



One does not simply track students: the relationship between teachers' perceived public track regard and their job satisfaction in a context of rigid tracking

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Abstract

Although there is a wealth of research on the educational and broader outcomes of tracking in education, there is virtually no research that investigates teachers' track identities on such outcomes. Building on research that focuses on the determinants of teachers' job satisfaction, tracking outcomes and social categorization theory, this study tests the relationship between the perceived public regard of a teachers' track and their job satisfaction, in a Belgian context of within- (vocational, technical and general education tracks) and between-school tracking (multilateral versus categorical schools). Data of the Belgian SIS (School, Identity and Society)-survey, a large-scale dataset gathered in 2017, containing the self-reports of 324 teachers, clustered in 43 secondary schools is used to test particular hypotheses regarding this relationship. The results of a multilevel analysis show that the relationship between teachers' public track regard and their job satisfaction varies according to the track they teach and whether they work in a categorical or multilateral school. The findings highlight the importance of carrying out further research on tracked identities in education.

Keywords Teacher attitudes · Secondary school teachers · Statistical analysis · Belgium · Ability Grouping · Teacher job satisfaction

1 Introduction

Ability grouping in education and tracking as a grouping method have been at the center of debate for decades. Ability grouping stems from the idea that teaching students in homogeneous ability groups leads to better results through curricula and teaching methods that are adapted to the students' ability level (Hallinan et al.,

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2003). Tracking (US, Belgium) or streaming (UK) refers to a situation in which students are taught an entirely different curriculum depending on their ability group and preparing for disparate futures, while setting or banding refers to a situation in which students are differentiated in ability groups for specific subjects (Gamoran, 1992).

Previous research shows that students in the 'lower' technical and vocational tracks are disadvantaged, because these tracks are associated with lower quality of instruction (Page, 1991), lower levels of student motivation and can facilitate a culture of futility in its students (Saleh et al., 2005; Van Houtte & Stevens, 2015). Due to a generally lower societal valuation of non-academic tracks in knowledge-based societies, the choice for a 'lower track' is more often a negative one, instead of a choice based on interest and ability (Ainsworth & Roscigno, 2005; Boone, Seghers & Van Houtte, 2018). When lower track students study at the same school as academic track students they develop even stronger anti-school attitudes through increased status deprivation (Van Houtte & Stevens, 2009).

1.1 Teachers and student tracking: student characteristics and societal evaluation

Teachers also experience effects from ability grouping. First, due to the effects of tracking on students, teachers teaching in lower status tracks are more likely to experience a group of students that is motivationally and ethnically more diverse (Gamoran, 2010; Van Praag et al., 2015a), shows a higher incidence of deviant behavior among students (Van Houtte & Stevens, 2008) and is characterized by a culture of futility (Van Houtte & Stevens, 2010). This less study-oriented culture of their students leads to lower job satisfaction in vocational track teachers (Van Houtte, 2006b). Teachers change their expectations and behavior towards students based on track: they have lower expectations for 'lower track' students, develop a 'culture of futility', might try to create a more supportive environment in these tracks and shift away from a focus on instructional to more administrative and disciplinary tasks (Chmielewski et al., 2013; Hallinan, 1994; Kelly & Carbonaro, 2012).

Although research has focused on the effects of tracking on student and teacher outcomes, there is, to the best of our knowledge, almost no research that investigates how perceived society-wide judgements about tracks influence teachers who belong to such tracks. This possible association can be motivated by the observation that in many societies, lower tracks are perceived in a more negative way (Andersen & Van de Werfhorst, 2010; Smet, 2010) and the related idea that track-membership (as a student or a teacher) constitutes a clear societal identity (Hyland, 2002). The theoretical concept to study this public evaluation is public regard, meaning 'the extent to which individuals feel that others view their educational track positively or negatively' (Sellers et al., 1998, adapted for educational track). The influence of public regard is especially plausible for teachers since it has been shown by Ihme and Möller (2015) that future teachers allow their self-assessment to be affected by public evaluation.

This article focuses on this gap in the literature by studying the relationship between teachers' perceived public track regard and their job satisfaction in a Belgian context of within and between school tracking. In addition, by investigating the effect of (perceived) society-wide evaluations of tracks on teacher's job satisfaction, this study adds to existing research that focuses primarily on school and classroom characteristics and processes in explaining variance in teachers' job-satisfaction.

2 Theoretical framework

2.1 Teachers' job satisfaction

Teachers job satisfaction is seen as the teacher's assessment of his/her (emotional) need fulfillment in the present (Evans, 1998, 2001). The importance of job satisfaction is twofold. On the one hand it influences teachers' teaching practice and how they bond with students, since lower teacher satisfaction decreases teachers' involvement in maintaining positive interactions with their students (Sava, 2002). On the other hand, research shows that teachers' job satisfaction affects their career mentality. Lower job satisfaction can result in higher job turnover (Van Dick et al., 2004a, 2004b) and the stressors that result in lower job satisfaction can also lead to burn-out (Skaalvik & Skaalvik, 2009; Wolpin et al., 1991). At times it has been suggested that teachers' job satisfaction might also influence student achievement (Miller, 1981), but recent work by Caprara et al. (2006) and Kincade (2013) found no relation between teacher job satisfaction and student achievement.

Based on previous research we can identify three categories of factors that influence teachers' job satisfaction: personal, structural and cultural factors. Personal factors include, among others, teachers' instructional performance (Klusmann et al., 2008), the feeling of contributing to the growth of students (Zembylas & Papanastasiou, 2006), the importance of working with youth and love for the subject matter taught (Lortie & Clement, 1975), the perceived view of society on teachers (Rhodes et al., 2004), the quality of the relationships teachers develop with principals, students and parents (Johnson et al., 2012; Taylor & Tashakkori, 1995; Van Maele & Van Houtte, 2012), and their sense of self-efficacy (e.g., Judge & Bono, 2001; Caprara, Barbaranelli, Borgogni & Steca, 2003; Collie et al., 2012), referring to how competent they feel in performing the major work tasks, which also heightens the commitment to the teaching job (Coladarci, 1992).

School-structural factors connected with teacher job satisfaction entail school facility quality like proper heating, clean classrooms and quality of learning material (Buckley et al., 2005) and work conditions like organizational support (Hulpia et al., 2009; Lent et al., 2011), job demands (Kittel & Leynen, 2003) and administration control (Ma & MacMillan, 1999).

Lastly there are cultural factors shown to be related to teacher job satisfaction, for which we define culture as a fairly stable set of taken-for-granted assumptions, shared beliefs, meanings, and values that form a kind of backdrop for action (Smircich, 1985). First there are (school-)culture factors shaped among colleagues, like the balance between autonomy and collegiality between teachers (Clement &

Vandenberghe, 2000). Secondly there are factors directed by the school leadership, such as the principal leadership style steering the school culture (Anderman, Belzer & Smith, 1991; Bogler, 2001) and the opportunity for decision participation (Taylor & Tashakkori, 1995). Thirdly there are cultural (dis)satisfiers due to the student composition, as for instance, racial mismatch leads to less satisfaction in white teachers (Mueller et al., 1999; Renzulli et al., 2011; Stearns et al., 2014). Furthermore, as studied in Flanders, tracked student groups might result in more satisfied teachers in the academic track, because of the more study-oriented student culture in the academic track compared to the other tracks (Van Houtte, 2006a). Lastly there are cultural factors which cannot be assigned to one specific group within the school, such as a supportive school culture and a willingness from the school to innovate (Aeltermans, Engels, Van Petegem & Verhaeghe, 2007) and the openness of the school culture to implement social-emotional learning (Collie et al., 2012).

Most research on teachers' job satisfaction focuses on a multitude of personal factors, coming from the personal assessment of and experiences on the job. In contrast, there is less variety in structural (dis)satisfiers, being mostly school facility factors. The research into school cultural (dis)satisfiers shows influence from explicit school policy, student body composition and implicit interactions between different school actors.

2.2 Ability grouping

Ability grouping is a common practice in education. A brief overview by Maaz et al. (2008) shows that different nations choose different grouping systems. The largest differences are between the extent of differentiation (tracking, banding or setting), implicit or explicit tracking and within or between school tracking. Ability grouping practices lead to different student compositions per track in terms of social background, ethnicity and study orientation (Tan, 1998; Van Houtte, 2006a). Borman and Dowling (2008) showed the importance of schools' socioeconomic composition, average student achievement level and schools' racial/ethnic composition on teachers' job retention through job satisfaction. Tracked education is characterized by a convergence of more lower socio-economic status students and more ethnic minority students in the lower tracks (Gamoran, 2010). So, the student composition per track differs in a way that has already been shown to influence teachers' job satisfaction. Students' more diverse socio-economic, ethnic and educational background in technical and vocational education makes us hypothesize that academic track teachers will have the highest job satisfaction, followed by technical and eventually vocational track teachers.

2.3 Social Categorization Theory on teachers' professional identities

Beijaard et al. (2004) showed that a professional identity consists of several sub-identities for teachers. These include, for example, being a subject matter specialist, didactical expert and pedagogic expert and are performed in social contexts like interacting with the student body, their colleagues or the school organization

(Beijaard et al., 2000; Vloet, 2009). Aside from these teaching specific identities we add the tracking context as an organizational identity within the global teacher identity. The place of track identity in the teaching profession can be integrated in the Social Categorization Theory (SCT) (Tajfel, Turner, Austin & Worchel, 1979; Turner, Hogg, Oakes, Reicher & Wetherell, 1987). The SCT states that an individual can identify him- or herself (1) with his or her own career (personal level), or, on a group level, with (2) different subunits within his/her organization (e.g., work groups, departments), or (3) with the organization as a whole. We shall put aside career identification since we do not expect this to differ according to the educational tracks a teacher identifies with. In this study the track can be considered as a subunit within the educational organization.

Van Dick et al., (2004a, 2004b) already applied the SCT in the German educational context. They distinguish three dimensions of social categorization: (1) a cognitive component, which is the knowledge of being a member of a certain group, (2) an affective dimension, which is the emotional attachment to that group, and (3) an evaluative aspect, which describes the value connotation assigned to that group from inside and/or outside. These can be linked to concepts more often used in identity research, for which we rely on the overview on collective identity theories by Ashmore et al. (2004): (1) self-categorization as identifying yourself as part of a particular social grouping, (2) sense of belonging which is seen as emotional attachment and affective involvement with the group or category one is a member of and (3) private and public regard. These latter concepts, developed by Sellers et al. (1998) are based on the evaluative component of identity, where private regard is the self-evaluation of one's own social category and the public regard is the perceived evaluation of one's social category by others.

Van Dick and colleagues (2004) found that teachers' job satisfaction was predicted by the evaluative components of team and career identification and by the affective dimension of school and occupational identification. This shows that collective professional identities have an influence on job satisfaction. The manner in which they do, depends on the identities a teacher attaches him- or herself to, the dimension through which he/she views that identity (cognitive, affective or evaluative) and on the context which gives more salience to certain identities. Van Dick and colleagues did not explicitly include the tracked educational context in their study so we cannot make assumptions about tracks based on their results. Yet, it could be argued that tracking identities can be studied through the SCT-framework since the different tracks (group level) are evaluated differently in terms of prestige by the public and therefore elicit differential public regard.

2.4 Public track regard

One of the factors that contributes to teachers' job satisfaction is the public regard of teaching (Rempel & Bentley, 1970). Ihme and Möller (2015) showed that future teachers' performance on a test dropped when confronted with negative stereotypes, whereas psychology students did not get affected by stereotypes. Rice (2005) suggests that this more influenceable self-perception derives from the fact that the

teaching profession has little quantifiable markers of quality. The insecurity of teachers about their achievements and functioning causes them to attach extra importance to outsider evaluation.

Public track regard as the theoretical concept to capture this public evaluation has its origins in collective identity research in a racial context. The choice to link track identity with racial identity theory is made since both show differences between groups in terms of privilege, social esteem and differential levels of affective membership. This public regard overlaps with the public side of the evaluative aspect of the SCT as studied by Van Dick et al. (2004a, 2004b). A public opinion on educational tracks is possible since tracks have fixed boundaries and often a clear public hierarchy.

In a knowledge-based society the highest value is attached to academic education, followed by technical education and, lastly, vocational education. Yet the size of the status differences differs at the country-level. In a 14-country comparison Andersen and Van de Werfhorst (2010) examined the differences in future occupational status between technically/vocationally educated students and those just finishing general secondary education. Belgium and the Netherlands show an average gap in occupational status, with technically and vocationally qualified students attaining less labor market status. This divide is significantly larger than the one in Scandinavian countries (Sweden and Norway) and Germany, where there is barely a difference. Eastern European labor markets on the other hand have double the gap in educational status between general and technically/vocationally educated students compared to Belgium.

The students' public status differences could affect the teachers' job satisfaction if teachers connect on a personal level with the negative/positive societal perception about their students. A way in which this societal image of the educational track can affect the teacher is through reflected appraisal, which states that people allow their self-perception to change based on what they assume other people think of them (Stryker & Serpe, 1982). Whether someone allows the reflected appraisal to affect him/her might depend on the possibility for self enhancement, meaning that people attach importance to social identities that provide them with positive self-esteem (Hogg, 2006).

Based on the findings stated above and the sensitivity of teachers toward external evaluation we hypothesize that a higher public track regard will result in a higher job satisfaction due to self enhancement.

2.5 School structure

Educational grouping literature traditionally makes the distinction between within school ability grouping (in for example the United States, United Kingdom and Australia) or between school tracking in which each school provides one track (e.g., The Netherlands and Japan) (Chmielewski, 2014; Leicht, 2013; Ono, 2001). Yet in countries such as Belgium and Germany tracks are organized both between schools and within schools. So called 'categorical schools' provide one track per school (academic or technical/vocational) and multilateral schools (or 'Gesamtschule' as they

are called in Germany) have more than one track in the same school. Yet the distinction between tracks persists and there is no education in heterogeneous or mixed-ability groups (Chmielewski, 2014; Van Houtte et al., 2012).

This distinction between multilateral and categorical schools may have an influence on teacher job satisfaction when we consider that in multilateral schools pupils and teachers from the lower esteemed vocational track (informally) interact with those of the higher regarded technical or highest regarded academic track. Because of this the evaluative component of the SCT takes prominence with the multilateral school context providing confrontation with other track identities and heightening the visibility and salience of the tracked identity (Van Dick et al., 2004a, 2004b). This is in line with the reference group theory which sees visibility as a first necessary requirement for a group identity to have an influence on someone's norms, values and self-evaluation (Kelley, 1952, as cited by Richer, 1976).

The second requirement, meaningfulness of the group, is less clear but we assume this holds true most for the academic track teachers since they can gain positive self-evaluation from this comparison (Schwalbe & Staples, 1991). Van Dick (2001) adds that self-categorization is a necessary requirement for people to be affected by the evaluative or affective identification with identities. In multilateral schools teachers will be reminded of their tracked identity on a daily basis. In categorical schools it is less clear if they will attach as much significance to their tracked identity as those in multilateral schools or whether the school identity might take prevalence.

Taking the above into account we hypothesize that the effect of the public regard of tracks on job satisfaction will be amplified in the multilateral schools in comparison to the categorical schools since the (evaluative) differences in track identities are made clearer through interaction. This holds for both the positive public regard effects in academic track teachers and the negative effects in vocational track teachers.

2.6 Research context: Belgium

2.6.1 Secondary education structure

In the first two years of secondary education pupils have the choice between a general stream (the A-stream) and a remedial stream (B-stream) for those who did not successfully obtain a qualification in primary education. The A-stream is in theory a common program for all students. Yet students have to choose elective courses in the first year already like Latin, modern sciences or technology, effectively preparing them for the official track choice they will make after the second year (Van Praag, Boone, Stevens & Van Houtte, 2015a). In an informal way, social characteristics play a part in the choice of these options. Boone and Van Houtte (2012) showed how rational action interpretations by parents cause more students from low SES backgrounds to not choose the academic stream regardless of educational performance.

From the third year onward, students are divided in tracks that they pick based on their educational interest but also based on the grade they obtain after two years. For the third until the sixth year of secondary education in Belgium (Grade 9–12

in the USA; year 10–13 in the UK), students choose between 4 tracks: academic, arts, technical or vocational. These are the same for both Flanders and Wallonia, the two regions of Belgium with their own ministry of education, being sampled in this study (Centrum voor Leerlingenbegeleiding, 2019; Fédération Wallonie-Bruxelles, 2019; Vlaams Ministerie van Onderwijs en Vorming, 2019). The academic track is intended to give students a preparation to start higher education. The technical track has both general and technical-theoretical courses. The arts track offers art courses and a general education. Because of the small student population in the arts track (only 2.2 percent of the student population, Vlaamse Overheid, 2019a, 2019b), this track will not be discussed any further in this paper. The vocational track focuses on training their students for a craft (Vlaams Ministerie van Onderwijs en Vorming, 2019).

A typical feature of tracking in Belgium is the so called ‘cascade’, which relates to the process where students in secondary education ‘aim high’, by trying the more academic courses and tracks first and eventually ‘go down’ to ‘lower’, more technical courses and tracks. This (parental) choice is heavily influenced by societal assumptions with respect to the tracks involved (Boone, Seghers & Van Houtte, 2018). This hierarchy not only indicates the curriculum but also the societal status attributed to the tracks (Smet, 2010). In practice there is barely any upward track mobility in Belgium, confirming the cascade movement pattern and status differences. The clear track hierarchy with its rigid boundaries allows for an evaluation of tracks by the general public and subsequently of the students within the tracks. If teachers internalize their track identity, they are subject to the same evaluation as other members of their track.

2.6.2 National context, tracking and teacher identity

The structural and employment factors of Belgian secondary education promote loyalty to a track without eliciting internal competition between teachers and as such should strengthen the (affective) bond of teachers with their track over time. To highlight which aspects of Belgian education facilitate this bond between track and teacher we make a comparison to teacher tracking in the United States, where there is already some research on teachers’ careers taking the track context into consideration. The United States educational literature views ability grouping for teachers as a competitive model where the class you teach is based on your performance relative to your colleagues (Finley, 1984; Kelly, 2004; Talbert & Ennis, 1990). This is mostly because there is only within school tracking with teachers not being bound to a specific track for multiple years or setting where students are differentiated within their class (Gamoran, 1992). There are also several job positions within a school(group) a teacher can be officially promoted to afterwards. Therefore, a competitive mode within the same school with competition between teachers is enabled.

In a tracked system like Belgium we do not assume a competition between teachers for coveted classes or pupils because firstly, in categorical schools there is no internal upward or downward mobility between tracks. Secondly, even multilateral schoolteachers are often bound to their track by the track specific course they teach. Thirdly, Elchardus and colleagues (2010) observed that Flemish teachers search less

for promotions or higher labor positions than comparably educated peers. As such the teacher career is typically seen as 'flat' with mostly horizontal mobility (Becker, 1952). Fourthly, there is no mandatory central examination in or between schools so performance comparisons between teachers cannot be done objectively. In other ability grouping systems (like in the US) teachers attain status from the classes they teach, which can change on a yearly basis, and the results they achieve with their students. They also search (upward) mobility opportunities more quickly to advance their career, therefore seeing track or set membership as a (temporal) validation of their own merit (Finley, 1984). The track identity of Belgian teachers is more likely to become a fixed part of their professional identity over time because of the lack of 'ambitious' mobility to other job positions in the school system. The system of 'lifelong employment' (Kelchtermans, 1993), which rewards teachers with employment security if they stay within the same school(group) for the duration of their career, further encourages track loyalty. Lastly the rigid tracking could stimulate conscious track membership for teachers from the start of their career. This track choice can be made through choosing track specific subject matters in the teacher education or looking for schools that offer specific tracks when applying to schools for employment.

What unites the academic and vocational track but sets the technical track apart is the clarity of their public identity in Belgium. Where the academic track is widely regarded as the highest achieving, with a clear orientation to higher education, on top of the cascade and with more students from a higher socio-economic status background, the vocational track has its finality in the labor market, with a mixture of students who achieve the least academically, are less aligned with the ideas of academic achievement and have a more diverse social background (e.g., Van Houtte & Stevens, 2010; Van Praag, Boone, Stevens & Van Houtte, 2015a; Vlaams Ministerie van Onderwijs en Vorming, 2019). Both of these tracks offer their own challenges for teachers, but they have fairly clear identities. The profile of the technical track is less straightforward: it has a dual finality in both higher education and the labor market, is for some students not their final track but an intermediate step in the cascade effect and the social mixture is less predictable as well.

3 Methodology and methods

3.1 Sample

The data was gathered from September to December 2017 by inviting 1600 teachers across 64 secondary schools to take part in an anonymous paper-and-pencil questionnaire. The schools were selected by means of a multistage sampling with a focus on attitudes about cultural diversity as well as educational diversity present within the overall Belgian educational system. Therefore, in a first stage, urban areas with a history of migration were randomly selected. For each city, the schools were divided in strata based on the combination of school tracks that are offered. This led to a division of purely academic schools, technical-vocational schools and schools offering both an academic track and a technical or vocational track. Afterwards, schools

were randomly selected from each stratum. The principals in all schools distributed an information letter in Dutch and/or French to all the teachers teaching in the third year since there was also data-collection on third year students for the overarching research project, informing them about the research theme, the day the survey would be distributed and the anonymous and voluntary participation in the study.

The survey was personally distributed by the researcher to the third-grade teachers, the researcher explained the overall research theme and goal during a meeting in the staff room. Every teacher received the questionnaire together with a return-envelope to guarantee anonymity. Teachers who were absent received the survey, the envelope and information in their mailbox. The teacher survey received a lot of critique, which mainly had to do with the political sensitivity of certain survey questions and asking teachers to explicitly acknowledge or reflect on stereotypes. This pushback does not relate to the tracking items used, so content-wise we do not expect bias in terms of the current research topic of this paper, yet it does reflect in the response rate. In total, the cooperation of 324 teachers across 43 schools was considered valid for analysis. As a result, a response-rate of 20 percent was achieved. Caution in interpretation is advised, since there are some divergences between our sample and the teacher population: an overrepresentation of youngest teachers (25 percent of survey compared 13.32 percent in the workforce) and an underrepresentation of teachers 50 to 59 years old (16.5 percent in survey, 24.7 percent in the workforce) (Vlaamse Overheid, 2019a, 2019b). This might have an influence, yet current findings on the effect of years of experience on job satisfaction is inconclusive (e.g., Crossman & Harris, 2006; Klassen & Chiu, 2010; Liu & Ramsey, 2008; Van Houtte, 2006b). The sex distribution of our sample is in line with the teaching population: 38.3 percent of the teachers were male ($N=92$), 61.7 percent were female ($N=148$) in the survey, since in 2017–2018 63 percent of Flemish teachers were women (Vlaamse Overheid, 2019a, 2019b). In terms of gender division per track and subject matter the government does not provide us with accurate information to compare this with the sample.

3.2 Variables

Teacher job satisfaction was measured by using the Job Descriptive Index (Smith et al., 1969). This scale consists of 18 items. The scale reflects teachers' general satisfaction with their teaching work. The items, after being recoded when necessary, were rated from *absolutely disagree* (1) to *definitely agree* (5), with the highest score indicating the highest level of job satisfaction. The job satisfaction scale was obtained by calculating the sum score (ranging from 18 to 90) across the 18 items (Table 1, $N=235$; $M=62.89$, $SE=6.94$, Cronbach's Alpha=0.66).

The *track membership of teachers* is measured by a self-reporting item in which teachers could state which track they associate themselves most with. There are 243 teachers who associate themselves with one track, being academic ($N=103$), technical ($N=74$) or vocational ($N=66$). Some teachers indicated that they cognitively associated with several tracks. The majority of these teachers combined the academic and technical track ($n=38$), followed by a group of teachers that instructs

Table 1 Teacher job satisfaction, public track regard, school structure, years of teaching, sex subject matter – frequencies, means, standard deviations, comparisons by tracks

Variable (N = 243)	Total		Academic (N = 103)		Technical (N = 74)		Vocational (N = 66)		Difference F or Cramer's V
	Mean or %	SD	Mean or %	SD	Mean or %	SD	Mean or %	SD	
Teacher job satisfaction (N = 235)	62.89	6.94	61.67	7.22	62.90	6.92	64.75	6.19	3.975*
Public track regard (N = 234)	10.27	2.90	12.41	1.98	9.64	2.25	7.61	2.14	105.707***
School structure (N = 228)	39.9		60.4		19.0		28.1		0.208**
Years of teaching (N = 243)	13.52	10.62	13.33	10.89	15.49	10.69	11.86	9.94	2.100
Sex (N = 242)	38.4		54.5		28.8		24.2		0.285***
Subject matter (N = 241)	50.6		40.8		57.5		58.5		0.170*

all three tracks ($n=19$). Due to limitations of the measurement instrument of ‘public track regard’, the teachers who indicated multiple tracks were omitted from the analysis.

To measure the *public track regard of teachers*, they were asked to evaluate 3 statements on how students from other tracks evaluate the track in which they teach. The items were formulated as follows: (1) pupils from other tracks look down on my track (2) pupils from other tracks have a higher esteem than pupils in my track (3) pupils from different tracks see the pupils from my track as social outcasts. These items were measured by a 5-point Likert-scale rating from 1 being ‘absolutely disagree’ to 5 ‘definitely agree’ with a high score equaling a high public regard. The public track regard scale was obtained by calculating the sum score across the 3 items (ranging from 3 to 15) (Table 1, $N=234$; $M=10.27$; $SE=2.90$, Cronbach’s Alpha=0.84). Divided per track this gives the following mean scores for teachers: academic track 12.41 ($SD=1.98$), technical track 9.64 ($SD=2.25$) and vocational track 7.61 ($SD=2.14$), with all three groups differing significantly from each other at the 5 percent level.

The school structure indicates whether a school is categorical or multilateral. Strictly, the former are schools offering only one track, while multilateral schools offer multiple tracks on the same campus. To create this division, the student-data was followed and not the official government data since the latter does not take into account schools’ different campuses. There are 16 categorical schools/campuses offering one track ($N=91$ teachers; 12 academic, 2 technical and 3 vocational schools/departments) in our sample and 21 multilateral schools/campuses ($N=137$) offering a combination of tracks (academic-technical, academic-vocational, technical-vocational, academic-technical-vocational). In previous research, the Belgian technical-vocational schools are considered as categorical (e.g., Van Houtte & Stevens, 2015), which reflects the most common way to organize technical and vocational education. For the purposes of our research, however, they are categorized as multilateral schools since our focus is on the contacts of teachers with those from other tracks in the same school, not on how schools are generally organized.

We measured *years of teaching* in general and not age to account for people moving into the teaching profession after a career in a different sector. The answers are skewed to the right with 35.3 percent of teachers reporting 6 years of experience in schools or less, meaning that teachers with less experience are overrepresented in our sample. This is a moderate skewness of 0.704. (Table 1, $N=241$; $M=13.59$; $SE=10.62$).

The *sex* distribution per track is: a majority of male teachers in the academic track, (55 men to 46 women), where in the technical and vocational track there were far more female teachers in our sample (21 men to 52 women and 16 men to 50 women respectively). We have no explanation for this strong difference and cannot state with certainty if it is attributable to the sampling or a reflection of the educational landscape since the government does not provide detailed information of teacher sex per track.

The relevant divide in *subject matter* for this research is whether teachers teach a subject that is specific for their track or a general subject, since teachers might develop a stronger connection with their track if the subject matter is more clearly

connected with the track. Being a track (non-)specific subject teacher is measured by a self-reported yes or no question. A track specific subject teacher, teaching a course that is typical for his/her track (e.g., in Social Technical Sciences that would constitute the courses on natural science, social science and food), was coded as 0 ($N=122$), a general subject teacher as 1 ($N=119$). For the ease of reading this will be referred to as 'subject matter' from here on.

3.3 Design

To start with, we performed an ANOVA to examine whether there are differences in job satisfaction between the tracks, testing the track satisfaction hypothesis. A second ANOVA was run to test whether there is a difference in terms of variance of the public regard measure between the tracks. Since we theoretically assumed that the academic track would be esteemed the highest, vocational the lowest and the technical track holds an intermediate position, it might be the case that the technical track is the only track truly showing variance in public regard, whereas the other two are clearly perceived as either positive or negative. This would influence how the results of the public regard measure should be interpreted. The Levene's test for homogeneity of variance analysis gives us clarity on these possible differences in variance. Thirdly, we ran a multilevel null model to divide the variance between the teacher and the school level, informing our choice for multilevel analysis in subsequent models. This and all subsequent multilevel models are run with HLM6.

The self-enhancement hypothesis will be studied through a stepwise multilevel regression model with job satisfaction as the outcome variable (Table 2). Model A tests for the tracks by adding dummies for the technical and vocational track, with each having the academic track as reference category. Model B adds the control variables sex, years of teaching and subject matter. Model C includes public track regard and Model D adds the interaction terms of technical and vocational track with public track regard.

The school type interaction hypothesis has school structure as its central concept, since we study the effect of school structure on the relationship between public regard and job satisfaction, for each track separately (Tables 3 through 5). For technical track teachers we created dummy variables which compare technical track teachers who work in categorical schools to those who work in multilateral schools and encounter academic track teachers on the one hand or vocational track teachers on the other hand. This should allow to discern if technical track teachers experience differing effects of public track regard depending on which colleagues they interact with. The teachers in academic-technical-vocational schools were omitted because the different effects of interacting with academic and vocational counterparts will probably cancel each other out. Model A contains the three control variables (years of teaching, gender and subject matter), model B adds the public track regard measure, model C school structure at the school level and model D the cross-level interaction between school structure and public track regard.

For the models testing the self enhancement hypothesis the continuous variables public track regard and years of experience are centered on the total sample. The

Table 2 The Association between Track, Sex, Subject Matter, Years of Teaching, Public Track Regard and Job Satisfaction: Results of Stepwise Two-level Multiple Regression (HLM 6) with Job Satisfaction as Outcome

Variables	Model A	Model B	Model C	Model D
Intercept	61.821***	61.428***	61.141***	61.658***
Technical track (ref. = academic track)	1.021 (1.200)	0.885 (1.033)	1.464 (1.432)	-16.666** (5.262)
Vocational track (ref. = academic track)	2.693* (1.250)	2.115 (1.252)	4.118* (1.919)	-0.196 (5.180)
Sex (ref. = male)		2.349** (0.815)	2.086* (0.830)	2.435** (0.783)
Subject matter (ref. = track specific)		-1.210 (0.625)	-1.140 (0.747)	-1.116 (0.714)
Years of teaching		0.048 (0.048)	0.043 (0.051)	0.049 (0.054)
Public track regard			0.439 (0.291)	-0.105 (0.311)
Technical track*public track regard				1.710*** (0.455)
Vocational track*public track regard				0.243 (0.543)
<i>Variance components</i>				
Intercept	2.500	8.976	1.066	1.577*
Technical track	7.786			
Vocational track	10.856			
Sex		3.241		
Subject matter		0.213		
Years of teaching		0.010*	0.016	
Public track regard			0.359	

* $p < 0.05$.; ** $p < 0.01$.; *** $p < 0.001$

school type interaction hypothesis is studied for each track separately, so the continuous variables are centered on these groups. In all analyses we treat variance components randomly to start with, but we fix them in subsequent models when they are non-significant ($p > 0.05$). This choice is informed by our dataset: due to the at times lower number of cases per school, we do not wish to burden the power of our data if it does not give extra information to interpret.

4 Results

The ANOVA on teachers' job satisfaction per track [$F(2, 232) = 3.975, p = 0.020$] indicates that there are two contrasting tracks: the vocational teachers are significantly more satisfied with their job than their academic counterpart ($p = 0.016$). The technical track teachers do not differ significantly from the academic track

Table 3 The Association between Public Track Regard, School Structure and Job Satisfaction: Results of Stepwise Two-level Multiple Regression on Academic Track Teachers (HLM 6)

Variables	Model A	Model B	Model C	Model D
Intercept	61.723***	61.825***	62.497***	62.510***
<i>School Level</i>				
School structure (ref. = categorical schools)			-2.292 (1.785)	-2.682 (1.746)
<i>Teacher level</i>				
Sex (ref. = male)	1.294 (1.460)	0.933 (1.535)	1.165 (1.429)	1.434 (1.325)
Subject matter (ref. = track specific)	-0.220 (1.405)	0.405 (1.386)	-0.054 (1.386)	-0.038 (1.407)
Years of teaching	0.066 (0.091)	0.098 (0.092)	0.100 (0.089)	0.090 (0.098)
Public track regard		0.100 (0.371)	-0.132 (0.356)	-0.311 (0.501)
School structure*public track regard				0.167 (0.705)
<i>Variance components</i>				
Intercept	26.937*	33.748*	24.566**	17.539***
Sex	9.401	12.658*	6.548	
Subject Matter	0.565			
Years of teaching	0.111***	0.116***	0.101**	0.135***
Public track regard		0.287		

* $p < 0.05$.; ** $p < 0.01$; *** $p < 0.001$

teachers ($p=0.745$) or the vocational track teachers ($p=0.351$). Secondly, the Levene’s test for homogeneity of variance test on public regard compared between the three tracks was not significant ($p=0.608$), meaning that there is no significant difference in the variance between the tracks. Thirdly, the multilevel null model showed significant variance at the school level in job satisfaction. The intraclass correlation coefficient indicated that 7.14 percent ($p=0.013$) of the total teacher job satisfaction is based at the school-level, therefore multilevel analysis is advised to account for possible school-level effects.

Model A in the multilevel modelling (Table 2) confirmed what is shown in the ANOVA: the vocational track teachers are significantly more satisfied with their job than their academic counterparts. This effect disappeared when the control variables were added (model B) but returned when adding public track regard in model C. Model B showed a significant effect of gender, with women being more satisfied than men. This gender effect remained, regardless of adding public track regard in model C. Public track regard is not significantly related to job satisfaction in general. Model D shows that public track regard does have different effects for the different tracks. The significant interaction term states that technical track teachers have a significant positive effect of public track regard, whereas the

academic and vocational teachers do not. In model D the technical track teachers are significantly less satisfied than their academic counterpart when controlling for the effect of public track regard on technical track teachers. Only the effect of years of experience on job satisfaction differed significantly between schools (variance components) in model B.

The multilevel model for the academic track showed no significant associations with job satisfaction (Table 3). Based on the variance components we do see that job satisfaction differs significantly between schools and so does the effect of teacher experience on job satisfaction. This model disproves the school type interaction hypothesis for the academic track, since the effect of public track regard is not significant, nor is its interaction with the school structure.

The analysis of the technical track (Table 4) shows a significant positive influence of being a track specific subject matter teacher on the job satisfaction of technical track teachers compared to their general subject colleagues, in every model. Sex and years of teaching experience are not significantly associated with job satisfaction.

Table 4 The Association between Public Track Regard, School Structure and Job Satisfaction: Results of Stepwise Two-level Multiple Regression on Technical Track Teachers (HLM 6)

Variables	Model A	Model B	Model C	Model D
Intercept	63.046***	62.939***	62.306***	62.123***
<i>School level</i>				
School structure Cat < > Tech/Voc. (ref. = cat school)			0.933 (1.675)	1.040 (1.670)
School structure Cat < > Acad/Tech. (ref. = cat school)			1.149 (2.327)	2.721 (2.799)
<i>Teacher level</i>				
Sex (ref. = male)	1.695 (1.961)	1.579 (1.535)	1.608 (1.548)	1.723 (1.548)
Subject matter (ref. = track specific)	-3.460* (1.792)	-3.696* (1.500)	-3.692* (1.503)	-3.497* (1.515)
Years of teaching	-0.089 (0.092)	-0.111 (0.070)	-0.108 (0.071)	-0.115 (0.072)
Public track regard		1.125* (0.484)	1.159* (0.486)	0.427 (0.822)
PubReg* CAT < > Tech/Voc				0.908 (0.994)
PubReg* Cat < > Acad/Tech				2.337 (1.730)
<i>Variance components</i>				
Intercept	5.323	1.675	1.055	0.800
Sex	2.084			
Subject Matter	0.512			
Years of teaching	0.016			
Public track regard		1.595*	1.498*	0.962*

* $p < 0.05$.; ** $p < 0.01$ *** $p < 0.001$

School structure has no significant effect either. Public track regard has a positive significant effect on teachers in models B and C but, when adding the interaction terms with school structure, this significance disappears in model D. The effect of public track regard on teachers' job satisfaction differs significantly between schools, as indicated by the variance components. Yet this school level difference is not caused by the difference between categorical and multilateral schools, as this variance component remains significant in models C and D with the addition of school structure. The interaction between school structure and public track regard is not significant in any direction. Our findings disprove the school structure hypothesis for the technical track.

The analysis for the vocational track (Table 5) show that neither public track regard nor school structure have a significant effect (model B and C respectively). The interaction between school structure and public track regard is significantly positive (model D), meaning that teachers in multilateral schools show a positive correlation between public track regard and their job satisfaction, whereas for teachers in categorical schools there is no significant association between public track regard and job satisfaction. Of the control variables in the vocational track model (Table 5), only sex shows a significant effect in which female teachers are more satisfied,

Table 5 The Association between Public Track Regard, School Structure and Job Satisfaction: Results of Stepwise Two-level Multiple Regression on Vocational Track Teachers (HLM 6)

Variables	Model A	Model B	Model C	Model D
Intercept	61.268***	61.384***	60.898***	60.831***
<i>School level</i>				
School structure (ref. = cat schools)			0.219 (2.088)	0.372 (1.851)
<i>Teacher level</i>				
Sex (ref. = male)	4.086* (1.772)	3.910* (2.422)	4.724** (1.713)	4.839** (1.656)
Subject matter (ref. = track specific)	-0.324 (1.385)	-0.326 (1.398)	-0.358 (1.495)	-0.120 (1.445)
Years of teaching	-0.007 (0.090)	-0.091 (0.091)	0.011 (0.080)	-0.010 (0.076)
Public track regard		-0.129 (0.411)	0.258 (0.359)	-0.571 (0.492)
School struc*public regard				1.599* (0.663)
<i>Variance components</i>				
Intercept	22.151*	2.676	6.235*	3.661
Sex	6.983			
Subject Matter	1.116			
Years of Teaching	0.031*	0.030		
Public track regard		0.381		

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

across all models. These findings do show proof for the school structure hypothesis in the vocational track.

5 Discussion

The central objective of the present study was to examine if teachers' job satisfaction was influenced by tracked education, through the public regard of the track a teacher teaches, in a context of within and between school tracking. The track satisfaction hypothesis stated that academic track teachers would be the most satisfied and vocational track teachers the least for a myriad of reasons. The self-enhancement hypothesis suggested that job satisfaction would be influenced by public regard. And the school type interaction hypothesis assumed that the effects of public track regard would be amplified in multilateral schools compared to categorical schools through meaningful interaction with colleagues highlighting status differences. Our results show that the track satisfaction hypothesis cannot be confirmed. The vocational track teachers are the most satisfied, not the academic track teachers, which contradicts previous research on job satisfaction in teachers (e.g., Borman & Dowling, 2008; Van Houtte, 2006b). These diverging results do raise questions. Looking at the rather small number of participants in our study there might have been a sampling bias, with more satisfied vocational track teachers being sampled more than in previous research. This could be attributed to an overrepresentation of female vocational teachers, who are more satisfied than their male colleagues. The gender difference only being significant in the vocational track could come from the fact that women are less sensitive to status differences than men (Schwalbe & Staple, 1991). The self-enhancement hypothesis is partly confirmed. Technical track teachers allow the public opinion to positively influence their job satisfaction. The school type interaction hypothesis is confirmed in vocational track teachers, since categorical school teachers experience no effect from public regard and multilateral school teachers experience a positive effect.

According to the self-enhancement hypothesis, the academic track teachers were expected to experience the largest benefits from the public esteem their track has, yet they show no significant impact of public track regard on their job satisfaction. An explanation as to why academic track teachers do not show results for public track regard, although their technical track counterparts do, is that they simply might not consider their track membership as an important collective identity (Kelley, 1952, as cited by Richer, 1976). This lack of importance might have to do with a lack of awareness. As Doane (1997) stated in terms of ethnicity, the dominant group (in this case the academic track) can take their position for granted and not be consciously aware of their identity, since they consider this as 'the norm'. As a result, they do not draw much satisfaction from how they think others look at them and it remains a 'hidden identity', especially if it is not contested or judged. Future research could further explore this hypothesis by considering other dimensions of teachers' track identities, such as the centrality of these identities for teachers from different tracks (Sellers et al., 1998).

The technical track teachers are the only group that show a significant influence of public track regard on their job satisfaction. Through the ‘homogeneity of variance analysis’ we ruled out the possibility that they are the only group to experience variations in how the public perceives them. This might have been the case since they hold an intermediary position in the academic status hierarchy, leading to a less uniform societal judgement than the highly esteemed academic and lower esteemed vocational track. Yet our results show that there is no significant difference between the tracks in the variance of experienced public track regard, so the explanation for the effect of public track regard has to be found in the interpretation of public regard by the technical track teachers.

The ‘uncertainty reduction hypothesis’ can explain why technical track teachers’ job satisfaction is influenced by how they think society looks at them. This theory predicts that people reduce social uncertainty through group membership, yet if their collective identity category is characterized by a lack of clarity in terms of its internal structure and external boundaries, this is less effective (Hogg, 2000; Hogg & Terry, 2000). Given that technical track teachers are somewhat caught and considered as ‘in-between’, they might not consider their technical track identity as offering them a clear set of characteristics and instead rely more on how others look at them.

Although we expected vocational track teachers to show lower levels of job satisfaction due to how they think society perceives them, we did not find an effect of public regard on their job satisfaction. This can be explained by the positive distinctiveness hypothesis, which predicts that groups will reverse current status hierarchies when they cannot attain certain status markers (Tajfel, Turner, Austin & Worchel, 1979). As the academic status of the vocational track in a knowledge-based society like Belgium is clear and perceived negatively, teachers within this track can consciously put aside its place in the academic hierarchy and attach more personal relevance to those elements which make teaching in the vocational track unique and a source of satisfaction. Possible dimensions for positive distinction include: generally more personal closeness and developing rapport (‘fraternization’) with students (Stevens & Vermeersch, 2010), less interference from parents, the teaching skills required to teach more disadvantaged students in terms of socio-economic status and a more diverse student body in terms of ethnicity and educational history (Boone & Van Houtte, 2013; Hallinan, 1996; Van Praag et al., 2015b).

The assumption of positive distinction is strengthened by the fact that vocational track teachers do feel a significantly lower public track regard than those in the academic and technical track, but do not allow it to influence their job satisfaction. Crocker, Luthanen, Blaine and Broadnax (1994) saw a similar lack of connection between private group feelings and public evaluation of black college students, which they saw as a way of coping with discrimination and prejudice. Future research could dive deeper into the coping mechanisms applied by vocational track teachers in dealing with the public valuation of the vocational track in a cascaded educational landscape.

The results for the school type interaction hypothesis showed that the effects of public track regard are not influenced by school structure for academic and technical track teachers. With vocational track teachers, school structure does show a

significant association with public track regard, but the contrast between categorical and multilateral schoolteachers is more pronounced than expected. Where in multilateral schools vocational track teachers have a lower job satisfaction when they experience lower public track regard, this association is not present in categorical schools. These results suggest that daily contact with teachers from other tracks makes the track identity more visible, turns it into a salient identity for vocational track teachers and, due to higher visibility of this track in this context, they attach importance to the public evaluation of their track (Kelley, 1952, as cited by Richer, 1976; Van Dick et al., 2004a, 2004b). Future research focusing on school dynamics might provide a more in-depth explanation for these results.

5.1 Limitations

The sample size is a limitation in using multilevel models. Studying cross-level interactions with a low number of level 2 groups (lower than 50) could lead to biased results, with level 2 standard errors being estimated too small, and as such might lead to false significant effects (Maas & Hox, 2004). The only track showing a significant cross-level interaction is the vocational, which has 20 schools, the other tracks displayed a similar number of level 2 cases (27 for academic and 16 for technical schools), yet these did not display significant cross-level interactions. So, although we have to take some precaution regarding the explanatory power of the dataset in a multilevel analysis, we still regard this as more accurate than the alternative of ignoring the group level effects of teachers nested in schools. Due to these limitations we present this analysis as indicative rather than conclusive.

The school type interaction models did highlight some significant differences between the tracks in job satisfiers, which constitute an interesting starting point for future research but lie outside the scope of the current paper. The first concerns why the nature of the chosen subject matter has an influence on the technical track teachers' job satisfaction. Secondly, there are also significant differences between the sexes in vocational track teachers, but our data did not show a representative distribution of gender, so follow up research on other data is better suited to make strong statements on gender differences.

6 Conclusion

Although there is a wealth of research on teachers' job satisfaction, there is virtually no research that investigates how this is influenced by the public perception of the tracks in which teachers teach. This study builds on existing research by showing that teachers' job satisfaction is influenced by the public image of the track they teach, but also that this influence varies according to the status of the track and whether teachers work in schools in which they can interact with colleagues and students from other tracks. These findings underline the importance of considering tracks' effects on teachers' job satisfaction not only through eliciting different classroom dynamics (Stevens & Vermeersch, 2010; Van Praag et al., 2015b),

but also through the tracks' public image. Additionally, the way in which identity theories such as hidden identity (Doane, 1997), the uncertainty reduction hypothesis (Hogg, 2000; Hogg & Terry, 2000), the positive distinction hypothesis (Tajfel, Turner, Austin & Worchel, 1979; Crocker, Luthanen, Blaine & Broadnax, 1994) and identity salience and visibility (Kelley, 1952, as cited by Richer, 1976; Van Dick et al., 2004a, b) are able to provide an explanation for our results shows that teachers' tracked identities are important to consider in educational research on teacher outcomes and teachers' professional development more generally. Future research could build on our study by considering the particularities of tracks in the career attitudes of teachers, not only through the personal experiences of tracked classrooms but also through the identity aspect of tracking. There are possibilities to do this through studying the personal evaluation of tracks or the influence the centrality of a track identity has on a teacher, in addition to considering teachers' perceived public regard of the track they teach. Gaining knowledge on the identity categories teachers attach value to in their professional identity and the impact they experience from public opinion gives us more concrete insight in what makes a conducive environment for satisfied teachers.

The idea of a seeing track membership as a possible identity, which was tested in this paper for teachers, could also be applied to students in future research. Students are in the formative years of their identity, so outsider evaluation of their status could have an even stronger effect on their self-evaluation and well-being than on teachers, who are affected by it less directly and only through their affective association with their students. Considering the identity aspect of track membership would allow for knowledge from identity research (for instance coping and bonding mechanisms with an identity) to be applied in cases of prejudices and discrimination against educational tracks.

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Declarations

Conflicts of interest The authors of this article (Lorenz Dekeyser, Charlotte Maene, prof. Dr. Mieke Van Houtte, prof. Dr. Peter Stevens) declare to have no actual or potential conflict of interest including any financial, personal or other relationships that could inappropriately influence, or be perceived to influence, their work.

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