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

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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.