○ goed (we kunnen goed rondkomen)
- ○ niet zo goed (we kunnen moeilijk rondkomen)
- ○ het wisselt
- ○ weet ik niet

97. Heb je sinds de start van je opleiding een kind gekregen of ben jij of je partner momenteel in verwachting?

- ○ nee
- ○ ja, ik heb een kind gekregen
- ○ ja, ik ben in verwachting
- ○ ja, mijn partner is in verwachting

98. Heb je momenteel schulden?

- ○ nee
- ○ ja, een beetje
- ○ ja, veel

99. Ben je sinds het begin van dit schooljaar in aanraking gekomen met politie of justitie?
(er zijn meerdere antwoorden mogelijk)

- ○ nee
- ○ ja, ik ben niet veroordeeld
- ○ ja, ik moet binnenkort voorkomen
- ○ ja, ik moet binnenkort een straf uitvoeren
- ○ ja, ik doe momenteel een taakstraf
- ○ ja, ik heb een taakstraf gedaan
- ○ ja, ik heb celstraf uitgezeten

100. Gebruik je momenteel weleens (soft)drugs?

- ○ nooit
- ○ een paar keer per jaar
- ○ maandelijks
- ○ wekelijks
- ○ dagelijks

Je bent nu klaar. Bedankt voor het invullen!

Meer informatie over het anoniem invullen
Je vult de vragenlijst anoniem in. Dat betekent dat niemand kan weten wat jij precies hebt geantwoord. Jouw naam staat niet op de vragenlijst en is niet bekend in het onderzoek. De ingevulde vragenlijsten gaan direct in de envelop naar de onderzoeker van de Universiteit van Amsterdam. De school weet niet welke antwoorden jij hebt ingevuld.
Omdat je dit jaar drie keer een vragenlijst invult, moet de onderzoeker weten welke drie vragenlijsten bij één student horen. Daarom wordt je gevraagd om je studentnummer in te vullen. De onderzoeker ziet alleen dit nummer en heeft geen toegang tot bestanden waarin dit nummer aan je naam of andere gegevens kan worden gekoppeld.

Meer informatie over het onderzoek
Het onderzoek wordt uitgevoerd door een medewerker van de Universiteit van Amsterdam. Zij onderzoekt wat de schoolervaringen van MBO-studenten in het eerste leerjaar op het ROC zijn. Het onderzoek wordt uitgevoerd op meerdere ROC's in Nederland.

Vragenlijst Schoolervaringen in het MBO - Meting 3

BELANGRIJK! VUL HIER EERST JE STUDENTNUMMER IN

Dit nummer staat b.v. op je schoolpas. Weet je je nummer niet? Vraag het dan aan je docent.

vul steeds **één** getal per hokje in
gebruik zoveel hokjes als je nodig hebt voor jouw nummer
schrijf **duidelijk**
schrijf **binnen** de hokjes

De Universiteit van Amsterdam doet onderzoek naar de schoolervaringen van MBO-studenten. Dit schooljaar krijgen eerstejaars studenten in het MBO op drie momenten een vragenlijst over hun ervaringen op school. Dit is de laatste vragenlijst.

Het invullen duurt ongeveer 20 minuten.

Je vult de vragenlijst **anoniem** in: niemand komt jouw naam te weten of kan straks terugzien welke antwoorden van jou zijn. Meer informatie hierover vind je aan het einde van de vragenlijst.

LET OP: Je kunt bij elke vraag maar één rondje inkleuren! Een voorbeeld zie je hieronder.

Zo invullen: ○ ● ○ ○ ○ Gebruik liefst een potlood en vul duidelijk in. Deze vragenlijst wordt door een computer verwerkt. Verbeter met gum of Tipp-Ex.

Over jou

A. **Wat is je geboortedatum?**

dag 01 ○ 02 ○ 03 ○ 04 ○ 05 ○ 06 ○ 07 ○ 08 ○ 09 ○ 10 ○ 11 ○ 12 ○ 13 ○ 14 ○ 15 ○ 16 ○ 17 ○ 18 ○ 19 ○ 20 ○ 21 ○ 22 ○ 23 ○ 24 ○ 25 ○ 26 ○ 27 ○ 28 ○ 29 ○ 30 ○ 31 ○

maand ○ jan ○ feb ○ maa ○ apr ○ mei ○ jun ○ jul ○ aug ○ sep ○ okt ○ nov ○ dec

jaar ○ 1987 ○ 1988 ○ 1989 ○ 1990 ○ 1991 ○ 1992 ○ 1993 ○ anders, namelijk: **19** | | |

B. **Ben je een man of vrouw?**

○ man

○ vrouw

C. **Welke opleiding heb je hiervoor als laatste gevolgd?**

○ vmbo (diploma behaald)

○ vmbo (diploma niet behaald)

○ andere mbo-opleiding (afgemaakt)

○ andere mbo-opleiding (niet afgemaakt)

○ havo

○ praktijkonderwijs

○ anders

D. **Tot welke bevolkingsgroep reken jij jezelf?**
Ik noem mijzelf:

- ○ Nederlands
- ○ Marokkaans
- ○ Nederlands - Marokkaans
- ○ Turks
- ○ Nederlands - Turks
- ○ Surinaams
- ○ Nederlands - Surinaams
- ○ Antilliaans
- ○ Nederlands - Antilliaans
- ○ anders, namelijk _____

E. **Bij wie woon je in huis?**

- ○ ik woon alleen
- ○ bij één ouder / verzorger
- ○ bij beide ouders / verzorgers
- ○ bij andere familie (bv. oma/opa, tante/oom, broer/zus)
- ○ bij mijn partner
- ○ bij kennis(sen) / vriend(en)
- ○ wisselend: geen vast adres
- ○ anders

F. **Werken je ouders / verzorgers?**

Ouder / verzorger 1:	Ouder / verzorger 2:
○ ja	○ ja
○ nee	○ nee
○ weet ik niet	○ weet ik niet

G. **Wat is de hoogste opleiding die je ouders / verzorgers hebben gevolgd?**

Ouder / verzorger 1:	Ouder / verzorger 2:
○ geen	○ geen
○ lagere school	○ lagere school
○ middelbare school	○ middelbare school
○ mbo	○ mbo
○ hbo / universiteit	○ hbo / universiteit
○ weet ik niet	○ weet ik niet

H. **Hoe is momenteel de financiële situatie thuis?**

- ○ goed (we kunnen goed rondkomen)
- ○ niet zo goed (we kunnen moeilijk rondkomen)
- ○ het wisselt
- ○ weet ik niet

De opleiding

	zeer oneens	oneens	neutraal	eens	zeer eens
1. De lesstof is interessant	○	○	○	○	○
2. De lesstof sluit goed aan op de beroepspraktijk	○	○	○	○	○
3. Ik leer veel op deze opleiding	○	○	○	○	○
4. Het niveau van de opleiding past bij mij	○	○	○	○	○
5. De opleiding besteedt voldoende aandacht aan de theorie	○	○	○	○	○
6. De opleiding besteedt voldoende aandacht aan de praktijk	○	○	○	○	○
7. Het werk waarvoor ik hier word opgeleid past goed bij mij	○	○	○	○	○
8. De opleiding is leuk	○	○	○	○	○
9. De manier van werken past goed bij mij	○	○	○	○	○
10. Er zijn genoeg les- en begeleidingsuren met docenten	○	○	○	○	○
11. Er is genoeg ruimte voor eigen inbreng van studenten in de les	○	○	○	○	○
12. Er is genoeg ruimte om zelf keuzes te maken voor vakken, projecten of opdrachten	○	○	○	○	○

Les en begeleiding

	zeer oneens	oneens	neutraal	eens	zeer eens
13. De docenten geven goed les	○	○	○	○	○
14. De opdrachten zijn duidelijk	○	○	○	○	○
15. De docenten begeleiden mij goed bij het leren	○	○	○	○	○
16. De docenten helpen mij goed als ik vragen heb over de lesstof	○	○	○	○	○
17. De docenten helpen mij om het beste uit mezelf te halen	○	○	○	○	○
18. De docenten maken goed duidelijk wat ik al kan en waar ik nog aan moet werken	○	○	○	○	○
19. De school helpt mij bij het nadenken over mijn toekomst	○	○	○	○	○
20. Ik krijg in de opleiding een duidelijk beeld van het werk dat ik later kan doen	○	○	○	○	○

De school

	zeer oneens	oneens	neutraal	eens	zeer eens
21. Er heerst een goede sfeer op deze school	○	○	○	○	○
22. Ik voel me veilig op deze school	○	○	○	○	○
23. Op deze school gaat iedereen op een prettige manier met elkaar om	○	○	○	○	○
24. Op deze school respecteert iedereen elkaar	○	○	○	○	○
25. De school organiseert voldoende leuke activiteiten buiten de les (excursies, feesten, sport, toneel, debatten, etc.)	○	○	○	○	○
26. De regels op school zijn duidelijk	○	○	○	○	○
27. De school behandelt alle studenten rechtvaardig	○	○	○	○	○
28. Er is voldoende rust en orde op school om goed te kunnen leren	○	○	○	○	○
29. De meeste zaken zijn goed georganiseerd op deze school	○	○	○	○	○
30. Ik krijg voldoende aandacht van de school	○	○	○	○	○
31. De school steunt mij als het niet zo goed met mij gaat	○	○	○	○	○
32. De school neemt mijn mening serieus	○	○	○	○	○
33. De school doet er alles aan om studenten te helpen	○	○	○	○	○
34. De school let goed op de aanwezigheid van studenten	○	○	○	○	○

Contact met studenten

	zeer oneens	oneens	neutraal	eens	zeer eens
35. Ik zit in een leuke klas	○	○	○	○	○
36. Ik kan goed opschieten met de meeste klasgenoten	○	○	○	○	○
37. Ik heb veel vrienden op deze school	○	○	○	○	○
38. Ik voel me weleens buitengesloten op school	○	○	○	○	○
39. Ik word weleens gepest op school	○	○	○	○	○
40. Ik heb vaak ruzie op school	○	○	○	○	○

Contact met medewerkers van school

	zeer oneens	oneens	neutraal	eens	zeer eens
41. Ik heb een goed contact met de docenten	○	○	○	○	○
42. De meeste docenten zijn aardig	○	○	○	○	○
43. De docenten tonen interesse in mij	○	○	○	○	○
44. De docenten nemen de tijd voor mij	○	○	○	○	○
45. Ik kan mijn docenten in vertrouwen nemen	○	○	○	○	○
46. Ik kan met vragen en problemen goed terecht bij docenten	○	○	○	○	○
47. Ik kan met vragen en problemen goed terecht bij andere medewerkers op school	○	○	○	○	○
48. Ik heb een goed contact met mijn mentor	○	○	○	○	○

Jouw ervaring op de school

	zeer oneens	oneens	neutraal	eens	zeer eens
49. Ik voel me thuis op deze school	○	○	○	○	○
50. Deze school past goed bij mij	○	○	○	○	○
51. Ik zit hier goed op mijn plek	○	○	○	○	○
52. Ik ben blij dat ik voor deze school gekozen heb	○	○	○	○	○

Jouw ervaring op de opleiding

	zeer oneens	oneens	neutraal	eens	zeer eens
53. Deze opleiding past goed bij mij	○	○	○	○	○
54. Ik wil graag mijn diploma halen op deze opleiding	○	○	○	○	○
55. Het diploma van deze opleiding heeft veel waarde op de arbeidsmarkt	○	○	○	○	○
56. Ik ben blij dat ik voor deze opleiding heb gekozen	○	○	○	○	○
57. Wat ik leer op deze opleiding, kan ik later goed gebruiken in mijn werk	○	○	○	○	○
58. Ik ga deze opleiding zeker afmaken	○	○	○	○	○

Jij op school

	zeer oneens	oneens	neutraal	eens	zeer eens
59. Ik ben de meeste lesuren aanwezig	○	○	○	○	○
60. Ik kom vaak te laat op school	○	○	○	○	○
61. Ik maak alle opdrachten die ik moet doen	○	○	○	○	○
62. Ik loop achter met mijn schoolwerk	○	○	○	○	○
63. Ik let goed op in de lessen	○	○	○	○	○
64. Tijdens lesuren doe ik vaak andere dingen dan werken (kletsen, msn, sms, internet)	○	○	○	○	○
65. Ik werk hard voor school	○	○	○	○	○
66. Ik doe er alles aan om goede cijfers of beoordelingen te halen	○	○	○	○	○
67. Ik doe mee aan activiteiten buiten de les (b.v. excursies, feestjes, debatten, sport)	○	○	○	○	○
68. Ik bespreek weleens met docenten of de directie hoe de school verbeterd kan worden	○	○	○	○	○

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Je resultaten

	zeer oneens	oneens	neutraal	eens	zeer eens
69. Mijn studieresultaten zijn tot nu toe goed	○	○	○	○	○
70. Het gaat zeker lukken om mijn diploma te halen op deze opleiding	○	○	○	○	○
71. Als ik doorga zoals nu, dan haal ik mijn diploma	○	○	○	○	○

Jouw mening over onderwijs in het algemeen

	zeer oneens	oneens	neutraal	eens	zeer eens
72. Ik vind het belangrijk om naar school te gaan	○	○	○	○	○
73. Ik vind het leuk om naar school te gaan	○	○	○	○	○
74. Ik wil na deze opleiding nog verder studeren	○	○	○	○	○
75. School is niks voor mij	○	○	○	○	○
76. Ik ben liever ergens anders dan op school	○	○	○	○	○
77. Ik ga liever werken dan naar school	○	○	○	○	○
78. Ik ga het liefst zo snel mogelijk van school af	○	○	○	○	○

Jouw omgeving

	zeer oneens	oneens	neutraal	eens	zeer eens
79. Mijn ouders / verzorgers weten hoe het gaat op school	○	○	○	○	○
80. Ik praat met mijn ouders / verzorgers over school	○	○	○	○	○
81. Mijn ouders / verzorgers hebben goed contact met school	○	○	○	○	○
82. De meesten van mijn vrienden volgen ook een opleiding	○	○	○	○	○
83. Ik praat met mijn vrienden over school	○	○	○	○	○

Geef je mening over de volgende zaken:

84. Ik vind de **regels op school:**

○ veel te streng
○ streng
○ precies goed
○ weinig streng
○ veel te weinig streng

85. Ik vind het **niveau van de opleiding:**

○ veel te makkelijk
○ makkelijk
○ precies goed
○ moeilijk
○ veel te moeilijk

86. Ik vind de **hoeveelheid zelfstandig werken in de opleiding:**

○ veel te veel
○ veel
○ precies goed
○ weinig
○ veel te weinig

87. In vergelijking met mijn klasgenoten zijn **mijn studieresultaten:**

○ heel goed
○ goed
○ gemiddeld
○ niet zo goed
○ slecht

SLA DE BLADZIJDE OM VOOR DE LAATSTE 5 VRAGEN

Tot slot

88. Heb je kinderen en/of ben jij of je partner in verwachting? *(er zijn meerdere antwoorden mogelijk)*

○ nee

○ ja, ik heb een kind / kinderen

○ ja, ik ben in verwachting

○ ja, mijn partner is in verwachting

89. Heb je momenteel schulden?

○ nee

○ ja, een beetje

○ ja, veel

90. Heb je een bijbaan naast je opleiding? LET OP: je stage voor school telt **niet** mee

○ nee

○ ja, voor minder dan 8 uur per week

○ ja, voor 8 – 15 uur per week

○ ja, voor meer dan 15 uur per week

91. Gebruik je momenteel weleens (soft)drugs?

○ nooit

○ een paar keer per jaar

○ maandelijks

○ wekelijks

○ dagelijks

92. Ben je dit schooljaar in aanraking gekomen met politie of justitie? *(er zijn meerdere antwoorden mogelijk)*

○ nee

○ ja, ik ben niet veroordeeld

○ ja, ik moet binnenkort voorkomen

○ ja, ik moet binnenkort een straf uitvoeren

○ ja, ik doe momenteel een taakstraf

○ ja, ik heb een taakstraf gedaan

○ ja, ik heb celstraf uitgezeten

Je bent nu klaar. Bedankt voor het invullen!

Meer informatie over het anoniem invullen
Je vult de vragenlijst anoniem in. Dat betekent dat niemand kan weten wat jij precies hebt geantwoord. Jouw naam staat niet op de vragenlijst en is niet bekend in het onderzoek. De ingevulde vragenlijsten gaan direct in de envelop naar de onderzoeker van de Universiteit van Amsterdam. De school weet niet welke antwoorden jij hebt ingevuld.
Omdat studenten dit jaar drie keer een vragenlijst invullen, moet de onderzoeker weten welke drie vragenlijsten bij één student horen. Daarom wordt je gevraagd om je studentnummer in te vullen. De onderzoeker ziet alleen dit nummer en heeft geen toegang tot bestanden waarin dit nummer aan je naam of andere gegevens kan worden gekoppeld.

Meer informatie over het onderzoek
Het onderzoek wordt uitgevoerd door een onderzoeker van de Universiteit van Amsterdam. Zij onderzoekt wat de schoolervaringen van MBO-studenten in het eerste leerjaar op het ROC zijn. Het onderzoek wordt uitgevoerd op meerdere ROC's in Nederland.

Nederlandse samenvatting en discussie

De meeste schooluitval in Nederland vindt plaats in het eerste jaar na de transitie naar het middelbaar beroepsonderwijs (MBO). In vervolg op het voorbereidend middelbaar beroepsonderwijs (VMBO) verzorgt het MBO gespecialiseerde beroepsopleidingen voor studenten van 16 jaar en ouder. De helft van alle uitval in het MBO vindt plaats in het eerste jaar, wat aangeeft dat de overgang naar het MBO voor veel studenten lastig is. Om het studiesucces van MBO-studenten te bevorderen, is het nodig meer te weten te komen over de precieze factoren die hen belemmeren in hun schoolloopbaan. Omdat de achtergronden van schooluitval divers zijn, zal daarbij naar verschillende invloedssferen, zowel binnen als buiten de school, moeten worden gekeken. Voor de preventie van uitval is het echter met name belangrijk om die factoren te identificeren die beïnvloedbaar zijn middels onderwijsgerelateerde interventies.

In dit proefschrift onderzoek ik stapsgewijs verschillende distale en proximale processen die kunnen bijdragen aan het studiesucces danwel de uitval van studenten na de transitie naar het MBO. Ik onderzoek de entree, ervaringen en studievoortgang van eerstejaars voltijds BOL-studenten in techniek-, zorg & welzijn- en economie-opleidingen, op allevier de MBO-niveaus, van ROC's in grote en middelgrote steden. Voor het onderzoek volgde ik 1438 studenten uit 61 verschillende klassen vanaf het moment van binnenkomst in het MBO tot de start van het tweede leerjaar. Aan de hand van verschillende statistische technieken, waaronder multilevel lineaire regressie, logistische regressie en structural equation modeling, beschrijf ik de verschillende processen die deel uitmaken van de weg naar en door het eerste jaar in het MBO. Het proefschrift bestaat uit zes opeenvolgende studies, die zijn geclusterd in drie delen. Deel I beschrijft de entree van studenten in het MBO. In Hoofdstuk 1 onderzoek ik de sociale en onderwijsgerelateerde achtergrond van studenten op het moment van de transitie naar het MBO. In Hoofdstuk 2 bestudeer ik de schoolse attitudes, aspiraties en verwachtingen van studenten bij hun start in het MBO. Deel II schetst de ervaringen van studenten in het eerste jaar in het MBO. In Hoofdstuk 3 en 4 kijk ik naar de rol van sociale en onderwijsinhoudelijke schoolervaringen in de emotionele en gedragsmatige betrokkenheid van studenten in het eerste jaar in het MBO. Deel III betreft de studievoortgang van eerstejaars MBO-studenten. In Hoofdstuk 5 beschrijf ik de interactie en ontwikkeling van schoolse betrokkenheid en prestaties voor en na de transitie naar het MBO. In Hoofdstuk 6 onderzoek ik de determinanten van uitval in het eerste jaar in het MBO.

SAMENVATTING VAN DE BELANGRIJKSTE BEVINDINGEN

Deel I: de entree van studenten in het MBO

In **Hoofdstuk 1** onderzoek ik in welke mate het verhoogde risico op uitval onder bepaalde groepen MBO-studenten geïnterpreteerd kan worden vanuit een verschil in toegang tot hulpbronnen die studenten in hun studieloopbaan ondersteunen, zoals hulp bij huiswerk of de mogelijkheid om schoolervaringen te bespreken, en vanuit de schoolervaringen van studenten voorafgaand aan de transitie naar het MBO. De resultaten laten zien dat sociaal-demografische kenmerken die een verhoogd risico op uitval indiceren, zoals een allochtone afkomst, opgroeien in een arm gezin, of het hebben van werkloze of laag opgeleide ouders, negatief samenhangen met de mate van ouderlijke ondersteuning die studenten ervaren in hun schoolloopbaan. Turkse en Marokkaanse studenten bespreken schoolzaken vaker met hun vrienden dan studenten met een andere etnische achtergrond. Jongens lijken beduidend meer moeite te hebben om ondersteuning te vinden bij hun ouders, in hun vriendengroep, of in hun algehele sociale netwerk. Persoonlijke omstandigheden en vormen van buitenschools gedrag die zijn gerelateerd aan een verhoogd risico op uitval, zoals drugs, schulden, in aanraking zijn geweest met justitie, of intensieve bijbaantjes, zijn gerelateerd aan een geschiedenis van negatieve schoolervaringen voorafgaand aan de transitie naar het MBO. Studenten met deze kenmerken zijn daardoor vaker verwikkeld in een proces van afnemende schoolse betrokkenheid op het moment dat ze de transitie naar het MBO maken.

In **Hoofdstuk 2** bestudeer ik de verwachtingen, aspiraties en onderwijsattitudes van studenten op het moment van hun entree in het MBO. De resultaten wijzen uit dat de gemiddelde eerstejaars student hoge verwachtingen heeft bij de start in het MBO. Studenten met een verhoogd risico op uitval, de zogeheten risicoleerlingen, hebben geen lagere verwachtingen en aspiraties of negatievere onderwijsattitudes dan niet-risicoleerlingen. In sommige gevallen geldt juist het tegendeel: studenten met een lagere sociaal-economische of allochtone achtergrond hebben juist bijzonder hoge aspiraties en positieve attitudes. De attitudes bij de start in het MBO hangen sterk samen met de schoolgerelateerde ondersteuning van ouders, vrienden en het algehele sociale netwerk van studenten, maar de attitudes van studenten met een allochtone of lagere sociaal-economische achtergrond hangen minder sterk samen met de mate van ondersteuning in hun thuisomgeving. Studenten die al eens eerder zijn uitgevallen in het MBO na eerdere negatieve ervaringen op de vorige MBO-opleiding, zijn extra optimistisch over hun nieuwe start. Uitgevallen MBO-studenten die echter wél tevreden waren over hun vorige opleiding, maar die het kennelijk niet is gelukt deze succesvol voort te zetten, zijn juist pessimistischer over hun tweede poging.

Deel II: de ervaringen van studenten in het eerste jaar in het MBO

In **Hoofdstuk 3** kijk ik naar de rol van sociale en onderwijsinhoudelijke schoolervaringen in de emotionele betrokkenheid bij school van eerstejaars MBO-studenten. Emotionele betrokkenheid bij school refereert aan de ervaring zich thuis te voelen op school, waarde te hechten aan de eigen opleiding, en aan het belang dat studenten toekennen aan onderwijs in het algemeen. De resultaten laten zien dat sociale en onderwijsinhoudelijke schoolervaringen een belangrijke rol spelen in de emotionele betrokkenheid van MBO-studenten. De emotionele betrokkenheid van risicoleerlingen is echter minder sterk gerelateerd aan de schoolervaringen in het MBO dan de emotionele betrokkenheid van niet-risicoleerlingen. Zowel de waarde die studenten aan hun opleiding hechten, als het zich thuisvoelen op school, is primair gerelateerd aan onderwijsinhoudelijke ervaringen. Studenten die vinden dat er op school (te)veel zelfstandig moet worden gewerkt hechten minder waarde aan hun opleiding. Een steunende relatie met docenten speelt geen prominente rol in de emotionele betrokkenheid van MBO-studenten, noch voor risicoleerlingen noch voor niet-risicoleerlingen.

In **Hoofdstuk 4** onderzoek ik de gedragsmatige betrokkenheid van risico- en niet-risicoleerlingen in het eerste jaar van het MBO. Gedragsmatige betrokkenheid betreft de actieve participatie van studenten op school, zoals regelmatige aanwezigheid in de les, op tijd komen, opletten wanneer de docent uitleg geeft en het maken van opdrachten. Risicoleerlingen in het MBO zijn gedragsmatig evenzeer betrokken als niet-risicoleerlingen, met twee negatieve uitzonderingen: studenten die (soft)drugs gebruiken en studenten met schulden. Schoolervaringen spelen een minder belangrijke rol in de gedragsmatige betrokkenheid van risicoleerlingen dan van niet-risicoleerlingen. De gedragsmatige betrokkenheid op school is positief gerelateerd aan een steunende thuisomgeving. Studenten van grootstedelijke ROC's zijn minder gedragsmatig betrokken, ook nadat er gecontroleerd is voor individuele achtergrondkenmerken van studenten. De ervaren inhoudelijke aansluiting met de opleiding speelt een belangrijke rol in de gedragsmatige betrokkenheid. Hoe minder zelfstandig ze hoeven te werken, hoe meer gedragsmatig betrokken MBO-studenten zijn. Techniekstudenten lijken echter juist de voorkeur te geven aan meer zelfstandige werkvormen op school.

Deel III: de voortgang van studenten in het eerste jaar in het MBO

In **Hoofdstuk 5** bestudeer ik de wisselwerking tussen schoolse betrokkenheid en prestaties voor en na de transitie naar het MBO. De resultaten laten zien dat emotionele betrokkenheid een belangrijke predictor is van prestaties. De invloed van emotionele betrokkenheid op prestaties is groter dan de invloed van gedragsmatige betrokkenheid. Gedragsmatige betrokkenheid voorafgaand aan de transitie naar het MBO beïnvloedt de gedragsmatige betrokkenheid in het eerste

jaar in MBO, zowel kort na de transitie als later in het schooljaar. Deze bevinding illustreert de continuïteit van gedragsmatige betrokkenheid over verschillende schoolcontexten heen. Emotionele betrokkenheid is daarentegen meer contextafhankelijk. Emotionele betrokkenheid in de vorige schoolomgeving heeft geen invloed op de emotionele betrokkenheid in een daaropvolgende schoolomgeving. Emotionele betrokkenheid binnen dezelfde schoolomgeving blijft echter vrij stabiel over de tijd. Dit suggereert dat een overstap naar een andere schoolomgeving emotioneel weinig betrokken studenten een kans kan bieden om een nieuwe start te maken.

In **Hoofdstuk 6** analyseer ik sociale en onderwijskundige determinanten van schooluitval in het eerste jaar in het MBO. Individuele achtergrondkenmerken van studenten spelen een belangrijke rol in het voorspellen van uitval in het eerste semester na de transitie naar het MBO, maar niet in het voorspellen van uitval later in het schooljaar. Het hebben van schulden is echter het gehele schooljaar door een belangrijke predictor van uitval. Hoge aspiraties verkleinen de kans op uitval in het eerste semester, maar verhogen de kans op uitval in het tweede semester. De verwachting dat de MBO-opleiding en de gerelateerde beroepssector goed passen bij de eigen interesses en mogelijkheden verkleint de kans op uitval voor autochtone studenten, maar verhoogt de kans op uitval voor allochtone studenten. Betrokkenheid en prestaties op school hebben een bepalende invloed op de kans om uit te vallen. De ervaren waarde van de opleiding voor de toekomstige loopbaan beïnvloedt met name de beslissing om na de zomer wel of niet terug te keren in het tweede jaar van dezelfde opleiding. Techniekstudenten besluiten vaker tijdens de zomervakantie te stoppen met de opleiding dan studenten in andere opleidingssectoren.

ALGEMENE DISCUSSIE

Hierboven zijn de belangrijkste bevindingen samengevat van de zes studies waaruit dit proefschrift is opgebouwd. Tezamen geven de zes studies een beeld van de weg naar en door het eerste jaar in het MBO. Hieronder breng ik de resultaten van de zes studies bij elkaar, om een breder beeld te schetsen van de kenmerken en knelpunten van een succesvolle start in het MBO. Ik bekijk de rol van de thuisomgeving en schoolomgeving in de betrokkenheid en studievoortgang van studenten in het eerste jaar in het MBO, en ik bespreek in welke mate binnen- en buitenschoolse factoren en processen kunnen bijdragen aan het verklaren van het verhoogde risico op uitval onder bepaalde groepen jongeren. Ik leg daarbij de nadruk op factoren en processen die middels onderwijsinterventies beïnvloed zouden kunnen worden, en bespreek de implicaties van de belangrijkste onderzoeksresultaten voor onderwijsonderzoek, -beleid en –praktijk.

Betekenisvol onderwijs: een voorwaarde voor studiesucces in het MBO

De onderzoeksresultaten laten zien dat een succesvolle start in het MBO sterk afhangt van de ervaringen die studenten hebben in hun nieuwe onderwijsomgeving. Prettige contacten met docenten en medestudenten, en het ervaren van een goede aansluiting met de school en opleiding bevorderen de emotionele en gedragsmatige betrokkenheid op school, en vermoedelijk vice versa. Na hun transitie naar het MBO moeten studenten een nieuwe cyclus op gang zien te brengen van positieve schoolse betrokkenheid en prestaties in hun nieuwe onderwijsomgeving. Dit onderzoek laat zien dat deze cyclus primair wordt aangedreven door een ervaren inhoudelijke aansluiting met het geboden onderwijs. Studenten moeten kunnen ervaren dat hun opleiding interessant en nuttig is met het oog op hun toekomstige loopbaan. Dit beeld sluit aan bij eerdere studies die het cruciale belang van het ervaren nut van onderwijstaken voor de studievoortgang in uiteenlopende onderwijssettings hebben aangetoond (Eccles, 1983; National Research Council & Institute of Medicine, 2004). De sterke invloed van de waarde die MBO-studenten aan hun opleiding hechten op de studievoortgang, weerspiegelt het beroepsgerichte signatuur van MBO-opleidingen, die studenten voorbereiden op een overstap naar de arbeidsmarkt. Een praktijkgerichte benadering in het onderwijs, met taken die zichtbaar gerelateerd zijn aan de beroepspraktijk en de 'echte wereld' buiten de muren van de school, wordt beschouwd als een belangrijk middel om de schoolse betrokkenheid van meer en minder schoolgerichte leerlingen te bevorderen (National Research Council & Institute of Medicine, 2004; Newmann, 1992; Volman, 2011). De beroepsgerichte oriëntatie in het MBO kan studenten helpen om de waarde van een opleiding te bezien vanuit het oogpunt van hun persoonlijke interesses en toekomstplannen. Dit onderzoek geeft aan dat, gemiddeld genomen, eerstejaars studenten het volgen van hun MBO-opleiding zien als een belangrijke stap in de realisatie van hun loopbaanplannen. De noodzaak om al op een relatief jonge leeftijd te kiezen tussen verschillende gespecialiseerde beroepsopleidingen in het MBO brengt echter ook het risico van een verkeerde opleidingskeuze met zich mee: vaak blijkt de gekozen opleiding later toch niet zo goed aan te sluiten bij de wensen en mogelijkheden van studenten. De resultaten in dit onderzoek bevestigen dat studenten die negatief oordelen over het belang van de opleiding voor hun toekomstige loopbaan een grotere kans hebben om uit te vallen.

Bewaken en bijsturen van emotionele betrokkenheid in het MBO

Emotionele betrokkenheid bij school, en dan met name de waardering voor de opleiding, heeft een sterk direct effect op de studievoortgang in het eerste jaar in het MBO. De invloed van emotionele betrokkenheid op schoolprestaties en uitval is net zo groot als de invloed van gedragsmatige betrokkenheid, en in sommige gevallen zelfs groter. Het is daarom belangrijk de emotionele betrokkenheid van

MBO-studenten regelmatig te monitoren. Emotionele betrokkenheid kan niet verondersteld worden op basis van gedrag of prestaties op school. Verminderde gedragsmatige betrokkenheid en schoolprestaties kunnen worden voorafgegaan door een proces van afnemende emotionele betrokkenheid, waardoor ingrijpen bij zichtbare signalen van afnemende schoolse betrokkenheid algauw te laat komt (Janosz, LeBlanc, Boulerice, & Tremblay, 2000). Gedragsmatige betrokkenheid en schoolprestaties zijn relatief eenvoudig te monitoren, bijvoorbeeld aan de hand van verzuimgegevens of studieresultaten. Om een goed beeld te krijgen van de emotionele betrokkenheid van studenten is het echter nodig regelmatig persoonlijke gesprekken met hen te voeren (Christenson et al., 2010). Docenten, ouders en mentoren kunnen studenten vragen of zij zich thuisvoelen op school, en of zij het idee hebben dat de opleiding ze helpt om hun doelen te bereiken. Indien studenten negatief antwoorden op deze vragen moet er gezocht worden naar manieren om hun emotionele betrokkenheid bij de school en opleiding te versterken. Schoolse betrokkenheid is geen statisch kenmerk van een student, maar het resultaat van interacties tussen de student en de onderwijsomgeving (Eccles & Midgley, 1989; Fredricks, Blumenfeld, & Paris, 2004; Tinto, 1993; Wehlage, Rutter, Smith, Lesko, & Fernandez, 1989). Om die reden is schoolse betrokkenheid beter te beïnvloeden dan individuele studentkenmerken of buitenschoolse omstandigheden die de schoolloopbaan beïnvloeden (Fredricks et al., 2004). De bevindingen in dit proefschrift laten zien dat emotionele betrokkenheid, meer dan gedragsmatige betrokkenheid, gerelateerd is aan de interactie van studenten met hun schoolomgeving. Hierdoor is emotionele betrokkenheid bij uitstek te beïnvloeden door een verandering van omgeving. Waar (een gebrek aan) gedragsmatige betrokkenheid grotendeels overeind blijft na de transitie naar een nieuwe schoolomgeving, geldt dit niet voor emotionele betrokkenheid. Emotionele betrokkenheid op een vorige school of opleiding blijkt geen voorspeller van de mate van emotionele betrokkenheid op een nieuwe school of opleiding. Een tijdige overstap naar een ander programma, klas of school kan een proces van afnemende emotionele betrokkenheid een halt toeroepen voordat de negatieve spiraal uitmondt in uitval (Finn, 1989).

Het bevorderen van schoolse betrokkenheid: de rol van zelfstandig werken

De ervaren mate van zelfstandig werken die in de opleiding van studenten wordt gevraagd speelt een belangrijke rol in de emotionele en gedragsmatige betrokkenheid van studenten in het MBO. Studenten die vinden dat ze veel zelfstandig moeten werken, zijn minder betrokken. De recente overgang naar het competentiegericht leren in het MBO is bekritiseerd vanwege het grotere beroep op zelfstandigheid en verantwoordelijkheid van studenten, zonder dat daarbij de nodige structuur en instructie wordt geboden (Basoski, Wiegers, & Overmeer, 2007). MBO-opleidingen worden geacht studenten voor te bereiden op de grotere

verantwoordelijkheid en zelfstandigheid die hen in een toekomstig beroep of vervolgstudie staat te wachten. De resultaten in dit proefschrift kunnen echter worden geïnterpreteerd als een waarschuwing om niet teveel zelfstandigheid van MBO-studenten te vragen. De resultaten bevestigen de veelgehoorde suggestie dat jongens meer moeite zouden hebben met de vereiste mate van zelfstandig werken dan meisjes daarentegen niet (NRC, 2009). Integendeel, jongens in het eerste jaar in het MBO lijken juist een grotere voorkeur te hebben voor zelfstandige werkvormen dan meisjes. Voor een correcte interpretatie van dit resultaat is het echter belangrijk de sekseverdeling in de MBO-sectoren in aanmerking te nemen. Techniekstudenten, voor 96% jongens in deze studie, zijn meer gedragsmatig betrokken als ze vinden dat ze veel zelfstandig moeten werken, terwijl studenten in zorg & welzijn-opleidingen, voor 92% meisjes in deze studie, juist meer gedragsmatig betrokken zijn als ze vinden dat ze weinig zelfstandig moeten werken. Verschillen in de interpretatie en implementatie van zelfstandige werkvormen tussen de verschillende opleidingssectoren lijken het sekseverschil in het verband tussen zelfstandig werken en betrokkenheid te kunnen verklaren. De belangrijke rol van de ervaren mate van zelfstandig werken in de schoolse betrokkenheid van MBO-studenten benadrukt de noodzaak beter zicht te krijgen en beter aan te sluiten op de specifieke wensen en mogelijkheden voor zelfstandige werkvormen bij verschillende groepen studenten en opleidingen.

De beperktere invloed van de schoolomgeving op risicoleerlingen

Schoolervaringen hebben een sterke invloed op de betrokkenheid en studievoortgang van eerstejaars MBO-studenten. Op verschillende punten in dit onderzoek komt echter een zwakker verband aan het licht tussen de schoolervaringen, betrokkenheid en studievoortgang van risicoleerlingen. Bijvoorbeeld, vergeleken met niet-risicoleerlingen dragen de positieve ervaringen van risicoleerlingen met de ondersteuning door docenten, en met de ervaren aansluiting met het geboden curriculum en het schoolklimaat, minder bij aan hun schoolse betrokkenheid. Hetzelfde geldt voor de rol van emotionele betrokkenheid in de studievoortgang van allochtone studenten, die een verhoogd risico hebben om uit te vallen. Het is kennelijk lastiger om de betrokkenheid en studievoortgang van risicoleerlingen in het MBO te beïnvloeden vanuit de schoolomgeving. Deze beperktere invloed van de schoolomgeving zou een belangrijk mechanisme kunnen zijn dat ten grondslag ligt aan een verhoogd risico op uitval. De verklaring voor deze geringere invloed is een belangrijk onderwerp voor vervolgonderzoek. Een mogelijke verklaring zou kunnen liggen in de aanwezigheid van verstorende buitenschoolse omstandigheden. Studenten die te maken hebben met substantiële problemen of verantwoordelijkheden buiten school zijn wellicht simpelweg niet in staat om voldoende tijd aan school te besteden, ongeacht of ze het nu wel of niet naar hun zin hebben op school. Een andere mogelijke verklaring zou te maken

kunnen hebben met een verschil tussen risico- en niet-risicoleerlingen in de vaardigheid om strategisch gebruik te maken van de aanwezige hulpbronnen in de schoolomgeving (Enthoven & de Bruijn, 2009). Risicoleerlingen in het MBO lijken de aanwezige hulpbronnen, zoals de geboden ondersteuning door docenten, weliswaar te waarderen, maar ze lijken minder goed in staat om er ook profijt van te trekken. Waar niet-risicoleerlingen geneigd zijn zelf ervaringen en interacties in de schoolomgeving te initiëren die hen helpen in het volgen van hun opleiding, blijken risicoleerlingen vaak afhankelijker te zijn van docenten en andere schoolmedewerkers om de aanwezige hulpbronnen in de schoolomgeving goed te benutten (Enthoven & de Bruijn, 2010). In plaats van af te wachten tot studenten vragen om ondersteuning, zouden scholen er daarom goed aan doen risicoleerlingen actiever te benaderen, om ze in staat te stellen te profiteren van de op school aanwezige voorzieningen en hulpbronnen. Zo'n actieve benadering lijkt met name van belang in de eerste periode na de transitie naar het MBO, aangezien risicoleerlingen vooral in die eerste maanden lijken te worstelen om het hoofd boven water te houden.

Omgaan met verstorende buitenschoolse omstandigheden

Studenten die te maken hebben met moeizame persoonlijke omstandigheden of die problematisch gedrag buiten school vertonen, vallen vaker uit in het eerste jaar in het MBO. Veel individuele risicofactoren in dit onderzoek, zoals niet bij de ouders wonen of het hebben van schulden, zijn vermoedelijk ingebed in een leefstijl of in een bredere problematiek die de schoolloopbaan bemoeilijken. Studenten die drugs gebruiken of schulden hebben lijken de transitie naar het MBO te maken met één been buiten het onderwijs: zij vertoonden in veel gevallen al een geringere schoolse betrokkenheid vóór de overstap naar het MBO, vertonen vervolgens ook weinig betrokkenheid na de transitie naar het MBO en vallen voor het einde van het eerste schooljaar uit. De schoolomgeving lijkt een beperkte rol te spelen in dit proces van uitval, wat het moeilijk maakt voor scholen om te interveniëren. Er is echter één bron binnen de school die de schoolse betrokkenheid van studenten die drugs gebruiken of schulden hebben juist sterker beïnvloedt dan van andere studenten: het contact met studiegenoten. Zogenaamde 'peer tutoring' projecten bieden daarom een mogelijkheid voor scholen om het contact met deze studenten vast te houden. Het hebben van schulden blijkt een belangrijke predictor van afnemende gedragsmatige betrokkenheid en schooluitval in het MBO. De negatieve impact van schulden is een voorbeeld van de verstorende invloed van "overbelasting" door persoonlijke problemen buiten school (Scientific Council for Government Policy, 2008). Schulden vormen een emotionele en praktische belasting voor studenten, die hun participatie en prestaties op school direct kunnen beïnvloeden. In plaats van een direct causaal verband te veronderstellen tussen schulden en uitval, zouden zowel schulden als

uitval echter ook veroorzaakt kunnen worden door andere onderliggende persoonlijke problemen. Zo bezien kan het hebben van schulden worden geïnterpreteerd als een *pars pro toto*, dat een opeenstapeling van problematische persoonlijke omstandigheden buiten school indiceert. Nochtans geven de aanhoudend negatieve effecten van schulden op de betrokkenheid en studievoortgang in het eerste jaar in het MBO aanleiding schuldpreventie voor schoolgaande jeugd aan te bevelen. Het is alarmerend dat minderjarige studenten kampen met zodanige schulden dat hun schoolloopbaan hier hinder van ondervindt. Intensievere voorlichting over het omgaan met geld in het voortgezet onderwijs, alsmede het beperken van de mogelijkheden voor jongeren om geld uit te geven dat ze niet hebben, lijkt noodzakelijk.

Bouwen aan een stevige basis voor succes: het belang van hulpbronnen

De thuisomgeving heeft een belangrijke invloed op de schoolloopbaan van studenten in het MBO. Ouders, vrienden en andere leden van de sociale gemeenschap buiten school vormen een sociaal netwerk dat studenten voorziet van hulpbronnen die hen helpen in hun schoolloopbaan. Over het algemeen geven risicoleerlingen in dit onderzoek aan minder toegang te hebben tot dergelijke hulpbronnen. Bovendien blijkt de ouderlijke ondersteuning minder invloed uit te oefenen op de studieplannen van allochtone studenten, studenten met werkloze of laag opgeleide ouders, en studenten uit arme gezinnen. Deze uitkomsten wijzen op twee belangrijke mechanismes die schuilgaan achter een verhoogd risico op uitval onder bepaalde groepen studenten. Studenten uit lager opgeleide kringen hebben beperkter toegang tot hulpbronnen die over voldoende praktische kennis en ervaring beschikken om hen te ondersteunen bij het vormgeven van hun schoolloopbaan. Deze studenten beschikken over een bewonderenswaardige zelfstandigheid in het vinden van hun weg in het onderwijssysteem. Anderzijds beperkt een geringere begeleiding door de mensen die deze studenten van nabij kennen mogelijk hun kansen om hun loopbaanplannen te realiseren. Naast een verschil in de toegang tot hulpbronnen verschillen studenten ook in hun vaardigheid om de beschikbare bronnen te benutten (Lin, 2001). Jongens in het MBO lijken meer moeite te hebben om de hulpbronnen in hun thuisomgeving te identificeren en te benutten, wat een mogelijke verklaring biedt voor hun verhoogde risico op uitval. Voldoende toegang tot hulpbronnen is een belangrijke basis voor studiesucces. ROC's dienen ouderbetrokkenheid bij de schoolloopbaan van hun kinderen zoveel mogelijk te stimuleren. Docenten worden wel gezien als een belangrijke alternatieve hulpbron voor studenten die weinig ondersteuning vanuit huis krijgen (Scientific Council for Government Policy, 2008). In dit onderzoek blijkt de rol van ondersteuning door docenten in de schoolse betrokkenheid van studenten echter niet groot, en zelfs geringer voor risicoleerlingen. Dat resultaat toont eens te meer dat docenten in het MBO

studenten actief zullen moeten benaderen om een goede steunende relatie met hen op te bouwen. Daarnaast impliceert de prominente invloed van contacten met studiegenoten in het MBO dat 'peer tutors' kunnen fungeren als een waardevolle hulpbron voor studenten. Tot slot kunnen ook externe mentorprojecten het sociale netwerk van studenten uitbreiden met aanvullende hulpbronnen die hen ondersteunen in hun studieloopbaan.

Studenten helpen om hun weg te vinden in het MBO

Voor de transitie naar het MBO moeten studenten een opleiding kiezen die hen voorbereidt op het werken in een bepaalde beroepssector of specifiek beroep. Deze keuze vereist van studenten inzicht in de eigen interesses en mogelijkheden, alsmede inzicht in de structuur van de arbeidsmarkt en het onderwijsbestel. Eerstejaars MBO-studenten ontbreekt het vaak aan beide (Dekker, 2011; Voncken, van der Kuip, Moerkamp, & Felix, 2000). Dit onderzoek toont dat een sterke wil om een diploma te behalen van een bepaalde opleiding MBO-studenten helpt om vol te houden in de eerste maanden na de transitie. Naarmate studenten meer ervaringen hebben opgedaan in de opleiding lijkt deze wilskracht zich echter tegen hen te keren, wat suggereert dat veel studenten ondervinden dat hun verwachtingen niet zijn uitgekomen. Met name allochtone studenten lijken een kloof te ervaren tussen hun aanvankelijke verwachtingen en hun feitelijke ervaringen. Deze bevindingen impliceren dat studenten, en met name allochtone studenten, meer hulp nodig hebben om hun weg te vinden in het complexe MBO-stelsel. Eerder onderzoek heeft laten zien dat eerstejaars MBO-studenten veelal moeite hebben om een onderwijsroute te vinden die past bij hun loopbaanplannen op de langere termijn, en de keuze voor een bepaalde MBO-opleiding lijkt soms vrij willekeurig (Dekker, 2011). Naast de bestaande mentorprogramma's die studenten helpen om carrièredoelen voor de langere termijn te formuleren, zouden MBO-studenten dan ook met name kunnen profiteren van intensievere begeleiding bij het zetten van de kleinere stapjes op weg naar die grotere carrièredoelen, zoals het kiezen van een beroepssector, opleiding, stage, of studieproject. ROC's kunnen hieraan bijdragen door intakegesprekken te houden met aankomende studenten, maar ook ouderejaars studenten, studiegenoten en externe coaches kunnen goed helpen bij het vinden van een optimale route in het MBO. De onderzoeksresultaten laten zien dat studenten die eerder zijn uitgevallen in het MBO nadat ze hadden ervaren dat de opleiding niet goed bij ze paste, bij de start van hun nieuwe opleiding extra overtuigd zijn dat ze dit keer wel de goede keuze hebben gemaakt. Helaas krijgen velen van hen ongelijk, waarop ze nog binnen het eerste jaar van hun tweede poging opnieuw uitvallen. Om die reden zouden met name studenten die eerder in het MBO zijn uitgevallen extra ondersteuning moeten krijgen om een geschikte studieroute te kiezen in het MBO. Naast huidige oriëntatietrajecten op niveau 1 (AKA) en heroriëntatieprogramma's voor uitvallers die sommige ROC's

aanbieden, kan het nuttig zijn te overwegen een algemeen oriëntatieprogramma in het eerste semester na de transitie naar het MBO aan te bieden aan studenten die nog geen definitieve opleidingskeuze kunnen of willen maken.

De transitie naar het MBO: knelpunt of kans?

De transitie naar het MBO kan een lastig knelpunt zijn in de studieloopbaan van sommige studenten, en een uitdagende nieuwe stap of een kans om met een schone lei te beginnen voor anderen. Of studenten de transitie naar het MBO nu enthousiast of benauwd tegemoet treden, onderwijstransities zijn altijd moeilijk voor studenten, omdat zij in sociaal en inhoudelijk opzicht opnieuw hun plek moeten zien te vinden in een nieuwe onderwijsomgeving (Tinto, 1993). De resultaten in dit proefschrift suggereren dat het verhoogde risico op uitval onder bepaalde sociaal-demografische groeperingen gerelateerd is aan een worsteling om met de transitie naar het MBO om te gaan. Allochtone studenten, jongens en studenten die niet bij hun ouders wonen, hebben meer dan andere studenten moeite om de eerste maanden na de transitie naar het MBO door te komen, terwijl zulke verschillen vervagen na het eerste semester. Steun van ouders en vrienden helpt studenten om vol te houden in het eerste semester, maar jongens, studenten uit sommige minderheidsgroeperingen en studenten die zelfstandig wonen geven aan minder toegang te hebben tot dergelijke steun. Dit betekent dat de vereiste transitie naar het MBO, die nodig is om een startkwalificatie te behalen, een extra risicoverhogende factor vormt in de schoolloopbaan van verschillende groepen risicoleerlingen in het beroepsonderwijs. Deze studenten hebben meer ondersteuning nodig van alternatieve hulpbronnen, zoals docenten, studiegenoten, en mentoren, om zich staande te kunnen houden tijdens en na de transitie naar het MBO. Aangezien er elk jaar duizenden studenten niet starten in het MBO na het eindexamen VMBO (Scientific Council for Government Policy, 2008), zou zulke ondersteuning al moeten beginnen voordat studenten het VMBO verlaten. Een alternatief is om de transitie er helemaal uit te halen. De eerste resultaten uit het zogenaamde VM2-experiment, waarin studenten op het VMBO blijven tot zij een MBO niveau 2-diploma hebben behaald, zijn wat dat betreft hoopvol: de uitval in deze VM2-programma's is beduidend lager (van Schoonhoven, Heijnens, & Bouwmans, 2011). Toch kiest een aanzienlijk deel van de VM2-studenten ervoor het programma voortijdig te verlaten om alsnog naar het MBO te gaan (van Schoonhoven et al., 2011). Dit geeft aan dat sommige studenten de voorkeur geven aan een verandering van omgeving om hun studieloopbaan te vervolgen. De resultaten in dit proefschrift bevestigen dat emotioneel minder betrokken studenten profijt kunnen hebben van een overstap naar een nieuwe school of opleiding. De transitie naar het MBO vormt een kans voor studenten om een frisse start te maken in hun schoolloopbaan. Om deze mogelijkheid optimaal te benutten, moeten alle studenten voorzien zijn van voldoende sociale en

onderwijsinhoudelijke ondersteuning. Moeite om een opleiding te kiezen na het voortgezet onderwijs is allerminst beperkt tot MBO-studenten: eerstejaars studenten in het hoger onderwijs krijgen ook vaak spijt van hun studiekeuze en velen hebben een tweede kans nodig (de Jong, Webbink, & Roeleveld, 1997). Om de consequenties van een verkeerde studiekeuze en de daaraan gerelateerde uitval in het eerste jaar in het post-secundair onderwijs te minimaliseren, is het raadzaam dat alle studenten, inclusief degenen die van het VMBO komen, de transitie naar het post-secundair onderwijs maken met een startkwalificatie op zak.

Reflectie op de bijdragen van dit proefschrift

In dit proefschrift heb ik de entree, ervaringen en studievoortgang van studenten in het eerste jaar van het middelbaar beroepsonderwijs onderzocht. Ik heb verschillende binnen- en buitenschoolse factoren en processen bestudeerd die het studiesucces in het eerste jaar in het MBO beïnvloeden. Ik heb verschillende mechanismes besproken die ten grondslag kunnen liggen aan het verhoogde risico op uitval onder bepaalde groepen studenten. Daarbij heb ik mij met name gericht op die factoren en processen die beïnvloed kunnen worden middels onderwijsgerelateerde interventies. Aan de hand van een meervoudig perspectief, waarin zowel aspecten van de thuisomgeving als de schoolomgeving zijn meegenomen, heb ik de factoren en processen besproken die invloed uitoefenen op de betrokkenheid en studievoortgang van studenten in het eerste jaar in het MBO. Door het internationaal ontwikkelde theoretische model van schoolse betrokkenheid toe te passen op de context van het MBO heb ik het universele danwel context-specifieke karakter van het concept van schoolse betrokkenheid getoetst. Het brede perspectief dat is aangehouden in deze dissertatie faciliteerde een verkenning van de verschillende wegen die naar schooluitval leiden, en daarmee de ontwikkeling van gedifferentieerde uitvalpreventie-strategieën. Inherent aan een dergelijk veelomvattend perspectief in onderwijskundig onderzoek is de aanbeveling nader onderzoek te doen naar de processen die in dit proefschrift op een meer geaggregeerd niveau zijn beschreven. Dit onderzoek heeft bijvoorbeeld laten zien dat het multi-dimensionale construct van schoolse betrokkenheid een waardevol raamwerk biedt voor het bestuderen van de interactie tussen studenten en hun onderwijsomgeving. Vervolgonderzoek dat op micro-niveau naar onderwijsprocessen kijkt, kan gedetailleerder inzicht bieden in sociale en onderwijsinhoudelijke processen binnen en buiten de les die bijdragen aan de ontwikkeling van schoolse betrokkenheid bij studenten. De prominente maar wisselende rol die het zelfstandig werken speelt in de schoolse betrokkenheid van studenten vraagt om meer onderzoek naar de interpretatie en implementatie van zelfstandige werkvormen en zelfregulatie, onder verschillende groepen studenten en in verschillende settings en opleidingen in het MBO. De resultaten van dit onderzoek benadrukken dat emotionele betrokkenheid bij

school niet alleen betrekking heeft op de ervaring zich thuis te voelen op school in sociaal opzicht, maar ook in onderwijsinhoudelijk opzicht. Onderwijskundig onderzoek vanuit een meer micro-georiënteerd perspectief zou de relatie kunnen verhelderen tussen de vorm en inhoud van het onderwijs aan de ene kant en de percepties van studenten over de betekenisvolheid van hun onderwijs aan de andere kant. Een ander belangrijk onderwerp voor vervolgonderzoek is de ontwikkeling van studieplannen en aspiraties van studenten in het beroepsonderwijs. De resultaten in dit proefschrift wijzen op een sociale ongelijkheid in de totstandkoming en realisatie van onderwijsgerelateerde aspiraties. Nader onderzoek naar deze ongelijkheid is nodig. Naast de rol van de thuis- en schoolomgeving zou zulk onderzoek ook moeten kijken naar de invloed van maatschappelijke en arbeidsmarktgerelateerde factoren, die buiten het kader van dit proefschrift vallen.

Tot slot

De weg naar studiesucces is complex en dynamisch. Sommige factoren die een succesvolle schoolloopbaan van studenten ondermijnen liggen buiten de invloed van het onderwijs. Dit kan met name het geval zijn voor studenten in regio's waar sociaal-economische achterstanden domineren. Zulke studenten zijn ruim vertegenwoordigd in dit onderzoek. Niettemin geldt dat, voor deze studenten evenzeer als voor andere studenten, de ervaren aansluiting tussen hun wensen en behoeften, en de mogelijkheden en faciliteiten die de schoolomgeving biedt, een voorwaarde is voor studiesucces. Ik besluit dit proefschrift daarom met een citaat van Vincent Tinto (1993, p. 51): *"What matters is the view of the student. Whether there are objective grounds for mismatch is not necessarily of direct importance to the issue of individual departure. In most situations, what matters is whether the individuals perceive themselves as being incongruent with the life of the institutions, not whether other observers would agree with that assessment."* De persoonlijke perspectieven en ervaringen van studenten zijn de drijvende kracht achter onderwijsuitkomsten (Appleton, Christenson, & Furlong, 2008). Deze moeten het fundament vormen in onderwijsonderzoek, -beleid en -praktijk gericht op het bevorderen van studiesucces en de preventie van uitval. Met dit proefschrift hoop ik hieraan mijn steentje bij te dragen.

About the author

Louise Elffers (Amsterdam, 1978) obtained her gymnasium degree at the Barlaeus Gymnasium in Amsterdam. She graduated in 2003 with a cum laude Master's degree in Linguistics from the University of Amsterdam, with a thesis on Dutch language education for new immigrants in secondary education. During her Master's program, she studied for six months at Stellenbosch University in South Africa. As a trainee at the CED-Groep in Rotterdam, she developed teaching materials for Dutch second language learners in vocational education. After finishing her study, she worked for three years as a researcher and policy worker in the field of senior vocational education, among which as coordinator of the biannual student satisfaction monitor in senior vocational education. In 2007, she returned to the University of Amsterdam to start her PhD project at the Research Institute for Child Development and Education. In 2011, she worked as a visiting scholar at the Institute for Social and Economic Research and Policy at Columbia University in New York. As of November 2011, Louise is employed as a post-doctoral researcher at the Amsterdam Centre for Inequality Studies of the University of Amsterdam.

List of publications

Journal articles

Elffers, L. *(in press)* - One foot out the school door? Interpreting the risk for dropout upon the transition to post-secondary vocational education. *British Journal of Sociology of Education (33)* 1.

Elffers, L. & Oort, F.J. *(under review)* - Great expectations! Students' school attitudes upon the transition to post-secondary vocational education.

Elffers, L., Oort, F.J., & Karsten, S. *(in press)* - Making the connection: The role of social and academic school experiences in students'emotional engagement with school in post-secondary vocational education. *Learning and Individual Differences*.

Elffers, L. *(under revision)* - Staying on track: Behavioral engagement of at-risk and non-at-risk students in post-secondary vocational education.

Elffers, L. & Oort, F.J. *(submitted)* - Jumping over their own shadow: The interplay of students' school engagement and performance across the transition to post-secondary vocational education.

Elffers, L. & Oort, F.J. *(under review)* - Veni vidi vici: a multifaceted perspective on school dropout in the first year of post-secondary vocational education in the Netherlands.

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Elffers, L. & Weiss, C. (2011). *The impact of student engagement across educational transitions: a comparative international study*. Annual meeting of the American Educational Research Association (AERA), New Orleans, USA.

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Elffers, L. (2010). *Wat bindt de MBO-student? De invloed van sociale en onderwijsinhoudelijke interactie op de schoolse betrokkenheid en prestaties van eerstejaars MBO-studenten.* [What engages SVE-students? The role of social and academic interaction in the engagement and achievement of first year students in SVE] Onderwijs Research Dagen (ORD) 2010, Enschede, the Netherlands.

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