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

Elffers, L.

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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, Dilulio, & 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 than 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 ($\alpha=.76$, 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, $\alpha=.82$, 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, $\alpha=.85$, 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, $\alpha=.77$, e.g. *I get along well with most of my classmates*), with the school climate (*perceived fit school climate*: 9 items, $\alpha=.82$, e.g. *I feel safe at this school*), their perceptions of the social support provided by school staff (*perceived social support*: 10 items, $\alpha=.90$, 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, $\alpha=.70$, 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* ($\alpha = .92$). 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 β (SE)	p	Model 2 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
<i>Moroccan background</i>	-.02 (.11)		-.09 (.10)	
<i>Turkish background</i>	.07 (.11)		.07 (.10)	
<i>Surinamese background</i>	.06 (.13)		.02 (.12)	
<i>Antillean background</i> ^c	-.38 (.25)		-.16 (.24)	
<i>Other ethnic background</i>	-.01 (.12)		.02 (.11)	
Household (vs. living with two parents)		.624		.979
<i>Living alone</i>	-.12 (.20)		-.06 (.19)	
<i>Living with one parent</i>	-.08 (.08)		-.03 (.08)	
<i>Living with other relatives/friends</i>	-.13 (.13)		-.02 (.12)	

(table 2 continues on next page)

(table 2 continued)	Model 1	Model 2
Job status parents (vs. both parents have a job)		.062
<i>Both parents are unemployed</i>	.35 (.11)**	.28 (.10)**
<i>One parent has a job</i>	.10 (.08)	.10 (.08)
<i>Student doesn't know</i>	.12 (.11)	.10 (.11)
Highest education parents (vs. SVE or similar)	.993	.903
<i>Secondary education or less</i>	.02 (.10)	-.01 (.10)
<i>Higher education</i>	.01 (.10)	.04 (.09)
<i>Student doesn't know</i>	.03 (.09)	.04 (.09)
Financial difficulties family (vs. no difficulties)	-.03 (.08)	.717
Supportive resources in home community		.836
Encouragement and support parents and peers	.29 (.03)	.000***
Circumstances and behavior outside school		.20 (.03)
Student (or partner) expects/has child(ren) (vs. not)	.10 (.17)	.553
Personal debts student (vs. no debts)	-.28 (.12)	.022*
Student uses (soft-)drugs (vs. no drugs use)	-.38 (.11)	.000***
Student has been arrested by the police (vs. not)	-.18 (.09)	-.34 (.10)
Extra job student (vs. no extra job)		.001***
<i>< 8 hours a week</i>	-.04 (.09)	.509
<i>8-15 hours a week</i>	-.00 (.07)	-.03 (.08)
<i>> 15 hours a week</i>	-.17 (.12)	.03 (.07)
School-related background		-.13 (.11)
Prior education (vs. PVE with diploma) ^d	.680	.213
<i>PVE without diploma</i>	.05 (.17)	-.17 (.16)
<i>SVE with diploma</i>	-.05 (.13)	-.10 (.12)
<i>SVE without diploma</i>	-.16 (.12)	-.25 (.12)*
<i>Other prior education</i>	.03 (.10)	-.01 (.10)
Regional school board (vs. school board 5)	.009**	.004**
<i>school board 4 (intermediate urbanized area)</i>	.03 (.13)	-.07 (.12)
<i>school board 3 (highly urbanized area)</i>	-.28 (.11)*	-.27 (.09)**
<i>school board 2 (highly urbanized area)</i>	-.22 (.10)*	-.27 (.09)**
<i>school board 1 (highly urbanized area)</i>	-.35 (.11)***	-.36 (.09)***
SVE sector (vs. health&social care)	.951	.731
<i>Economics</i>	-.03 (.09)	.01 (.08)
<i>Engineering</i>	-.02 (.12)	-.06 (.11)
SVE degree program level (vs. level 4)	.992	.866
<i>Level 1</i>	.04 (.13)	.04 (.12)
<i>Level 2</i>	.02 (.09)	-.04 (.08)
<i>Level 3</i>	.02 (.10)	-.04 (.09)
SCHOOL EXPERIENCES		
Perceived fit academic program		.22 (.04)
Perceived support school staff		.15 (.05)
Perceived fit classmates		.15 (.03)
Perceived fit school climate		.000***
Perceived strictness school rules (vs. just right)		-.12 (.04)
<i>very lenient</i>		.498
<i>very strict</i>		.06 (.09)
Perceived difficulty degree program (vs. just right)		-.06 (.08)
<i>very easy</i>		.279
<i>very difficult</i>		.10 (.07)
Perceived proportion autonomous work (vs. right)		-.04 (.09)
<i>very little</i>		.005**
<i>very much</i>		.28 (.11)**
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: $\beta = -.81$, $p < .05$, level 1 students: $\beta = -.83$, $p < .05$), others appear to be *more* engaged if they think that their program is difficult (other ethnic backgrounds: $\beta = .75$, $p < .05$,

living with other relative or friends: $\beta=.73$, $p<.05$). Similarly, some students participate *more* if they perceive the program as easy (family with financial difficulties: $\beta=.39$, $p<.05$, single parent families: $\beta=.36$, $p<.05$), whereas others participate *less* when they think that the program is easy (prior education PVE without diploma: $\beta=-.86$, $p<.01$). 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 ($\beta=.46$, $p<.01$), whereas students in health & social care are *less* engaged in the case of much perceived autonomy ($\beta=-.33$, $p<.01$), and more engaged if they experience little autonomy ($\beta=.45$, $p<.01$).

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: $\beta=-.43$, $p<.001$; living with other relatives or friends: $\beta=-.26$, $p<.05$; living with a single parent: $\beta=-.14$, $p<.05$), and with respect to perceived support school staff (Surinamese students: $\beta=-.36$, $p<.001$; other ethnic backgrounds: $\beta=-.25$, $p<.05$; financial difficulties: $\beta=-.17$, $p<.05$; living with other relatives and friends: $\beta=-.36$, $p<.01$; parental education unknown: $\beta=-.17$, $p<.05$).

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, even though 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 cross-sectional 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.