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VOCATIONAL STUDENTS' INTENTION TO DROP OUT IN FLANDERS: THE ROLE OF TEACHER BELIEFS
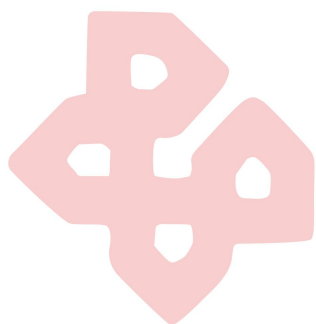
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Abstract:

For decades, western education confronts the problem of student unqualified dropout, which is most prevalent in vocational education. Relatively little research focuses on the role teachers might play in students' decision to quit school. By means of multilevel analyses on data of 2589 vocational students in 48 Flemish secondary schools, this study examines whether teachers' shared expectations of their students associate with vocational students' (intention to) dropout. In vocational education, teachers' beliefs about the teachability of students influence students' intention to quit, irrespective of students' perceived teacher support and students' sense of futility.

Key words: vocational education, dropout intention, teacher expectations

1. Introduction

For decades, western education confronts the important problem of student unqualified dropout (Lamb, Markussen, Teese, Sandberg & Polesel, 2011). In Flanders, on average 10% to 15% (even more in the cities) of the students in secondary education leave the school prematurely, without any qualification (Van Landeghem, De Fraine, Gielen & Van Damme, 2013). Moreover, dropout is most prevalent in vocational education, making these students most at risk (Flanders: Van Landeghem & Van Damme, 2011; the Netherlands: van Uden, Ritzen & Pieters, 2014; Turkey: Tas, Selvitopu, Bora, & Demirkaya, 2013). A Turkish study (Tas et al., 2013) found that most vocational students drop out because of academic factors, such as grade retention, and social factors, such as gender or SES. In general, most research into predictors of students' attrition has been focusing on individual student features, most notably these socio-demographic and academic risk factors (De Witte, Cabus, Thyssen, Groot & Maassen van den Brink, 2013), turning dropout into an individual problem (Luyten, Bosker, Dekkers & Derks, 2003). Relatively little empirical research concentrated on school characteristics, and in particular research into the role teachers might play in students' decision to quit school is rather scarce. However, most dropouts in the Turkish study also pointed to the attitudes and behavior of the teachers, stating that teachers were unfair in their practices (Tas et al., 2013). However, dropouts' perceptions might be shaped after they have left school (see Worrell & Hale, 2001). Moreover, the negative feelings about school might bias students' views about their teachers, and as such might not inform on teachers' actual role in the dropout process (Van Houtte, 2011). Therefore a measure that is not obtained from students, but reported by the teachers themselves, like for instance teachers' expectancies or beliefs about their students, might give a more accurate grip on the teachers' impact. To our knowledge, the possible direct influence of teachers' beliefs has rarely been considered in dropping-out research (exception: Rumberger & Palardy, 2005). However, as teacher beliefs affect both student-teacher relationships and student engagement (Demanet & Van Houtte, 2012)—the latter being considered the primary factor in understanding and predicting high school dropout (Fall & Roberts, 2012; Finn, 1989)—, it is not too far-fetched to hypothesize an effect of teacher beliefs on students' (intention to) dropout.

Hence, we set as objective the investigation of how teachers' shared beliefs about students—that is teacher culture—affect vocational students' intention to drop out of school. So, knowing that teachers in lower tracks hold a rather poor image of their students (e.g., Kelly & Carbonaro, 2012) and knowing that lower track students, in particular vocational students, are most vulnerable for dropping out, we aim to examine which role teachers' beliefs play as a determinant of vocational students' intention to dropout.

2. Background

2.1. Dropping out in lower tracks

Worldwide in secondary education students are grouped according to their ability level—a practice supported by the belief that students have relatively fixed levels of ability and need to be taught accordingly (Boaler, William & Brown, 2000; Gamoran, Nystrand, Berends & LePore, 1995). This grouping of ability is organised in a myriad ways. 'Tracking' refers to a situation in which students are taught an entirely different curriculum depending on their ability group, with the different tracks commonly classified hierarchically in terms of

level of abstraction and theorising, placing technical and vocational tracks at the bottom of the ladder (Boaler, William & Brown, 2000). Subsequently, a technical or vocational training is usually not a truly positive choice, but rather a second choice because one does not meet the standards set by academic tracks (Ainsworth & Roscigno, 2005). This is certainly the case in educational systems where curriculum placement is based on prior achievement—as in Flanders (Trautwein, Lüdtke, Marsh, Köller & Baumert, 2006). Their lack of perceived ability—based on achievement—pushes students into lower tracks, which entails a loss in status, due to the hierarchical nature of the tracking system (Hargreaves, 1967; Rosenbaum, 1976). Moreover, in the present knowledge society the occupations for which students are prepared in technical/vocational tracks are often little esteemed, while de-industrialisation and technological change have led to the collapse of demand for skilled, semi-skilled and unskilled manual workers (Nixon, 2006). The unemployment rate increases as the educational level decreases, offering technical/vocational students little future perspective. Technical and vocational tracks seem to suffer from a negative image, resulting from the social overvaluing of cognition and white-collar jobs at the expense of manual labour. Given this society's undervaluation, it is conceivable that lower-track students lose their faith in the system and no longer see the point in studying or working hard for school. Ethnographic case-studies have been pointing at the existence of more fatalism in lower tracks. Schafer and Olexa (1971) suggested that lower-track students develop more negative attitudes toward school partly because they consider grades, commitment and staying in school until graduation as having little payoff in the future. Malmberg and Trempala (1997) found that vocational-school students express lower levels of control over their future than do academic-school students. Students in the more academically oriented tracks are, according to Friedkin and Thomas (1997), on average, less fatalistic and more self-efficacious than are students in the vocationally oriented tracks. This fatalism is likely to negatively impact lower-track students' willingness to deliver effort at school (Carbonaro, 2005; Rosenbaum, 2001). Previous research in Flanders indeed showed that students in technical and vocational tracks display higher feelings of futility than students in academic tracks do (Van Houtte & Stevens, 2008, 2010, 2015), leading to less study involvement (Van Houtte & Stevens, 2010) and higher levels of school misconduct (Van Houtte & Stevens, 2008).

It has been shown repeatedly that lower track students tend to perform worse, to achieve less, to fail more often, and to be more prone to dropping out than higher track students (e.g., Duru-Bellat & Mingat, 1997; Hallinan & Kubitschek, 1999; Shavit & Featherman, 1988). Since a number of studies suggested that students are making dropout decisions based on their perception of their opportunities in the future and the utility of education (Bickel, 1989; Worrell & Hale, 2001), it is easy to understand why dropout is most prevalent in the lower tracks, specifically in vocational education, making these students most at risk (Flanders: Van Landeghem & Van Damme, 2011; the Netherlands: van Uden, Ritzen & Pieters, 2014; Turkey: Tas et al., 2013). Moreover, among vocational students, it might be expected that the most fatalistic and pessimistic ones have the highest chance of dropping out. Tas et al. (2013) found that most vocational students drop out because of academic factors, such as grade retention, and social factors, such as socioeconomic status. Most participants in their research, however, also pointed to the attitudes and behavior of the teachers, stating that teachers were unfair in their practices.

2.2. Teachers' beliefs and students' dropout

Dropping out research pointed to the fact that students' departure is not only associated with problems regarding learning and academic engagement, but with problems

regarding social engagement as well (Finn, 1989; Rumberger & Palardy, 2005; Wehlage & Rutter, 1986). Finn (1989) presented in this vein the "participation-identification model" which emphasizes the importance of "bonding" with school. When this bonding does not occur, the chance of problem behavior, including leaving school before graduation, is enhanced.

However, such studies into the impact of the school's social climate commonly rely on students' reports and perceptions of the student-teacher relations and teachers' support (e.g., Barile et al., 2012; Fall & Roberts, 2012; Lee & Burkam, 2003). Especially in cross-sectional studies this might be deceptive, as dropouts' perceptions might be formed after they have left school. Furthermore, these perceptions might express negative feelings towards school irrespective of how teachers act in reality, and as such may not provide accurate insight into teachers' actual role in the dropout process. Therefore, a more useful and accurate indicator of the quality of the teacher-student relationship, not obtained from the students themselves, might be teachers' beliefs or expectations about students (Van Houtte, 2011). After all, how teachers relate to and interact with their students is largely informed by how they see their students and what they think about their students (Van Houtte, 2004, 2011).

Already since the 1960s, educational researchers agree that teachers' opinions about students can have a profound impact on students' educational growth (e.g., *USA*: Rosenthal, 2002; *France:* Trouilloud, Sarrazin, Martinek & Guillet, 2002; *New Zealand*: Rubie-Davies, Hattie & Hamilton, 2006). Rosenthal and Jacobson (1968) were the first to present evidence regarding self-fulfilling prophecies in education. Specifically, they contended that students bring certain characteristics to the school context, which are—mostly unwittingly—used by teachers as an indication of their later educational success. Rosenthal and Jacobson's (1968) main contention was that teachers' expectations determine their behavior towards students, which can actually result in raising students' performance. Students whom teachers label as the "gifted" in class make the greatest progress, primarily because of differential treatment by teachers (Jussim, 1986; Rubovits & Maehr, 1971). It has been suggested that teachers' attitudes shape their treatment of students in two ways (Jussim, 1986; Rosenthal, 2002). First, when their expectations of some students are low, they spend less effort and time teaching these students (Jussim, 1986). Secondly, lower expectations result in less supportive teacher-student relations (Jussim, 1986; Rubovits & Maehr, 1971).

A few studies focused on non-cognitive student outcomes of teacher expectations. Demanet and Van Houtte (2012) demonstrated that lower expectations gave rise to more oppositional behavior. As disorderly behavior at school is strongly related to lower achievement (Bryant, Schulenberg, Bachman, O'Malley & Johnston, 2000) and dropout (Jenkins, 1995), there are certainly reasons to expect that low teacher expectations or poor teacher beliefs in students might result in less academic progress and eventually students' dropout. Rumberger and Palardy (2005) indeed showed that schools where teachers had high expectations (measured in teachers) had lower dropout rates.

2. 3. Teachers in the lower tracks

It has been shown that teachers in lower tracks tend to share negative views regarding the students—lower track students are deemed less able, more disruptive and less interested in schooling (Stevens & Vermeersch, 2010), and therefore less teachable and less trustworthy (Van Houtte, 2004, 2006a,b). When teachers end up in specific tracks

characterized by a specific group of students, they need to adjust their general conceptions about teaching to the real context, which might deviate from what they learned in teacher training (Fang, 1996). To do this, they appeal to common stereotypes. As such, the allocation of students in tracks is a given for teachers. Teachers usually do not make an independent, individual evaluation of students, but start from the stereotype that lower-track students are academically lacking (Ball, 1981; Rosenbaum, 1976). In other words, even before they have met their classes, they have formed an image of their students' academic abilities and developed certain expectations, to which they adjust their educational goals and their interactions with students (Ball, 1981; Jussim, 1986; Metz, 1993; Midgley, Feldlaufer & Eccles, 1988; Page, 1991). As such, within low track classrooms, teachers often demand less academically (Boaler et al., 2000; Goodlad, 1984; Hargreaves, 1967; Oakes, 2005; Page, 1991; Stevens & Vermeersch, 2010). Generally speaking, the attitude of many teachers in higher tracks is more apt to promote learning than it is in lower tracks (Oakes, 2005; Van Houtte, 2004, 2006a), although there are also schools with apparently effective instruction in low tracks, characterized by high expectations by teachers (see Gamoran, 1993).

Kelly and Carbonaro (2012) demonstrated in a system of within-school tracking that track placements affect teacher expectations above and beyond student achievement and other characteristics. Van Houtte and colleagues (2013), however, showed in a system of between-school tracking that teachers' negative judgements of students in lower tracks, more specifically in technical/vocational schools compared to academic schools, could be ascribed to the students' background variables, namely gender, socioeconomic status, migrant status and, especially, their ability. That teachers' views of students are more negative in lower tracks is due to the fact that teachers base their judgment on exactly these student features which make students opt for the lower tracks in the first place. However, irrespective of their origin, teachers' shared beliefs and expectations have been demonstrated to be responsible—at least in part—not only for the stated higher failure (Van Houtte, 2004), but also for the lower sense of school belonging (Van Houtte & Van Maele, 2012) of technical and vocational students, which is, according to the "participation-identification" model of Finn (1989) an important precursor for dropout. As such, knowing that teachers in lower tracks hold a rather poor image of their students and given that lower track students are most vulnerable for dropping out, an obvious question is to what extent, especially in vocational tracks, students' intention to drop out is associated with teachers' shared beliefs and expectations.

3. Context

Before depicting the methodology of the study, it seems useful to describe briefly the particulars of Flemish education. First of all, every single school in Flanders is state subsidized—private as well as public schools. Usually, children go to nursery school from the age of two and a half onward. Education becomes compulsory when the child gets six years old. After six years of primary education, at the age of twelve, children transfer to secondary education. There are six years of secondary education divided into three grades, lasting two years each. In theory the first grade (years one and two) is an orientating grade officially divided into a core curriculum known as the A-stream and a B-stream preparing for vocational education. In practice, though, the kind of courses offered in the A-stream depends upon the main tracks offered in the school at hand. There are four main tracks: academic education preparing for higher education, technical education, vocational education and artistic education (which is a rather marginal track, in terms of number of students). Tracks are not

only organized within but also, and mainly, between schools. A common differentiation is between schools offering academic education and schools offering technical and vocational education. Within each main track, different tracks are distinguished—e.g. economy-modern languages in academic education, electricity-mechanics in technical education, child care in vocational education—characterized by different subjects and accents. At the end of each year the students get a certificate indicating whether they can continue their current school career (A-certificate) or not (certificate B or C). In the case of the latter, a certificate B indicates that the student may pass to the next year but needs to join a lower track, a certificate C means that the student cannot pass to the next year and has to repeat the year. These certificates are based on the obtained GPA, there are no standardised tests (for example in the form of centrally administered and standardised examinations) (Stevens, 2007). Each grade, i.e. in the third and the fifth year, the students need to refine their branch of studies. Secondary education is compulsory until the age of eighteen. There is a possibility to enrol in part-time vocational education from the age of sixteen, combining classes with experience at the shop floor. After six years of general, technical, or artistic education, or seven years (six years plus an extra year) of vocational education, the student receives a diploma of secondary education granting unlimited access to each form of higher education. Each student having a diploma of secondary education may start at university. After six years of vocational education students obtain a qualification, not granting access to higher education. Secondary education is compulsory until the age of eighteen, and a student is considered a dropout when leaving education before having finished the six years and obtained the diploma (academic, arts and technical education) or qualification (vocational education).

4. Methods

4.1. Data

The analyses were based on data of 2589 3rd- and 5th-grade (the 9th- and 11th-grade students in the American educational system) vocational students clustered in 48 schools offering vocational education (descriptives: Table 1), as part of the Flemish Educational Assessment (FlEA), data gathered in 2004–2005 in 85 secondary schools in Flanders. Schools agreeing to participate did so with the parents' consent. Students completed the questionnaires in class in the presence of one or two researchers and a teacher. As part of the FlEA, a questionnaire was also distributed among all third- and fifth-grade teachers in the selected schools. A total of 2104 teachers in 84 schools (response rate: 60%) responded to the questionnaire, as in one school no teachers responded to the questionnaire. The student questionnaires were not anonymous because we wanted to couple this data with other data such as academic results provided by the school. All names were removed as the data was assembled, so the final database and all analyses are completely anonymous.

4.2. Design

As we were dealing with cross-sectional data gathered within schools, we did not have information on students' actual dropout. However, we did ask the students whether they were planning to finish high school. If not, they were considered as having an intention to quit. So, an obvious limitation of this study is that we cannot tell whether finally these students actually dropped out or not. Most plausible is that some of them in the end did stay, while others quit. Expressing the intention to quit is nonetheless an indication of severe disengagement (Janosz, Archambault, Morizot & Pagani, 2008).

Given the clustered sample of students nested within schools, and with an outcome at the student-level (intention to dropout) and determinant (schools' teachers' shared teachability beliefs, that is schools' teachability culture) at the school-level, multilevel techniques were most appropriate. As the outcome was binary (intend to quit (1) or not (0)), nonlinear Bernoulli models were used (HLM6, Bryk & Raudenbush, 1992). Multilevel analyses commonly start by estimating unconditional models to determine the amount of variance that occurs between schools, but in hierarchical logistic models it is not appropriate to partition the variance of the outcome into its between- and within-components. The between-school variance component τ_0 estimated in an unconditional model does give an idea of whether or not the between-school variance is significant and can be modelled (e.g., Frost, 2007).

In a first model we included individual characteristics which have been shown to be related to dropout, namely social risk factors (gender, age, SES, migrant background) and academic risk factors (ability, achievement, being retained). In the second model we added teachability culture, that is teachers' shared expectations regarding students' teachability, at the school level to assess the role of teachers in students' dropout-intentions, and school type, indicating whether the vocational track is part of a school with academic tracks or not (school type), as this may affect the teachers' teachability culture. In the third model we added students' perceived teacher support at the student level to assess whether these perceptions explain an eventual association between teachability culture and intention to dropout—this is a possibility given previous research that showed that lower teacher expectations lead to lower affect (Rosenthal, 2002). In a fourth model we added culture of futility (school level) and sense of futility (student level), to ascertain whether an association between teachability and intention to dropout holds, which would indicate that teachers' expectations are not merely an answer to students' negative attitudes and that teachers' expectations really affect students' intention to dropout.

4.3. Variables

a) Outcome

As we were dealing with students in a sample of schools, we could not take into account students who actually dropped out already. Instead, we asked the students whether or not they were planning on finishing high school with a credential. The majority of the vocational students (86.1%) was *aspiring* to finish high school (coded 0), 13.9% of the vocational students expressed the intention to quit (see Table 1).

b) School level variables

To probe the beliefs of the school staff about the pupils, the "Teachable Pupil Survey" developed by Kornblau (1982) is used (see also Demanet & Van Houtte, 2012). This five-point scale was made up of 31 items, encompassing students' "school-adjusted behaviors" (such as "concentrates well" and "enjoys school work"), "cognitive-motivational behaviors" (such as "intelligent" and "curious, inquisitive"), and "personal-social behaviors" (such as "calm" and "confident"). The score for each teacher was computed by summing the items, missing ones being imputed by item correlation substitution (Huisman, 2000). This yielded a range from 39 to 146, with a mean score of 100.15 (*SD* = 15.307; Cronbach's alpha = 0.94; *n* = 2104). By summing the item scores, we obtained a reliable measure of perceived teachability at the individual teacher level, but since it was the purpose to measure culture, and since culture is a group feature defined as "shared beliefs," the aggregation of the obtained measure was a necessary next step. A customary aggregation strategy is to calculate

the mean of the scores of the individual members of the group or organization (e.g., Hofstede, Neuijen, Ohavy & Sanders 1990). In doing this, one has to be sure this aggregation is permitted. In other words, one must examine whether the aggregated measure is reliable and represents something actually shared at the group or organization level (Glick, 1985). A useful measure is the "mean rater reliability" (Glick, 1985), calculated by means of the Spearman-Brown formula based on the intraclass correlation (ICC) of a one-way analysis of variance: ICC(1, k) = (between mean square-within mean square)/between mean square (with k = number of raters in each group or organization). The result must be at minimum 0.60 to permit an aggregation at the group or organization level (Glick, 1985; Shrout & Fleiss, 1979). Aggregation of this measure at the school level by calculating the mean per school was permitted (ICC = 0.92). For the 48 schools in the sample attended by vocational students the measure of the culture of teachability had a mean of 93.46 (SD = 7.89).

To assess the schools' *culture of futility* the same procedure was followed starting from the measurement of sense of futility in students (see below). Aggregation of this measure at the school level by calculating the mean per school was permitted (ICC = 0.84). For the 48 schools in the sample attended by vocational students the measure of futility culture had a mean of 10.88 (SD = 3.55).

In Flemish secondary education tracks are organized within and between schools. Hence, vocational students may be enrolled in a school offering solely vocational education, or in a school offering all four tracks. Most common are schools offering technical and vocational tracks, while attending a school offering academic tracks might be most influential for vocational students (Van Houtte & Stevens, 2009, 2015). In the analyses we added therefore at the school level whether the school offers an academic track (coded 1). Of the 48 schools attended by vocational students, 22.9% offered an academic track.

Table 1.
Vocational Students' Intention to Drop Out in Flanders - descriptives.

	Frequency (%)	mean (SD)	N
School level			
Teachability culture		93.46 (7.89)	48
Futility culture		10.46 (0.66)	48
School type: academic	22.9%		48
Student level			
Dropout intention	13.9%		2,437
Gender: Girls	53.4%		2,589
Age		16.95 (1.30)	2,579
SES		3.58 (2.02)	2,210
Migrant background	25.3%		2,598
Ability		70.12 (10.62)	2,008
Achievement		69.29 (10.40)	2,105
Retained	27.2%		2,433
Academic track			
Arts track			
Technical track			
Vocational track			
Teacher support		23.54 (4.29)	2,467
Sense of futility		10.88 (3.55)	2,466

c) Student level variables

With respect to *gender* the sample is quite equally divided with 53.4% of the vocational students being female (coded 1).

This research concentrated on the third- and fifth-grade students, so the vocational students were, on average, 16.95 years old (SD = 1.30), which is somewhat older than the general sample (mean = 16.45, SD = 1.31), due to their higher retention rate (Table 1).

We measured the *socioeconomic status (SES)* of origin of the students by means of the occupational prestige of the father and mother (Erikson, Goldthorpe & Portocarero, 1979)—the highest of both was used as an indicator of the SES of the family. The vocational students had a mean SES of 3.58 (SD = 2.02, Table 1).

We distinguish between native and immigrant students. As common (Timmerman, Hermans & Hoornaert, 2002), the principal criterion was the birthplace of the students' maternal grandmothers. If these data were missing (only 1% missing of the total sample, n = 11,872) we considered their mothers' and fathers' nationalities, as most immigrant students are second- or third-generation and have Belgian nationality. As is common practice in Flemish and Dutch educational research (Duquet, Glorieux, Laurijssen & Van Dorsselaer, 2006; Sierens, Van Houtte, Pelleriaux, Loobuyck & Delrue, 2006; Timmerman, Hermans & Hoornaert, 2002), non-West European birthplaces and nationalities were considered as producing foreign descent, because these are more likely to confront educational difficulties. Additional criteria—in case of missing data regarding nationality—were the language spoken at home (other language than Dutch), religion (Islam), and finally the student's name (see Felouzis, 2003). As such, we created a dichotomous variable (0 = native, 1 = immigrant). In the vocational tracks 25.3% of the students were identified as from a foreign origin (Table 1).

As a measure of *ability*, we used the grade point average at the end of primary education (range 0-100). This measure should be considered cautiously. There are no standardised tests (for example in the form of centrally administered and standardised examinations) in the Flemish educational system, which makes educational achievement very hard to compare across schools and across students (Stevens, 2007). Furthermore, we need to rely on a self-reported GPA, yielding questions with respect to validity because of memory problems and cover up strategies. Not unexpected, this variable shows more missing values than other variables do (9.2%). Notwithstanding these faults, it is the best measure we have to control for prior academic attainment. On average, vocational students reported a GPA of 70.12 (SD = 10.62, Table 1).

As a measure of *prior academic achievement*, we used the GPA at the end of the grade preceding the inquiry (range 0-100, passing at 50). As there are no standardised tests in the Flemish educational system, for this variable as well we needed to rely on a self-reported GPA, yielding questions with respect to validity because of memory problems and cover up strategies. Research indicated, however, that self-reported grades are generally highly correlated with grades taken from students' transcripts, and that GPA has some desirable features relative to standardized test scores (Kelly, 2008). On average, vocational students reported a GPA of 69.29 (SD = 10.40, Table 1).

We measured *retention* by asking the respondents to report retrospectively on their history of grade retention (coding: 0 = never retained; 1 = at least once retained). Of the vocational students, 27.2% was retained at least once in the course of primary and secondary education.

Perceived teacher support was measured by a subscale of the Psychological-Sense-of-School-Membership scale (PSSM; Goodenow, 1993). The scale consists of seven items, such as "Teachers in this school respect me", and "Teachers in this school are not interested in

students like me". Students could choose from five answers, ranging from *absolutely disagree* to *totally agree* (1–5). Scores across the items were summed, yielding a scale ranging from 7 to 35 (Cronbach's alpha = 0.74; *n* = 11,593). For vocational students the mean was 23.54 (*SD* = 4.29, Table 1).

Sense of futility was measured by means of a scale consisting of five items dealing with sense of control at school adapted from Brookover and colleagues (1979), such as "People like me will not have much of a chance to do what we want to in life". Each item had five answering categories from 'absolutely not agreed' to 'totally agreed' (range 1-5). Responses were imputed for missing values by way of item correlation substitution (Huisman, 2000). In this analysis we worked with the sum of the item scores, yielding scores from 5 to 25 (Cronbach's alpha = 0.75, *n* = 11620). The mean for vocational students was 10.88 (*SD* = 3.55, Table 1).

5. Findings

Table 2.
Correlates of intention to dropout in vocational secondary education. Results of Logistic Multilevel Analysis, Bernoulli (HLM6).

	Model 1	Model 2	Model 3	Model 4
Intercept	-2.163 (0.134) 0.115***	-2.193 (0.127) 0.112***	-2.278 (0.138) 0.103***	-2.308 (0.136) 0.100***
School level				
Schooltype		0.208 (0.251) 1.232	0.159 (0.269) 1.173	0.048 (0.264) 1.050
Teachability culture		-0.026 (0.012) 0.974*	-0.025 (0.012) 0.976+	-0.028 (0.014) 0.972*
Futility culture				-0.148 (0.171) 0.862
Student level				
Gender	-0.084 (0.164) 0.920	-0.033 (0.174) 0.968	0.048 (0.185) 1.049	0.053 (0.179) 1.054
Age	-0.045 (0.052) 0.957	-0.035 (0.052) 0.966	-0.032 (0.052) 0.968	0.002 (0.054) 1.002
SES	-0.077 (0.047) 0.926	-0.067 (0.047) 0.935	-0.055 (0.047) 0.947	-0.053 (0.050) 0.949
Migrant background	0.289 (0.213) 1.335	0.174 (0.212) 1.190	0.200 (0.217) 1.222	0.149 (0.244) 1.160
Ability	-0.010 (0.008) 0.990	-0.009 (0.008) 0.991	-0.009 (0.008) 0.992	-0.006 (0.008) 0.994
Achievement	-0.016 (0.008) 0.984°	-0.016 (0.008) 0.984*	-0.015 (0.008) 0.985°	-0.011 (0.008) 0.989
Retained	0.245 (0.229) 1.278	0.214 (0.228) 1.239	0.224 (0.222) 1.251	0.154 (0.220) 1.166
Teacher support			-0.092 (0.016) 0.913***	-0.050 (0.017) 0.951**
Sense of futility				0.159 (0.023) 1.173***
Variance components				
Intercept U_0	0.008	0.034	0.052	0.077

Note: Presented are the (unstandardised) gamma coefficients and odds ratio's with the standard errors appearing in parentheses and the variance components U (when significant). °*p* = 0.057, +*p* = 0.052, * *p* < 0.05, ** *p* ≤ 0.01,*** *p* ≤ 0.001

For the vocational students, the between-school variance in the unconditional model indicated that it was useful to estimate a model taking into account school-level variables (τ_0 = 0.059, p=0.006). Surprisingly, none of the social and academic risk factors appeared significantly related to intention to quit, indicating that once enrolled in the vocational track, these features apparently did not seem to matter anymore and did not make a difference anymore. An exception was achievement which was borderline significant (OR = 0.984, p = 0.057; Table 3, model 1). Teachability culture proved significantly negatively related to the intention to quit (model 2: OR = 0.974, p < 0.05) and this association held after controlling for perceived teacher support, and culture and sense of futility (Models 3 and 4). The most important predictor of intending to dropout for vocational students proved to be their sense of futility (OR = 1.173, p < 0.001), followed by their perceived teacher support (OR = 0.951, p < 0.01) and the teachers' teachability culture in the school (OR = 0.972, p < 0.05).

6. Discussion

As student unqualified dropout manifests itself in western education as an important problem (Lamb et al., 2011), a lot of research has been carried out to reveal the main predictors of student dropout. However, most research has been focusing on individual student features, namely socio-demographic and academic risk factors (De Witte et al., 2013), turning dropout into an individual problem (Luyten et al., 2003). In particular research into the teachers' role in students' decision to quit school is rather scarce. Research considering the teachers, often focuses on students' perceptions of teacher support or student-teacher relations (Croninger & Lee, 2001; Lee & Burkam, 2003), neglecting that these perceptions may be coloured and not necessarily report accurately on the teachers' actual role. As vocational students appear most vulnerable for planning not to finish secondary education, it is important to know which risk factors play in this specific group. Therefore this study set as its objective to ascertain whether teachers' shared beliefs regarding students are associated with vocational students' intentions to quit school, irrespective of students' perceptions of teacher support.

A multilevel analysis for this group demonstrates that none of the traditional social and academic risk factors play a role anymore, once a student is enrolled in a vocational track. In vocational tracks, the probability of planning to quit, is not dependent upon gender, age, SES, immigrant status, ability, or retention. When taking into account students' sense of futility, even prior achievement is no longer predicting the intention to dropout of vocational students. This finding contradicts the statement of for example Tas and colleagues (2012) that main reasons for dropout in vocational high school are individual academic factors such as grade repetition and achievement. These findings may be due to the specific nature of the tracking system in Flanders. As discussed above, in Flanders the tracks are hierarchically ordered, placing the vocational tracks at the bottom. The finding that within the vocational track academic risk factors are without effect suggests that attending the vocational track in Flanders in itself is an academic risk factor for considering dropout. These students perceive that they have failed in the educational system, and therefore they are more likely to intend to quit prematurely. Not surprisingly, then, the most important predictor of vocational students' intention to dropout turns out to be their sense of futility. Students who have a stronger feeling that studying has no use for people like them, are more likely to say that they have the intention to quit. Moreover, also students' perceived teacher support and teachers' teachability culture are related to the intention to quit, with teachability culture

holding its impact even when controlling for students' perceptions of teacher support. Hence, it appears that teachers' self-reported beliefs are important for students' dropout in vocational education. This is a substantive finding, as it suggests that teachers have the power to counteract—be it only to a certain extent—the influence of the vocational track position. More specifically, when students in the vocational track are confronted with beneficial teacher expectations, they are less likely to consider dropping out prematurely. Teachers, therefore, hold the key in demonstrating to students that attending the vocational track is not equal to failing the educational system.

It is important to acknowledge the limitations of the current study. First, we should stress again that this is a cross-sectional study, which precludes the possibility of making causal claims. It is possible, therefore, that the direction of the effect is reversed—that is, that intention to dropout leads to lower teacher support and a lower teacher culture. As discussed above, it may be the case that students having decided to drop out of education eventually report more negatively about school-related manners in general, and about their relations with teachers in particular. This study accounted for this by investigating teacher-reported expectations, but we did consider the role of student-reported teacher support as well—which, admittedly, is the strongest predictor of the two. Moreover, we accounted for this by controlling for students' sense of futility, which enabled to investigate whether teacher expectations are not merely an answer to students' negative attitudes and that teachers' expectations really affect students' intention to dropout. We propose, however, that future longitudinal studies try to replicate the findings to support this interpretation of the direction of the effects. Moreover, longitudinal research allows to investigate actual dropout-behavior, instead of intentions to quit. A second limitation of this study is the way in which we have operationalized teacher expectations. By considering school-wide attitudes, we could not go into detail concerning the effects of individual teachers. A further objection against this operationalization of teacher effects is that we cannot distinguish between individual students or different groups of students within the same school: teacher culture of teachability is a collective idea about the teachability of the students as a group, and as such, pertains to all students at a school. It would be beneficial to have data from each teacher on his or her expectations for each student. However, this method of data collection would be very extensive and demanding of teachers, and may not be feasible in secondary education (see also Van Houtte, 2011, p. 84). Moreover, we contend that operationalizing teachers' expectations by means of a teacher culture at school has its merits. In secondary schools, it is more logical to investigate the role of teacher cultures than that of individual teachers' expectations, because students are confronted with a number of different teachers during one school year.

7. Conclusion

This study contributes to the existing knowledge on predictors of high school dropout by demonstrating that teachers beliefs about the teachability of students influences vocational students' intention to quit high school, irrespective of students' perceived teacher support and students' sense of futility. This finding underlines the importance of the school and more in particular the role of the teachers in explaining dropout of the most vulnerable group in secondary education, being the vocational students.

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