



Diversity SCreening in educatiOn (DISCO): a quantitative analysis of teachers' competences in diversity sensitive education

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Diversity Screening in education (DISCO): a quantitative analysis of teachers' competences in diversity sensitive education

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ABSTRACT A quantitative analysis of the relationship between teachers' attitude toward diversity and self-efficacy for inclusive practices is essential to support teachers' competences in diversity sensitive education. This study explores how teachers' self-efficacy beliefs for five inclusion related tasks (i.e., noticing student diversity, creating stimulating learning environments for all students, enabling high-quality student-interactions, collaborating with colleagues, and collaborating with diverse parents) are associated with their beliefs about different forms of diversity and their vision on the role of education in terms of diversity. Data was collected in a sample of Flemish teachers (N = 4101) and schools (N = 142). Teachers' attitude and self-efficacy were measured using survey scales that consider a broad understanding of diversity, and the data was combined in a multilevel framework. Findings indicate that high self-efficacy for noticing diversity, creating stimulating learning environments, collaborating with colleagues and parents are associated with an optimistic attitude toward diversity. Enabling high-quality student-interactions does not seem to be a direct predictor of teachers' attitude. Furthermore, our results show that different school cultures regarding diversity might exist in Flemish (pre-) primary and secondary schools.

Keywords: Attitude; Teacher beliefs; Self-efficacy; Inclusion; Diversity; Education for All

1. Introduction

Classrooms have always been diverse as pupils have always had different learning rates, interests, and values (Dyson & Millward, 2000; Van Avermaet & Sierens, 2012). However, in recent decades, the student diversity has rapidly grown, both in Flemish schools and schools worldwide (OECD, 2018; Siongers et al., 2020). In urban majority-minority cities like Genk and Antwerp, two out of three children have an other-than-Belgian background (Geldof, 2019). Unfortunately, ethnic discrimination is a major issue in Flemish schools (D'hondt et al., 2021), and it is known to negatively impact minority students' school outcomes (D'hondt et al., 2015). Furthermore, the challenge that superdiverse (Vertovec, 2007) student populations bring to schools should not be underestimated (Pit-ten Cate et al., 2019; Van Avermaet & Sierens, 2012). Multiculturality is linked to an increased staff turnover

(Departement Onderwijs en Vorming, 2008), as Flemish teachers often feel that they are not adequately prepared to teach multicultural and multilingual classrooms (Van Droogenbroeck et al., 2019). This increased staff turnover leads to teacher shortages in superdiverse schools (Depraetere et al., 2015), and furthers segregation and inequity over time (Siongers et al., 2020).

However, educational inequality in Flanders is not limited to ethnic discrimination (Groenez et al., 2018). The Flemish educational system also struggles to provide equal opportunities to so-called special educational needs (SEN) pupils and low socioeconomic status (SES) students, which is reflected in the high degree of segregation of these learners. Furthermore, Flemish LGBT students are more prone to report mental health issues in comparison to their peers, which is likely to affect their academic achievements. Therefore, student diversity - as it is used in this study - should not be reduced to ethnic or cultural diversity, or focus on a specific category of students, but should be understood as a broad concept that concerns a plethora of differences between individuals and groups, including differences in ethnicity and culture, but also religion, race, gender, sexuality, dis/ability, social class, and so on (Sierens, 2007).

Accordingly, this study is situated in the field of “Education for All” (EfA) (Ainscow & Miles, 2008; Booth, 2011). EfA is “rooted in the belief that every person has value and potential and should be respected” (UNESCO, 2020, p. 11). Subsequently, it promotes the idea that *all* learners regardless of their background have a right to qualitative education throughout the whole of their academic career (Ainscow & Miles, 2008; Operti et al., 2014). Therefore, *all* pupils should have access to educators who make a positive impact on their learning and adapt their teaching practices to their needs (Caena, 2014). This requires teachers to have certain competences, that is the knowledge and skill to successfully create and teach an inclusive classroom, as well as a certain attitude (Crick, 2008).

However, a major hurdle in the field of EfA is the lack of reliable instruments to measure teacher competences for EfA (Schwab et al., 2021; Vantieghem et al., 2021), as established instruments often adopt a rather narrow definition of inclusion, mostly one that focuses on SEN students (e.g., Forlin et

al., 2011; Loreman et al., 2007; Sharma et al., 2012; Sharma & Jacobs, 2016). This is also reflected in the limited number of quantitative studies in the field (Messiou, 2017). Hence, this study aims to provide a quantitative analysis of Flemish teachers' competences for diversity sensitive education, using an instrument that honours the principle of EfA (Vantieghem et al., 2021).

Furthermore, it is important to recognise that schoolteachers do not exist in a vacuum, rather their attitudes and behaviours are shaped by the school's culture and the shared assumptions, values and beliefs that make up that culture (Ainscow & Miles, 2008; Weisel & Dror, 2006). This culture often operates unconsciously and therefore frequently remains unchallenged (Hargreaves, 1995), even though it can sustain deeply held beliefs that certain students are "inherently lacking" due to their race, language, SES, gender, or disabilities (Ainscow, 2005; Ainscow & Miles, 2008). Consequently, analysing and dismantling harmful beliefs at the school level are also necessary to make the education system more inclusive (Ainscow, 2005; Operti et al., 2014; UNESCO, 2017). Accordingly, we consider some contextual features of schools in our quantitative analysis. Eventually, quantitative analyses of teachers' competences for EfA and a more detailed understanding of Flemish school culture should help us understand how to better prepare the next generation of teachers in dealing with superdiverse classrooms, as well as define the best ways to aid schools to become more inclusive.

2. Theoretical framework

2.1. Diversity in Flanders

In 2007, Vertovec coined the term "superdiversity" when studying migration flows in the United Kingdom. This concept pinpointed a unique aspect of contemporary migration, namely the rapidly increasing diversification of migrants. Such superdiversity is also found in Flanders (Geldof, 2019): in Antwerp, for example, more than 50% of inhabitants have a migration background, representing 175 different nationalities (Provincies.incijfers.be, 2021). Moreover, multi-ethnic and multicultural populations are not limited to majority-minority cities (Geldof, 2019). Nevertheless, only 34% of Flemish educators state having learned to teach a multicultural or multilingual student population and

83% feels their training failed to prepare them for the reality of superdiverse classrooms (Van Droogenbroeck et al., 2019). Furthermore, research in Flemish schools reveals that one out of five students with a migration background report suffering discrimination by a teacher (D'hondt et al., 2021). D'hondt et al. (2015) notes that such discrimination severely impacts the student's sense of belonging. A lack of school belonging can decrease students' motivation and engagement (Osterman, 2000), and hence their academic outcomes (D'hondt et al., 2015), as well as cause depressive symptoms (Shochet & Smith, 2014).

In addition to ethnic and cultural diversification, the Flemish student diversity is impacted by the strong international trend to include SEN pupils into mainstream schools (Savolainen et al., 2022; Sharma et al., 2012). This move was prompted by the UNESCO Salamanca statement of 1994 and reinforced by the United Nations Convention of the Rights of Persons with Disabilities (UN CRPD) of 2006 (Opertti et al., 2014). Flanders ratified the UN CRPD in 2009 and adopted the M-decree, or Measures for students with educational needs, in 2014 to allow SEN students to enrol more easily in mainstream schools (De Schauwer et al., 2019). Nevertheless, Flanders still recognises nine different types of special education and type 9 was specifically created under the M-decree for students on the autism spectrum that do not have any so-called intellectual disabilities (De Schauwer et al., 2019; Groenez et al., 2018). Moreover, the number of students in Flemish special education steadily increases every year (De Schauwer et al., 2019). In September of 2023, the M-decree will be replaced with the Guidance decree. However, concerns have been raised as this decree continues to focus on explicitly segregating SEN students rather than providing a long-term plan for creating a truly inclusive educational system (Vlaamse Onderwijsraad, 2022). This deep-seated attitude in support of a segregated system is also reflected in Flemish teachers' resistance to include these learners in their classroom (Van Mieghem et al., 2020), insisting that their needs are "too specific" (Vantieghem et al., 2021). Furthermore, Forlin et al. (2001) noted that certain teachers feel "discomfort" and "fear" when interacting with students with disabilities, or are overly sympathetic to the extent that they might

underestimate a student's abilities. Additionally, concerns have been raised with the overall sentiment of regarding education for SEN students as a charitable act rather than a human right (Groenez et al., 2018). This is extremely problematic as the 1948 Universal Declaration of Human Rights - the first international document to recognise that all human beings have a right to education - is the foundation of inclusive education (Operti et al., 2014).

Groenez et al. (2018) also reported that Flanders' educational system is unable to effectively accommodate the needs of low-SES and LGBT students. Although certain practices regarding low-SES pupils are well applied, e.g. teaching tolerance towards people of all socioeconomic classes and providing extra support to financially disadvantaged families, explicit school policy to protect these students against discrimination is less prevalent (Siongers et al., 2020). Furthermore, there is a significant overrepresentation of low-SES students in the lower tracks of Flemish secondary schools (Boone & Van Houtte, 2013; Groenez et al., 2018). These inequalities are especially concerning when considering that poverty is on the rise in Flanders, even more so in the aftermath of the COVID19-crisis (Decenniumdoelen, 2022).

In accordance with Belgium's overall progressive stance on LGBT rights, Flemish teachers tend to think positively about policies specifically geared toward queer rights (Groenez et al., 2018; Vantieghem et al., 2021). Contrarily, research shows that teachers rarely mention LGB themes, either because they find the subject of homosexuality inappropriate or because they feel they do not have the competences to discuss these subjects (Aerts et al., 2012; Groenez et al., 2018). Subsequently, a new legislation was adopted in 2021 which obliges Flemish secondary teachers to discuss sexual orientation and gender identity (ILGA-Europe, 2022). Furthermore, Seynaeve et al. (2016) raised concerns about the mental health of LGBT youth, urging Flemish schools to address their heteronormative culture (Groenez et al., 2018). Heteronormativity - as conceptualized in the work of Butler (1990) and Rubin (1984) - refers to the essentialist view that heterosexual relationships are the norm and that gender is a binary construct. This leads to homonegativity, transphobia, as well as the condemnation of gender

expressions that do not comply with dominant gender norms. Heteronormativity in schools is not only reflected in the school's policy (Vantieghem & Van Houtte, 2020), but also in the educational resources (Groenez et al., 2018) and the language adopted by teachers (Vantieghem & Van Houtte, 2020). Although studies regarding heteronormative school culture often focus on LGB youth, Vantieghem and Van Houtte (2020) researched its effect on gender variant students, that is students whose gender identity, expression, or behaviour does not confirm with societal expectations (Simons et al., 2014). They concluded that a heteronormative school culture is not only detrimental to gender variant pupils but all students, and thus that inclusive schools are necessary for the well-being of all learners (Vantieghem & Van Houtte, 2020).

2.2. *EfA-teachers*

Instructing a diverse student population, however, requires teachers to have certain competences (Crick, 2008). Here, teacher competences are understood as the complex combination of the knowledge, skills and attitude of a teacher (Crick, 2008). In terms of teachers' attitude, the literature has identified two key requirements that are necessary to realize EfA: teachers should have a positive attitude toward diversity (1) (Caena, 2014; Dyson et al., 2002) and optimistic self-efficacy beliefs for inclusive practices (2) (Sharma et al., 2012).

2.2.1. Teachers' attitude toward diversity & inclusion

It has been noted that for schools to become more inclusive, they should strive for academic excellence and equity alike (Cochran-Smith et al., 2016; Van Avermaet et al., 2011). As teachers view it the school's responsibility to achieve both, their commitment to all pupils - regardless of background - increases (Fischman et al., 2006). That is, rather than viewing diversity as an obstacle, a positive attitude allows them to consider diversity as a resource in achieving excellence (Dyson & Millward, 2000; Vantieghem et al., 2021). Contrarily, a negative attitude toward diversity leads to the differential treatment of certain groups of learners (Pohan & Aguilar, 2001): expecting less from these students, challenging them less, investing less time into them, as well as being less supportive towards them

(Demanet & Van Houtte, 2012; Jussim & Harber, 2005). This differential treatment affects not only students' educational outcomes (Jussim & Harber, 2005), but also instigates deviant student behaviour (Demanet & Van Houtte, 2012). Subsequently, this leads to “self-fulfilling prophecies” as teachers' expectations are confirmed through their own behaviour towards these pupils. This unequal treatment is particularly devastating when considering teachers as role models for their students (Caena, 2014; Pushor, 2011). Hence, this negative behaviour does not only affect the students held in lower regard, but also affects the attitudes and assumptions of all other students in the classroom (de Bruïne et al., 2014). Therefore, teachers should be aware of the impact their views regarding diversity have (Sincer et al., 2019) and be aware of the school's responsibility, as well as their own, for creating EfA (Ainscow & Miles, 2008; Van Avermaet & Sierens, 2012). Accordingly, to attain EfA, teachers should have both positive beliefs about different forms of student diversity and a positive vision on the responsibility of education to achieve EfA (Caena, 2014; Dyson et al., 2002).

Furthermore, several variables have been found to influence teachers' attitudes toward diversity and inclusion. In regard to SEN students, teachers' attitudes are highly dependent on the type and severity of the disability (Avramidis & Norwich, 2002; de Boer et al., 2011), the class size (de Boer et al., 2011), and the availability of specialized staff and equipment (Avramidis & Norwich, 2002). In terms of teacher characteristics, the willingness to include SEN students depends on teachers' level of special education training (Avramidis et al., 2019; Sokal & Sharma, 2013). Similarly, Schwab et al. (2021) found that Austrian pre-service teachers have a more positive outlook on diversity when they specifically focus on inclusive education, in the broad sense of the word, during their training. In terms of teaching ethnic minorities, the ethnic background of the teacher is also important (Glock & Kleen, 2019). Furthermore, primary schoolteachers seem to have a more positive outlook on diversity than their counterparts in secondary schools (Groenez et al., 2018; Schwab et al., 2021). Finally, teachers' attitudes are also shaped by the school's culture (Ainscow & Miles, 2008; Weisel & Dror, 2006). Therefore, the EfA-perspective on inclusive education demands a fundamental mindset change at

every level of the education system, not only the individual teacher level (Ainscow, 2005; Operti et al., 2014; UNESCO, 2017).

2.2.2. Teachers' self-efficacy beliefs for inclusive practices

A second requirement to effectively implement EfA are teachers with a high sense of efficacy, or self-efficacy, for creating inclusive classrooms (Sharma et al., 2012). Bandura's (1977) concept of self-efficacy refers to a person's beliefs in their own capability to perform a certain task. Teachers' self-efficacy has been shown to affect their instructional quality and classroom management, as well as their enthusiasm and persistence (Tschannen-Moran & Woolfolk Hoy, 2001). Low-efficacy educators are often pessimistic about students' improvability and revert to deficit thinking (Bandura, 1997). Deficit thinking blames students' educational difficulties on individual and cultural characteristics, while simultaneously ignoring the systemic oppression marginalized communities face in schools and other institutions (Patton Davis & Museus, 2019; Sierens, 2007). Contrarily, teachers with a high sense of efficacy, who are more motivated and determined, tend to believe that "putting in the work" can overcome educational difficulties (Bandura, 1997; Sharma et al., 2012). Accordingly, high-efficacy teachers view all students as "reachable and teachable" (Bandura, 1997). This attitude allows high-efficacy educators to continuously make an effort to create an inclusive space that suits the needs and expectations of each individual learner, as well as persevere through moments of adversity (Bandura, 1997; Vantieghem et al., 2021).

The literature suggests that teachers learn to be more inclusive "by doing" (Siongers et al., 2020; Van Droogenbroeck et al., 2019): as teachers have a positive experience in accomplishing a specific task necessary to create an inclusive classroom (Desombre et al., 2019), they gain a mastery experience (Bandura, 1997). Such mastery experiences are seen as the primary source of self-efficacy (Malinen et al., 2013). They can be encountered during pre-service teacher training, intervention programs, and so on (Yada et al., 2022). Yada (2015) noted that Japanese teachers' self-efficacy for inclusive practices was impacted by their level of training in special education, their experience in teaching SEN

students, but also by whether they had previously had a significant interaction with a person that has a disability. Accordingly, special education teachers - both in-service (Avramidis et al., 2019) and pre-service (Miesera et al., 2019) - tend to show a higher sense of efficacy for inclusive practices than their colleagues working in mainstream schools.

Bandura (1997) notes three additional sources of self-efficacy: vicarious experiences, social persuasion and affective state. Firstly, a vicarious experience is obtained when a teacher observes another person successfully accomplish a task (Avramidis et al., 2019). This is especially powerful when that person is similar to oneself (Bandura, 2012). Such experiences could arise during co-teaching or by having discussions with experienced teachers (Yada et al., 2018). Secondly, social persuasion or positive feedback by colleagues (Desombre et al., 2019) or the head teacher (Kurt et al., 2012) can ameliorate self-efficacy beliefs. Finally, Bandura (1997) argued that self-efficacy is influenced by the emotional state of the teacher, that is whether they feel anxious, tired, etc. (Desombre et al., 2019).

2.2.3. The relationship between teachers' attitudes & self-efficacy

Several studies have shown that there is positive relationship between these two core EfA-requirements (e.g., Savolainen et al., 2012; Sokal & Sharma, 2013; Weisel & Dror, 2006; Yada et al., 2022). The general assumption is that a high sense of efficacy with regard to handling diversity has a positive impact on teachers' attitude toward diverse learners and inclusive education (Savolainen et al., 2022; Yada et al., 2022), since "the more teachers believe they are able to implement inclusive practices on a concrete and pragmatic level, the more positive their attitudes toward inclusion are" (Savolainen et al., 2012, p. 65). Only recently, however, a longitudinal study by Savolainen et al. (2022) provided the first empirical evidence to support this claim.

2.3. *Limits of EfA research*

Furthermore, it is important to note that many of the existing instruments in the field of inclusive education adopt a rather narrow definition of inclusion, often one that focuses on SEN students. This

includes the routinely used sentiments, attitudes, and concerns about inclusive education (SACIE) scale (Loreman et al., 2007), its revised version (SACIE-R) (Forlin et al., 2011), the Attitudes towards Inclusion Scale (AIS) (Sharma & Jacobs, 2016), as well as the teacher efficacy for inclusive practice (TEIP) scale (Sharma et al., 2012). By definition, this constitutes a lack of reliable instruments that EfA-researchers can use, which is reflected in the limited number of quantitative studies in the field (Messiou, 2017). One exception is the revised German Attitudes to Inclusion Scale (G-AIS) developed by Schwab et al. (2021) to examine teachers' attitude toward inclusion in the Austrian context.

In the Flemish context, the *DIversity SCreening in educatiOn* (DISCO)-instrument created by the Centre for Diversity & Learning (Ghent University, Belgium) is another exception. Although previously used to reflect on - rather than measure - teachers' attitudes (Roose et al., 2019), the call for a reliable instrument led to the further development and validation of this tool (Vantieghem et al., 2021). DISCO consists of a two-part questionnaire that assesses educators' attitude toward diversity, as well as their self-efficacy beliefs. The first part examines teachers' beliefs about different forms of student diversity (A1) and their vision on the role of education in terms of diversity (A2). The second part measures the teacher's sense of efficacy in noticing student diversity (B1), in creating learning environments that allow all students to excel (B2), in creating high-quality interactions among students (B3), and lastly, in collaborating with colleagues (B4) and diverse parents (B5). Thus, DISCO adopts a broad definition of inclusive education and combines the analysis of teachers' attitude and self-efficacy beliefs, while researchers in the past often had to make use of two separate instruments to measure these variables (Savolainen et al., 2022). Additionally, DISCO measures certain indicators of teachers' socio-demographic and professional background (i.e., their age, gender, teaching experience and experience working with diverse students) (Vantieghem et al., 2021).

3. Study Design

3.1. Aim

Using the online DISCO-tool (<https://diversiteiteleren.be/materiaal/screening>), this study aims to provide a quantitative analysis of Flemish teachers' competences for diversity sensitive education. As mentioned previously, research shows that teachers' self-efficacy beliefs are closely linked to their professional attitude (e.g., Yada et al., 2022). In the present study, we want to provide further insight into this relationship. We are interested in knowing to what extent teachers' attitude can be explained by their self-efficacy for five inclusion related tasks, that is noticing student diversity (1), creating stimulating learning environments for all students (2), enabling high-quality student-interactions (3), collaborating with colleagues (4) and collaborating with diverse parents (5). We hypothesize that a high sense of efficacy for these five tasks will be associated with positive beliefs about student diversity (H1a), as well as positive responsibility beliefs (H1b) (Savolainen et al., 2022; Yada et al., 2022). Furthermore, we want to add to previous research by considering the effect schools might have on teachers' attitudes toward inclusive education, or in other words whether school cultures surrounding diversity and inclusion exist in Flemish schools. We will assess this by considering two contextual factors, namely school type (i.e., mainstream vs. special education) and the education level taught at the school (i.e., pre-primary/primary vs. secondary education). We hypothesize that teachers working in special education schools will have more optimistic beliefs toward different forms of diversity (H2a) and a more positive vision on the role of education in terms of diversity (H2b) than those working in mainstream schools (Avramidis et al., 2019; Desombre et al., 2019; Sokal & Sharma, 2013). Finally, we hypothesize that secondary schoolteachers will have less inclusive attitudes, and thus less positive diversity beliefs (H3a) as well as responsibility beliefs (H3b), than their counterparts working in pre-primary and/or primary education (Groenez et al., 2018; Schwab et al., 2021).

3.2. *Participants & Schools*

Data was collected from in-service teachers between October 2018 and October 2021. The DISCO-questionnaire was administered in Dutch and thus focused on the Dutch-speaking part of Belgium, Flanders. As the DISCO app is open to the public, this sample contains both data from teachers who filled out the survey on an individual basis, as well as data from larger school-level projects. Duplicate cases were removed, as well as respondents who did not meet our requirements, including pre-service teachers and in-service teachers from Dutch schools. From the 5252 participants that started filling out the DISCO survey, eventually 4101 Flemish in-service teachers and 142 schools were included. Of the 4101 participants, 23.5% identified as male, 75.9% as female and 0.5% as other. Although the sample is not equally divided with regards to teachers' gender, it reflects the so-called feminization of the teaching profession witnessed worldwide (Van Droogenbroeck et al., 2019). Furthermore, the sample is congruent with the current data on the gender division in the Flemish education system which indicates that 73.5% of the school personnel is female (Departement Onderwijs en Vorming, 2021). In our sample, teachers' age ranges from 20 to 67 with an average age of 39.87 (SD= 10.65). This reflects previous findings that note the relatively young age of Flemish teachers in primary schools (39.6) and secondary education (39.4) (Van Droogenbroeck et al., 2019). Additionally, teachers had an average of 14.46 (SD= 10.35) years of teaching experience. This is fairly similar to the average experience of Flemish primary (16.7 years) and secondary teachers (15.7 years), suggesting that our sample is representative in terms of teaching experience (Van Droogenbroeck et al., 2019). The teacher with the most experience had 43 years of teaching experience and the minimum number of years was set at one, allowing novice teachers to include the working year. Additionally, teachers were asked to rate how much experience they had in working with diverse students in comparison to the average Flemish teacher. The majority of the teachers (96.3%) claimed that they had little to no experience, 0.2% had some, 1.5% had quite a bit of experience, and 1.3% stated they had a lot of experience (0.6% claimed the question was not applicable to them). Furthermore, 13.4% of teachers stated that they work in pre-

primary education, 33.4% in primary education of which 21.0% in special needs education, 51.1% in secondary education of which 11.5% in special needs education, and 2.0% in higher education. This represents the Flemish teacher population according to education level relatively well (Departement Onderwijs en Vorming, 2021).¹ In terms of schools, 89 of the 142 (62.7%) schools were categorised as providing pre-primary and/or primary education and 53 (37.3%) as secondary schools. This is comparable with the overall Flemish percentages (71.4% and 28.6%, respectively) (Departement Onderwijs en Vorming, 2021). Moreover, 131 of the 142 (92.3%) schools are mainstream schools. Eleven schools, that is 7.8%, are considered special education schools. Seven of these special education schools provide pre-primary and/or primary education and four are secondary schools. Although only 11 special education school are included in this study, the sample is relatively congruent with the current data on the division between mainstream (91.4%) and special education schools (8.6%) in the lower education levels of the Flemish education system (Departement Onderwijs en Vorming, 2021).

3.3. Variables

Means, standard deviations and the ranges of all variables described below are presented in Table 1.

3.3.1. Dependent variables

Teachers' beliefs about different forms of diversity (*A1_DiversityBeliefs*). DISCO contains 24 items related to professional diversity beliefs, including six items specifically related to students with an ethnic minority background (e.g., “Ethnic and cultural diversity is a valuable resource in education.”), five items explicitly related to SEN students (e.g., “Students with a disability often abuse the support that they receive.”), eight items related to gender and sexuality (e.g., “Boys shouldn't wear

¹ Percentages of teachers working in the respective education levels are: Pre-primary education: 15.1%; Mainstream primary education: 26.4%; Primary special needs: 4.6%; Mainstream secondary education: 42.2%; Secondary special needs education: 6.0%; Higher education: 5.7%. These percentages are based on calculations made using the dataset provided by Departement Onderwijs en Vorming (2021). It must be noted that the dataset did not provide conclusive material on the number of educational professional working at Flemish universities.

earrings or nail varnish when in school.” and “Many students experiment with their sexuality just to get noticed.”), and finally five items related to low-SES students (e.g., “Schools that educate many underprivileged students have lower standards.”). A detailed description of the DISCO-items used in this study can be found in Appendix A. Items were rated on a 7-point Likert scale (0= *completely disagree*, 6= *completely agree*). Items pertaining to negative beliefs were reverse coded. The scale was constructed using the mean sum of scores and demonstrated good internal reliability: $\alpha=.90$.

Table 1

Descriptive Characteristics of Variables.

Variable	N	%	Mean	SD	Min.	Max.
Dependent variables						
<i>A1_DiversityBeliefs</i>	4101		4.19	0.76	0.25	6
<i>A2_ResponsibilityBeliefs</i>	4101		4.02	0.80	0	6
Independent variables						
Teacher-level						
<i>B1_NoticingDiversity</i>	3505		5.46	1.39	0	8
<i>B2_StimulatingEnvironments</i>	3506		5.38	1.21	0	8
<i>B3_StudentInteractions</i>	3504		5.63	1.38	0	8
<i>B4_Colleagues</i>	3505		6.01	1.37	0	8
<i>B5_Parents</i>	3505		5.04	1.54	0	8
School-level						
<i>School type</i>	142					
<i>Mainstream (0)</i>		92.3%				
<i>Special Needs (1)</i>		7.7%				
<i>Education level</i>	142					
<i>Primary and/or Pre-primary (0)</i>		62.7%				
<i>Secondary (1)</i>		37.3%				
Control variables						
<i>Teaching experience</i>	4068		14.46	10.35	1	43
<i>Experience with diverse students</i>	4090		3.13	1.26	0	10
<i>Gender</i>	4076					
<i>Male (0)</i>		23.6%				
<i>Female (1)</i>		76.4%				

Teachers' responsibility beliefs (*A2_ResponsibilityBeliefs*). The items of this scale (see Appendix A) are subdivided into three factors: the first focuses on general school policy (e.g., “Teachers must be capable of working with students from different home situations.”). The second and third factor concern responsibilities towards ethnic minority students (e.g., “The school library should have books in the different home languages of the students.”) and SEN students (e.g., “It is time that we give children with a disability a full place in mainstream education. It is their right.”). The factors consist of five, four and four DISCO-items, respectively. Items were rated on a 7-point Likert scale (0= *completely disagree*, 6= *completely agree*). Items pertaining to negative beliefs were reverse coded. The scale was constructed using the mean sum of scores and demonstrated good internal reliability: $\alpha=.82$.

3.3.2. Independent variables

3.3.2.1. Teacher-level variables

Teachers' sense of efficacy. DISCO contains 37 standardized rating items that tap into teachers' self-efficacy beliefs (see Appendix A). All items were rated on a 9-point Likert scale (0= *not at all*, 8= *a lot*). The 37 items are subdivided into five subscales, which are constructed using the mean sum of scores, covering strategies to

(1) **Notice student diversity** (*B1_NoticingDiversity*, 6 items, $\alpha=.88$);

(2) **Create learning environments that allow all students to excel**

(*B2_StimulatingEnvironments*, 13 items, $\alpha=.88$);

(3) **Create high-quality interactions among students** (*B3_StudentInteractions*, 6 items, $\alpha=.85$);

(4) **Collaborate with colleagues** (*B4_Colleagues*, 4 items, $\alpha=.81$);

(5) **Collaborate with diverse parents** (*B5_Parents*, 8 items, $\alpha=.90$).

Each item was preceded by the stem “To what extent are you able to...”, for instance: “To what extent are you able to gain insight into a student's plans and dreams for the future.” (B1); “During your lessons, to what extent are you able to have students evaluate your lessons?” (B2); “To what extent are

you able to allow students with learning difficulties to be helped by other pupils.?” (B3); “In addition to your teaching assignments, to what extent are you able to ask colleagues for feedback to improve your teaching?” (B4); “In addition to your teaching assignments, to what extent are you able to use the insights that parents give you about their child?” (B5).

3.3.2.2. *School-level variables*

Teachers were asked about the education level of their current employment. The options were pre-primary education (coded 0), mainstream primary education (coded 1), special needs primary education (coded 2), mainstream secondary education (coded 3), special needs secondary education (coded 4) and higher education (coded 5). School-level variables were created by recoding and aggregating this teacher-level data. Pre-primary and primary education were often provided by different teachers within one school. Therefore, pre-primary education was combined with mainstream and/or special needs primary education to create school-level categories, as explained below.

School type. This variable was created by recategorizing the teacher-level data into two categories: “mainstream education” (coded 0) and “special needs education” (coded 1). As no distinction was made between mainstream and special needs pre-primary teachers, we could not simply assign these teachers to one of these categories. Yet, apart from one school, pre-primary education was always provided along primary education. Therefore, whether the pre-primary teachers, and eventually the schools, should be categorized as “mainstream” or “special needs” was decided on whether their colleagues provided mainstream or special needs primary education, respectively. Thus, 1 and 3 were recoded to 0, and 2 and 4 were recoded to 1. Zero was recoded to either 0 or 1 depending on the teachers working alongside the pre-primary teachers. All teachers in the one school that only provided pre-primary education were assigned 0. Teachers that did not belong to a school, because they completed the survey on an individual basis, were recoded as missing before aggregation. Consequently, all teachers providing higher education (coded 5) were recoded to missing and no higher education schools were included in the analysis. This recoding, and the subsequent aggregation of this

teacher-level data, allowed schools to be divided into two categories, namely “mainstream schools” (coded 0) and “special education schools” (coded 1). In the model, we used dummy-coding for this variable, with “mainstream” as the reference category.

Education level. This variable was created by first recoding the teacher’s education level: education levels 0 to 2 were recoded to 0, 3 and 4 to 1. All educators providing higher education (coded 5) were recoded as missing, as well as all other teachers that did not belong to a specific school. This recoded data was aggregated to the school level. Thus, this variable contains two categories: “pre-primary and/or primary schools” (coded 0) and “secondary schools” (coded 1). In the model, we used dummy-coding for this variable, with “pre-primary and/or primary” as the reference category.

3.3.3. Control Variables

We also included demographic variables as control variables to check whether the association between *A1_DiversityBeliefs* and *A2_ResponsibilityBeliefs* on the one hand and the self-efficacy variables on the other changed after controlling for teaching experience, experience with diverse students and gender.²

Teaching experience. Generally, increasing teaching experience has been linked to a less favourable attitude toward inclusive education (Mintz et al., 2020; Savolainen et al., 2012; Yada et al., 2018). The relationship between years of experience and self-efficacy is less clear and might be culturally specified (Klassen & Chiu, 2010; Yada et al., 2018). Teaching experience was measured by the number of years teachers had been working as a teacher, including the year of the survey.

Experience with diverse students. Research indicates that teachers who have experience in working with diverse students hold a more positive attitude toward inclusive education (de Boer et al., 2011; Yada et al., 2018), as well as have higher self-efficacy (Malinen et al., 2013; Yada et al., 2018). These studies mainly focus on SEN students, although the latter also seems to be true for teachers who

² Although DISCO also provides data on teacher’s age, age was not included in our model as teaching experience and age were found to be highly correlated, $r = 0.83, p \leq .01$.

work with students that are stigmatized due to their low SES (Justice et al., 2008; Siongers et al., 2020). To measure teachers' experience with diverse students, teachers were asked: "Compared to the average Flemish teacher, how much experience do you have in working with diverse students? Rate yourself from 1-10 (1= *no experience at all*, 10= *very much experience*)."

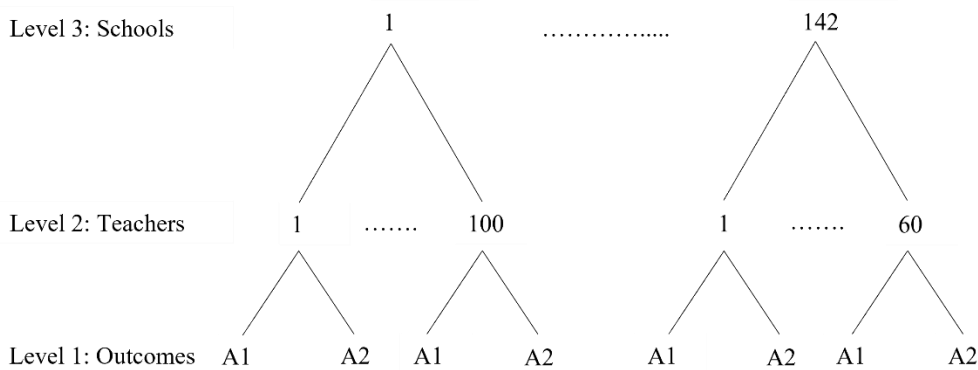
Gender. Previous studies have stated that female teachers tend to have more positive attitudes toward inclusion than male teachers (Avramidis & Norwich, 2002; Schwab et al., 2021). Furthermore, Malinen et al. (2013) reported that female Finnish teachers had lower self-efficacy for inclusive practices than their male counterparts. They noted that this was in line with other studies on teachers' self-efficacy, that is self-efficacy for more general teaching tasks that are not specifically related to the creation of inclusive classrooms. Teachers who self-identified as male were coded 0 and those who self-identified as female were coded 1. The number of teachers for whom the category "Other" best fitted their gender identity was too small (0.5% of the sample) to allow for a meaningful statistical analysis and were recoded as missing. We used dummy-coding for this variable, with "male" as the reference category.

3.4. *Data analytic plan*

In this study, teachers' diversity beliefs and teachers' responsibility beliefs are considered two distinct, yet related, constructs nested within teachers (Vantieghem et al., 2021). Furthermore, teachers are assumed to be nested within schools as research shows that there is a so-called school-effect on the beliefs and behaviours of teachers (Ainscow & Miles, 2008; Weisel & Dror, 2006). Figure 1 is a unit diagram showing the assumed underlying structure of the data used in this study: teachers' diversity and responsibility beliefs, at level 1, are seen as multiple outcomes nested within teachers, at level 2, who in turn are nested within schools, at level 3. A multivariate multilevel statistical model can offer an appropriate framework to model such hierarchically structured - or multilevel - data (Rasbash et al., 2017).

Figure 1

Multivariate Multilevel Structure of Teachers' Outcomes.



Note. Teachers' outcomes at level 1 nested within teachers at level 2 nested within schools at level 3. A1= Diversity Beliefs; A2= Responsibility Beliefs. Adapted from "Covariation in the socioeconomic determinants of self rated health and happiness: a multivariate multilevel analysis of individuals and communities in the USA." by S. V. Subramanian, D. Kim, and I. Kawachi, 2005, *Journal of Epidemiology and Community Health*, 59(8), p. 665 (<https://doi.org/10.1136/jech.2004.025742>). Copyright 2005 Journal of Epidemiology and Community Health.

Such multivariate multilevel models have several advantages: Firstly, multivariate models combine multiple dependent variables in one model allowing for a comparison of the effects of several independent variables on two closely related dependent variables (Heck et al., 2013; Rasbash et al., 2017). Secondly, the multilevel framework allows for the simultaneous analysis of individual- and group-level variables, with the possibility to make population wide inferences (Buxton, 2008; Centre for Multilevel Modelling, 2019; Hox et al., 2018). An additional advantage of multilevel models is their tolerance to the incorporation of partial data (Heck et al., 2013; Rasbash et al., 2017). For the descriptive analysis of the data, we made use of SPSS (Version 28.0). For multivariate multilevel analyses, we used the statistical program MLwiN 3.02 (Charlton et al., 2018).

First, an "empty" model (i.e., a model with no predictors) was constructed to estimate how much of the unexplained variance of the two belief dimensions could be attributed to the teacher level and the school level. This model served as a baseline for subsequent models. In model 1 to 5, each self-efficacy variable was added - separately - as a predictor variable to the empty model, as advised by Snijders and Bosker (2012). In model 6, the self-efficacy variables were combined. Before this, however, multicollinearity between these variables was assessed. The Pearson correlations and the Variance

inflation Indices (VIFs) can be found in Table 2. Although some correlations are large, all are lower than .80 and considered acceptable (Field, 2018). Similarly, the VIFs suggest no problematic dependence. Nevertheless, the average VIF is 2.08, indicating that the model may be biased. Following the principle of parsimony, parameters that did not significantly relate to at least one of the dependent variables were removed from the subsequent model (model 7). The parameter estimates of model 0 to 7 can be found in Table 3. Then, school-level variables were added in a stepwise manner (model 8 and 9). The improvement of both school-level variables on model 7 was assessed using a Likelihood Ratio Test (LRT). Table 4 provides an overview of the LRT results for all models. When no significant improvement to the model was made, the variable was excluded from subsequent models. Finally, the control variables were added to the model, first separately and then together to assess their combined effect (model 10 to 14). Again, only control variables that significantly improved the model, based on the LRT, and significantly related to at least one dependent variable were included in the final model (model 14). The parameter estimates of model 8, 9, 13 and 14 can be found in Table 5. The parameter estimates of model 10 to 12 can be found in Table B1. As a preliminary analysis showed no significant random slope variance, variables were included as fixed effects to conserve statistical power (Rasbash et al., 2017; Snijders & Bosker, 2012). Furthermore, all continuous independent variables were grand-mean centred to improve interpretability of the intercept (Snijders & Bosker, 2012).

Table 2

Correlations and VIFs of the Dependent and Self-efficacy Variables.

Variable	A1	A2	B1	B2	B3	B4	B4	VIF
<i>A1_DiversityBeliefs</i>	1							
<i>A2_ResponsibilityBeliefs</i>	.653**	1						
<i>B1_NoticingDiversity</i>	.177**	.241**	1					2.050
<i>B2_StimulatingEnvironments</i>	.211**	.277**	.661**	1				2.652
<i>B3_StudentInteractions</i>	.173**	.232**	.623**	.721**	1			2.372
<i>B4_Colleagues</i>	.196**	.201**	.430**	.497**	.449**	1		1.455
<i>B5_Parents</i>	.196**	.238**	.571**	.597**	.582**	.489**	1	1.871

** $p \leq .01$.

4. Results

4.1. Model 0

First, we run a three-level “empty” model (model 0) as described by Equation 1. This model enables us to examine how much of the unexplained variance of the dependent variables is located at the school vs. teacher level. Although no explanatory variables are included in the model, a set of dummy variables is added as “predictors” to indicate which dependent variable is present (Butler et al., 2014). In subsequent models, the predictor variables will be defined by multiplying these dummy variables with the teacher-level, school-level and control variables (Rasbash et al., 2017).

$$\begin{aligned}
 \text{response}_{1jk} &\sim N(XB, \Omega) \\
 \text{response}_{2jk} &\sim N(XB, \Omega) \\
 \text{response}_{1jk} &= \beta_{0jk} \text{Cons.DiversityBeliefs}_{ijk} \\
 \beta_{0jk} &= 4.231(0.026) + v_{0k} + u_{0jk} \\
 \text{response}_{2jk} &= \beta_{1jk} \text{Cons.ResponsibilityBeliefs}_{ijk} \\
 \beta_{1jk} &= 4.053(0.029) + v_{1k} + u_{1jk} \\
 \begin{bmatrix} v_{0k} \\ v_{1k} \end{bmatrix} &\sim N(0, \Omega_v) : \Omega_v = \begin{bmatrix} 0.067(0.011) & \\ 0.067(0.011) & 0.083(0.014) \end{bmatrix} \\
 \begin{bmatrix} u_{0jk} \\ u_{1jk} \end{bmatrix} &\sim N(0, \Omega_u) : \Omega_u = \begin{bmatrix} 0.501(0.012) & \\ 0.328(0.010) & 0.555(0.013) \end{bmatrix}
 \end{aligned} \tag{1}$$

In this equation, *response1jk* is the scale score for the diversity beliefs of teacher *j* in school *k* and *response2jk* is the scale score for that same teacher’s responsibility beliefs.³ Hence, the first part of the equation - also called the fixed part - entails the intercepts. Intercept parameters were tested using the univariate Wald test (Hox et al., 2018; Jones & Subramanian, 2019) and found to be significant (1df, $p \leq .001$; see Table 3). The random part displays the variances and covariances at the teacher (level 2) and school level (level 3). There is no level 1 variation because level 1 exists solely to define the multivariate structure (Hox et al., 2018; Rasbash et al., 2017). Considering the relatively large number of schools (Jones & Subramanian, 2019), the univariate Wald test was used to assess the significance

³ The *i* indicates the “chosen” set of beliefs, thus the diversity beliefs or responsibility beliefs (= 1 or 2, respectively).

of teacher-level parameters (Hox et al., 2018; Jones & Subramanian, 2019). Both variances and the covariance were found to be significant (1df, $p \leq .001$). The correlation coefficient derived from the estimated covariance ($r = .623$) indicates that the association between the two belief dimensions is moderate. Based on the LRT⁴ (Table 4), the school-level variances and covariance were found to be significant as well (3df, $p \leq .001$). Therefore, the next models will be built upon model 0 which allows both dependent variables (*A1_DiversityBeliefs* and *A2_ResponsibilityBeliefs*) to vary at the school level. The Variance Partitioning Coefficients of model 0 indicate that 11.8% (Table 3: $0.067/(0.067+0.501)$) of the unexplained variance of teachers' diversity beliefs lies at the school level. For teachers' responsibility beliefs, this is 13.0% (Table 3: $0.083/(0.083+0.555)$).

4.2. Model 1: fixed effects of teachers' self-efficacy in noticing student diversity

As shown in Table 3, teachers' self-efficacy in regard to noticing student diversity (*B1_NoticingDiversity*) significantly predicts teachers' diversity (1df, $p \leq .001$) and responsibility beliefs (1df, $p \leq .001$). For teachers across all schools, the average diversity beliefs score increases with 0.086 as teachers increase 1 point on the B1-scale. For responsibility beliefs, the average score increases with 0.126. Based on the LRT (Table 4), model 1 fits the data better than model 0 (2df, $p \leq .001$) and *B1_NoticingDiversity* will therefore remain in the model.

4.3. Model 2: fixed effects of self-efficacy in creating learning environments for all students

Teachers' sense of efficacy in regard to creating stimulating learning environments for all students (*B2_StimulatingEnvironments*) significantly predicts teachers' diversity (1df, $p \leq .001$) and responsibility beliefs (1df, $p \leq .001$). The average A1-score increases with 0.117 and the average A2-score with 0.166 as teachers increase 1 point on the B2-scale. According to the LRT (Table 4),

⁴ LRTs to compare two nested models that differ in their fixed part are based on IGLS estimates. However, as advised by Jones & Subramanian (2019), when comparing two models which differ in their random part RIGLS estimates are used and the p-value is divided by 2. Here, model 0 is compared to an empty model without any school-level variance (a level-2 empty model). Therefore, RIGLS estimates are used. (IGLS= Iterative Generalized Least Squares; RIGLS= Restricted Iterative Generalized Least Squares).

including *B2_StimulatingEnvironments* in the model provides a significant improvement to model in comparison to model 0 (2df, $p < .001$).

4.4. Model 3: fixed effects of self-efficacy in creating high-quality student-interactions

Teachers' self-efficacy beliefs in regard to creating high-quality student-interactions (*B3_StudentInteractions*) significantly predict teachers' diversity beliefs (1df, $p \leq .001$), as well as their responsibility beliefs (1df, $p \leq .001$). For teachers across all schools, the average A1-score increases with 0.088 as teachers increase 1 point on the B3-scale. The average A2-score increases with 0.125 as teachers increase 1 point on the B3-scale. As shown in Table 4, *B3_StudentInteractions* provides a significant improvement to the model (2df, $p \leq .001$).

4.5. Model 4: fixed effects of self-efficacy in collaborating with colleagues

Teachers' self-efficacy in regard to collaborating with colleagues (*B4_Colleagues*) significantly predicts teachers' diversity (1df, $p \leq .001$) and responsibility beliefs (1df, $p \leq .001$). The average A1-score increases with 0.096 as teachers increase 1 point on the B4-scale. The average A2-score increases with 0.108. Overall, *B4_Colleagues* yields a significant improvement to the model (2df, $p \leq .001$; see Table 4).

4.6. Model 5: fixed effects of self-efficacy in collaborating with diverse parents

Teachers' self-efficacy for collaborating with diverse parents (*B5_Parents*) also significantly predicts teachers' diversity (1df, $p \leq .001$) and responsibility beliefs (1df, $p \leq .001$). As teachers increase 1 point on the B5-scale, teachers' average A1-score and A2-score increase with 0.082 and 0.113, respectively. Based on the LRT (Table 4), *B5_Parents* provides a significant improvement to the model (2df, $p \leq .001$).

Table 3*Estimated Unstandardized Parameters and Standard Errors Model 0 – 7.*

Variables	Model 0	S.E.	Model 1	S.E.	Model 2	S.E.	Model 3	S.E.	Model 4	S.E.	Model 5	S.E.	Model 6	S.E.	Model 7	S.E.
Fixed Part																
Dependent variables																
<i>Cons.A1</i>	4.231***	0.026	4.181***	0.026	4.177***	0.025	4.172***	0.025	4.182***	0.025	4.171***	0.025	4.173***	0.024	4.173***	0.024
<i>Cons.A2</i>	4.053***	0.029	4.000***	0.028	3.995***	0.027	3.989***	0.027	4.002***	0.028	3.988***	0.027	3.989***	0.026	3.990***	0.026
Teacher-level variables																
<i>(B1-gm).A1</i>			0.086***	0.009									0.018	0.013	0.020	0.013
<i>(B1-gm).A2</i>			0.126***	0.010									0.037**	0.014	0.041**	0.013
<i>(B2-gm).A1</i>					0.117***	0.011							0.053***	0.017	0.057***	0.015
<i>(B2-gm).A2</i>					0.166***	0.011							0.083***	0.018	0.090***	0.016
<i>(B3-gm).A1</i>							0.088***	0.010					0.007	0.014		
<i>(B3-gm).A2</i>							0.125***	0.010					0.016	0.015		
<i>(B4-gm).A1</i>									0.096***	0.009			0.051***	0.011	0.051***	0.011
<i>(B4-gm).A2</i>									0.108***	0.010			0.034**	0.011	0.035**	0.011
<i>(B5-gm).A1</i>											0.082***	0.008	0.024*	0.011	0.025*	0.011
<i>(B5-gm).A2</i>											0.113***	0.009	0.035**	0.012	0.037**	0.012
Random Part																
School-level variance																
<i>Var(Cons.A1)</i>	0.067***	0.011	0.063***	0.011	0.057***	0.010	0.057***	0.010	0.058***	0.010	0.054***	0.010	0.052***	0.010	0.052***	0.010
<i>Covar(Cons.A2/Cons.A1)</i>	0.067***	0.011	0.059***	0.011	0.053***	0.010	0.054***	0.010	0.055***	0.010	0.051***	0.010	0.047***	0.009	0.048***	0.009
<i>Var(Cons.A2)</i>	0.083***	0.014	0.071***	0.012	0.065***	0.012	0.068***	0.012	0.069***	0.012	0.065***	0.012	0.060***	0.011	0.060***	0.011
Teacher-level variance																
<i>Var(Cons.A1)</i>	0.501***	0.012	0.470***	0.012	0.466***	0.012	0.472***	0.012	0.468***	0.012	0.471***	0.012	0.461***	0.012	0.460***	0.012
<i>Covar(Cons.A2/Cons.A1)</i>	0.328***	0.010	0.296***	0.011	0.291***	0.010	0.298***	0.011	0.298***	0.011	0.298***	0.011	0.285***	0.010	0.285***	0.010
<i>Var(Cons.A2)</i>	0.555***	0.013	0.519***	0.013	0.512***	0.013	0.522***	0.014	0.527***	0.014	0.522***	0.014	0.506***	0.013	0.506***	0.013

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

Table 4*Overview of Models and Results of the Likelihood Ratio Test (LRT).*

New Model	Deviance	Compared against	Δ in deviance	Δ in df	P value
Model 0 (3 level)	14569.61	Model 0 (2 level)	2323.27	3	0.000***
Model 1 (0 + B1)	12152.78	Model 0 (3 level)	2416.83	2	0.000***
Model 2 (0 + B2)	12107.65	Model 0	2461.97	2	0.000***
Model 3 (0 + B3)	12161.57	Model 0	2408.05	2	0.000***
Model 4 (0 + B4)	12180.50	Model 0	2389.11	2	0.000***
Model 5 (0 + B5)	12163.68	Model 0	2405.93	2	0.000***
Model 6 (0 + all B)	12019.13	Model 0	2550.49	10	0.000***
Model 6 (0 + all B)	12019.13	Model 7	7.43	2	0.024*
Model 7 (6 – B3)	12026.56	Model 0	2543.06	8	0.000***
Model 8 (7 + School Type)	12025.65	Model 7	0.91	2	0.636
Model 9 (7 + Edu Level)	12016.90	Model 7	9.66	2	0.008**
Model 10 (9 + TeachingExp)	11808.54	Model 9	208.36	2	0.000***
Model 11 (9 + ExperienceDivStu)	11976.97	Model 9	39.93	2	0.000***
Model 12 (9 + Gender)	11876.60	Model 9	140.30	2	0.000***
Model 13 (9 + all Control)	11641.39	Model 9	375.51	6	0.000***
Model 13 (9 + all Control)	11641.39	Model 14	31.38	2	0.000***
Model 14 (13 – ExperienceDivStu)	11673.22	Model 9	343.68	4	0.000***

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

4.7. Model 6: combined fixed effects of teachers' self-efficacy beliefs

Teachers' self-efficacy to notice student diversity, create inclusive and stimulating learning environments, create high-quality interactions among students, as well as collaborate with colleagues and students' parents, are joined together in model 6 to investigate their combined effects. As shown in Table 4, model 6 fits the data better than the previous models. In this model, *B2_StimulatingEnvironments*, *B4_Colleagues* and *B5_Parents* significantly predict both teachers' diversity beliefs and responsibility beliefs (Table 3). Although, *B1_NoticingDiversity* significantly impacts teachers' responsibility beliefs (1df, $p \leq .01$), it does not significantly predict their diversity beliefs ($p = .153$). *B3_StudentInteractions* no longer predicts teachers' diversity beliefs ($p = .626$) nor their responsibility beliefs ($p = .287$). Consequently, *B3_StudentInteractions* is excluded from subsequent models.

4.8. Model 7: removing self-efficacy for creating high-quality student-interactions

After the removal of *B3_StudentInteractions* from the model, *B2_StimulatingEnvironments*, *B4_Colleagues* and *B5_Parents* still significantly predict both diversity and responsibility beliefs (Table 3). Similar to model 6, *B1_NoticingDiversity* significantly impacts teachers' responsibility beliefs (1df, $p \leq .01$), but not their diversity beliefs ($p = .111$). Based on the LRT (Table 4), model 6 fits the data slightly - but significantly (2df, $p \leq .05$) - better than model 7. However, following the principle of parsimony, model 7 is selected as the best model to represent the relationships between teachers' attitude toward diversity and their self-efficacy. At the teacher level, the combined effects of *B1_NoticingDiversity*, *B2_StimulatingEnvironments*, *B4_Colleagues* and *B5_Parents* explains 8.18% of the variance in teachers' diversity beliefs found in model 0. Moreover, the joined effect explains 8.83% of the variance in teachers' responsibility beliefs and 13.11% of the association between diversity and responsibility beliefs. At the school level, these four self-efficacy variables explain 22.39% of the variance found in model 0 for diversity beliefs, 27.71% of the variance in responsibility

beliefs and 28.36% of the association between the two belief dimensions. In the next steps, the school-level variables are added to model 7.

Table 5

Estimated Unstandardized Parameters and Standard Errors Models 7 – 9 and 13 – 14.

Variables	Model 7	S.E.	Model 8	S.E.	Model 9	S.E.	Model 13	S.E.	Model 14	S.E.
Fixed Part										
Dependent variables										
<i>Cons.A1</i>	4.173***	0.024	4.18***	0.026	4.229***	0.031	4.065***	0.040	4.063***	0.039
<i>Cons.A2</i>	3.99***	0.026	3.995***	0.027	4.017***	0.034	3.969***	0.043	3.970***	0.043
Teacher-level variables										
<i>(B1-gm).A1</i>	0.020	0.013	0.020	0.013	0.021	0.013	0.023	0.012	0.023	0.012
<i>(B1-gm).A2</i>	0.041**	0.013	0.041**	0.013	0.041**	0.013	0.045***	0.013	0.044***	0.013
<i>(B2-gm).A1</i>	0.057***	0.015	0.057***	0.015	0.054***	0.015	0.064***	0.015	0.062***	0.015
<i>(B2-gm).A2</i>	0.090***	0.016	0.090***	0.016	0.089***	0.016	0.093***	0.016	0.093***	0.016
<i>(B4-gm).A1</i>	0.051***	0.011	0.051***	0.011	0.053***	0.011	0.028**	0.011	0.030**	0.011
<i>(B4-gm).A2</i>	0.035**	0.011	0.035**	0.011	0.035**	0.011	0.021	0.012	0.022	0.012
<i>(B5-gm).A1</i>	0.025*	0.011	0.024*	0.011	0.020	0.011	0.029**	0.011	0.029**	0.011
<i>(B5-gm).A2</i>	0.037**	0.012	0.036**	0.012	0.036**	0.012	0.041***	0.012	0.042***	0.012
School-level variables										
<i>SpecialNeeds.A1</i>			-0.078	0.085						
<i>SpecialNeeds.A2</i>			-0.052	0.091						
<i>Secondary.A1</i>					-0.140**	0.049	-0.095*	0.048	-0.094*	0.048
<i>Secondary.A2</i>					-0.072	0.054	-0.053	0.053	-0.054	0.052
Control variables										
<i>(TeachingExperience-gm).A1</i>							-0.014***	0.001	-0.014***	0.001
<i>(TeachingExperience-gm).A2</i>							-0.009***	0.001	-0.009***	0.001
<i>(ExperienceDivStu-gm).A1</i>							-0.003	0.013		
<i>(ExperienceDivStu-gm).A2</i>							-0.003	0.014		
<i>Female.A1</i>							0.192***	0.030	0.192***	0.030
<i>Female.A2</i>							0.056	0.032	0.055	0.032
Random Part										
School-level variance										
<i>Var(Cons.A1)</i>	0.052***	0.010	0.051***	0.010	0.047***	0.009	0.042***	0.008	0.043***	0.008
<i>Covar(Cons.A2/Cons.A1)</i>	0.048***	0.009	0.048***	0.009	0.045***	0.009	0.039***	0.008	0.039***	0.008
<i>Var(Cons.A2)</i>	0.060***	0.011	0.060***	0.011	0.059***	0.011	0.053***	0.010	0.053***	0.010
Teacher-level variance										
<i>Var(Cons.A1)</i>	0.460***	0.012	0.460***	0.012	0.460***	0.012	0.434***	0.011	0.434***	0.011
<i>Covar(Cons.A2/Cons.A1)</i>	0.285***	0.010	0.285***	0.010	0.285***	0.010	0.270***	0.010	0.270***	0.010
<i>Var(Cons.A2)</i>	0.506***	0.013	0.506***	0.013	0.506***	0.013	0.494***	0.013	0.494***	0.013

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

4.9. Model 8: fixed effects of school type

Based on the LRT (Table 4), school type provides no significant improvement to the model in comparison to model 7 ($p = .636$). Accordingly, school type does not significantly predict teachers' diversity beliefs ($p = .359$) or responsibility beliefs ($p = .567$) (Table 5). Consequently, this school-level variable is excluded from subsequent models.

4.10. Model 9: fixed effects of education level

Contrarily, the school's education level does provide a significant improvement to the model (2df, $p \leq .01$). The dummy variable for education level, *Secondary*, is significantly associated with teachers' diversity beliefs (1df, $p \leq .01$) (Table 5). On average, secondary teachers' A1-score is 0.14 points lower than the scores of teachers who provide pre-primary or primary education. For *A2_ResponsibilityBeliefs*, no significant association was found ($p = .181$). Adding the dummy variable explains some of the school-level variance found in model 7, namely it explains 9.62% of the variance found in diversity beliefs, 1.67% of the variance in responsibility beliefs and 6.25% of their association. As this is a school-level predictor, it does not explain any of the teacher-level variance.

4.11. Model 10 – 14: adding control variables & assessing their combined effects

In model 10 to 12, teaching experience (*TeachingExperience*), experience with diverse students (*ExperienceDivStu*) and gender, using the dummy variable *Female*, are added in a stepwise procedure. All control variables are significantly associated with at least one dependent variable (see Table B1) and all improve the model significantly (Table 4). Subsequently, they are added together in one model (model 13) to investigate their combined effects. Overall, model 13 yields a significant improvement to the model (6df, $p \leq .001$). Nevertheless, *B4_Colleagues* is now borderline significant ($p = .068$) in predicting teachers' responsibility beliefs. Furthermore, as shown in Table 5, *ExperienceDivStu* no longer significantly impacts *A1_DiversityBeliefs* ($p = .793$) nor *A2_ResponsibilityBeliefs* ($p = .838$). Consequently, *ExperienceDivStu* is removed from the subsequent model (model 14). As shown in Table 4, model 13 fits the data better than model 14 (2df, $p \leq .001$). Nevertheless, model 14 is selected

as the best model based on the principle of parsimony. In model 14, *TeachingExperience* negatively relates to *A1_DiversityBeliefs* ($\beta = -0.014$; $p \leq .001$) and *A2_ResponsibilityBeliefs* ($\beta = -0.009$; $p \leq .001$). In terms of teachers' gender, the A1-score of female teachers is - on average - 0.192 points higher than the A1-score of male teachers ($p \leq .001$). Contrarily, the A2-score of female teachers is not significantly different from the A2-score of their male colleagues ($p = .091$). Overall, the combined effect of the control variables does not seem to radically impact the intercept estimates of the teacher-level self-efficacy variables (Table 5). However, the combined effect does explain some of the teacher-level and school-level variance found in model 9. At the teacher level, the combined effects of the control variables explain 5.65% of the variance in teachers' beliefs about different forms of diversity, 2.37% of the variance in teachers' responsibility beliefs and 5.26% of the correlation between teachers' diversity and responsibility beliefs. At the school level, it explains 8.51% of the variance in diversity beliefs, 10.17% of the variance in teachers' responsibility beliefs and 13.33% of the association between the two belief dimensions.

5. Discussion

The literature suggests that to effectively implement EfA teachers should have a positive outlook on diversity (Hellmich et al., 2019) and a high sense of efficacy in regard to inclusive practices (Sharma et al., 2012; Wilson et al., 2016). Furthermore, several studies have indicated a positive relationship between these two highly relevant variables (e.g., Savolainen et al., 2022; Yada et al., 2022). However, quantitative studies in the field of EfA are rare (Messiou, 2017), as - until recently - there were no reliable instruments for measuring teachers' attitudes toward diversity or teachers' self-efficacy for inclusive practices that apply a broad definition of inclusion (Schwab et al., 2021; Vantieghem et al., 2021). Consequently, the primary objective of this study was to provide a quantitative analysis of the association between Flemish teachers' attitudes and their self-efficacy for inclusive education, using the DISCO-instrument developed by Vantieghem et al. (2021). More precisely, we wanted to investigate how teachers' beliefs about different forms of diversity and their vision on the

responsibility of education in terms of inclusion relate to their self-efficacy in realizing five diversity sensitive tasks: noticing student diversity, creating stimulating learning environments for all students, enabling high-quality student-interactions, and collaborating with colleagues and diverse parents.

5.1. The relationship between teachers' attitudes & self-efficacy

Firstly, our results show that Flemish teachers' beliefs about diversity and Flemish teachers' responsibility beliefs do indeed vary and covary in relation to their self-efficacy for diversity sensitive tasks. This reconfirmed the findings of previous studies that teachers' attitudes toward inclusion and their sense of efficacy for inclusive practices are associated (Savolainen et al., 2022; Yada et al., 2022). Furthermore, the results confirmed our hypothesis that teachers with a high sense of efficacy for inclusive practices, have more positive beliefs about different forms of student diversity (H1a), as well as a more optimistic vision on the role of education in achieving EfA (H1b).

The results of this study indicate that both belief dimensions are associated with teachers' self-efficacy for creating stimulating learning environments for all students and their self-efficacy in collaborating with diverse parents. Moreover, teachers' diversity beliefs are correlated to their sense of efficacy in collaborating with colleagues, and their responsibility beliefs to self-efficacy in noticing student diversity. However, when considering all five self-efficacy variables together, teachers' self-efficacy for enabling high-quality student-interactions showed no association with either belief dimension. Although there was no clear issue of multicollinearity, this lack of association could nonetheless arise from the strong correlation between teachers' self-efficacy for creating high-quality student-interactions and their self-efficacy for creating inclusive and stimulating learning environments. One central task to creating stimulating learning environments for all learners is proactively taking student diversity into account during the preparation of the class (Struyven et al., 2016). This is necessary so that differences between learners are used as complementary assets, rather than cause problems during the class. Consequently, student-interactions will - to a certain extent - be designed into the class schedule. For example, during the class preparation the teacher can consider

pupils' different work paces and proactively plan for faster students to assist the slower students (Struyven et al., 2016). In this example, one student takes on the role of the teacher and the other the role of the learner. However, inclusive learning environments also promote other types of peer assisted learning (Topping & Ehly, 2001), such as reciprocal peer learning where students function as both the teacher and the learner simultaneously (Boud et al., 1999). Reciprocal peer learning, or simply peer learning, allows students to collaboratively construct new knowledge, without the direct help of a professional teacher (Avramidis et al., 2019). Thus, teachers do not actively partake in the teaching process during peer learning, yet they still have to proactively organize, and oversee the whole process. Hence, by calling upon such methods, teachers are effectively creating stimulating learning environments, while guiding students towards high-quality student-interactions. That is to say, it could be that a high self-efficacy for creating inclusive and stimulating learning environment, allows teachers to feel simultaneously optimistic in their ability to enable high-quality interactions between students. Here, it is important to remember that the self-efficacy variables are not representative of how good a teacher is at performing a task, nor how important this task is to create an inclusive environment. It is merely an assessment of how optimistic teachers are in their capability to perform the task (Bandura, 1997). Therefore, enabling high-quality student-interactions should not be considered less important than any of the other diversity sensitive tasks, yet our study shows that self-efficacy for this task does not directly predict teachers' attitudes toward diversity. Of course, additional research is necessary to establish if the same would be true for another "time-frame", as this concerns cross-sectional data. Furthermore, a more detailed analysis of the associations between the other four self-efficacy variables and teachers' attitudes is necessary. Especially the absence of association between teachers' self-efficacy in noticing diversity and teachers' diversity beliefs, as well as the lack of correlation between

self-efficacy for collaborating with colleagues and teachers' responsibility beliefs, raise some interesting questions.

As this study involves cross-sectional data, we must also be cautious when interpreting the correlation between teachers' attitudes toward inclusive education and teachers' self-efficacy for inclusive practices as such data precludes us from examining the causality of the relationship. Nevertheless, a longitudinal study by Savolainen et al. (2022) has found evidence that teachers' self-efficacy for inclusive practices influences their attitude toward diversity, rather than vice versa. This means that increasing teachers' self-efficacy for inclusive practices, might simultaneously improve teachers' - often robust - attitudes toward inclusive education (Savolainen et al., 2022; Van Mieghem et al., 2020). This could quite radically impact the way teacher training is organised. As previous research has noted: this means that more time should be devoted to increasing teachers' self-efficacy for inclusive practices (Avramidis et al., 2019; Desombre et al., 2019; Yada et al., 2022). This argument becomes more poignant when taking into account that self-efficacy for creating stimulating learning environments and collaborating with diverse parents, which impacted both belief dimensions, are also the self-efficacy dimensions on which teachers score the lowest. Hence, greater efforts should be made for Flemish teachers to gain mastery experiences - the most effective source of self-efficacy (Bandura, 1997) - for these tasks during their training. In conclusion, further research is needed before conclusive claims can be made about the causality of the relationship between teachers' attitudes toward inclusion and teachers' self-efficacy beliefs, yet the importance of increasing teachers' self-efficacy beliefs - and what this means for teacher training - should not be underestimated. Of course, that is not to say that positive attitudes toward inclusion cannot lead to more optimistic self-efficacy beliefs. As the literature suggests, the willingness to include all students could also allow teachers to have more mastery experiences (Pit-ten Cate et al., 2018).

As the primary aim of this study was to provide a first quantitative look into Flemish teachers' competences for diversity sensitive education, we did not take into account the subdimensions of the

two belief variables (Vantieghem et al., 2021). Future research that considers these dimensions is fundamental to get a more detailed understanding of Flemish teachers' attitudes toward diversity and its relationship with teachers' self-efficacy beliefs.

5.2. The impact of school type & inclusive teacher training

Secondly, as we become more aware of the impact of the school culture surrounding diversity (Ainscow, 2005; Vantieghem & Van Houtte, 2020), we wanted to add to previous research by considering some contextual factors. We hypothesized that teachers working in a special education schools would have more optimistic beliefs toward different forms of diversity (H2a) and a more positive outlook on the role of education in terms of diversity (H2b) than those working in mainstream schools. In the current study, no association was found between school type, i.e. whether the school was considered a special education or a mainstream school, and teachers' attitudes. This is rather surprising as we would expect special needs schools to have a more inclusive school culture, and thus for the teachers working there to have a more optimistic attitude toward diversity (Avramidis et al., 2019; Desombre et al., 2019; Sokal & Sharma, 2013). A first explanation for this lack of association might be the limited number of special education schools included in the sample. Hence, it would be interesting to compare special education and mainstream schools in a more equal setting. However, a second explanation might be that even though special needs educators have a more optimistic attitude towards SEN students (Sokal & Sharma, 2013), this does not mean they have a more positive attitude towards students along other important axes of diversity or that they have a positive outlook on the school's responsibility in achieving EfA. Furthermore, linking the concepts of diversity and inclusion to "having special educational needs" during special educators' training could be counterproductive: this often reduces SEN students to one aspect of their identity, which - albeit unconsciously - leads to deficit thinking (Booth, 2011; Messiou, 2017). Further research into Flemish special needs educators' attitudes toward diversity and EfA as a concept seems not only necessary but could provide an

interesting insight into what happens to teachers' attitudes when education programs lay an explicit focus on one axis of diversity.

Similarly, we found no association between teachers' attitude and teachers' experience in working with diverse students. As only a small percentage of participants (3.0%) stated to have experience in working with diverse students, caution must be applied when interpreting these results. Nevertheless, this was - again - rather unexpected, as the literature demonstrates that teachers who have experience in working with diverse students generally hold a more positive attitude toward inclusive education (de Boer et al., 2011; Yada et al., 2018). This discrepancy could be attributed to the fact that these studies often focus on SEN students rather than a diverse student population (e.g., de Boer et al., 2011; Yada et al., 2018). Therefore, it must be noted that further work on inclusive education should apply a broad definition of diversity to bridge the gap between research and the realities of teachers' classrooms (Yada et al., 2022).

5.3. The impact of education level

Thirdly, it was hypothesized that secondary schoolteachers would have more negative beliefs about different forms of diversity than their counterparts working in (pre-)primary education (H3a), as well as less optimistic responsibility beliefs (H3b) (Groenez et al., 2018; Schwab et al., 2021). On the one hand, our analysis confirmed that Flemish secondary schoolteachers do indeed have more negative diversity beliefs. On the other, however, education level was not associated with teachers' vision on the responsibility of education in terms of diversity. As the responsibility-items of DISCO are mainly concerned with policies that ensure maximal learning and developmental opportunities for all students (Vantieghem et al., 2021), our results suggest that even though secondary teachers have a more negative stance toward diverse learners, they do understand the importance of school policy to ensure excellent and equitable education for all students. This accords with the earlier observation by Vantieghem et al. (2021) that Flemish teachers can hold positive beliefs about school policy and disapproving diversity beliefs at the same time. Furthermore, it is important to note that this seemingly

disapproving attitude toward different forms of diversity, could also imply that secondary teachers are simply more concerned with the daily challenge of providing education to a superdiverse student population (Vantieghem et al., 2021). Hence, further analyses are necessary to investigate whether secondary teachers have less approving diversity beliefs overall, whether their disapproval is geared toward a specific group of students, or whether they have more concerns which become expressed through disapproving diversity beliefs.

Additionally, this finding suggests that a different school culture could exist in Flemish secondary and (pre-)primary schools, at least in terms of diversity beliefs. It would be interesting to investigate this further, as well as to include more contextual factors - such as the size or urbanicity of the school - in future models.

5.4. The impact of teaching experience & gender

Finally, this study supports evidence from previous studies that increasing teaching experience is linked to a less favourable attitude toward inclusive education (Mintz et al., 2020; Savolainen et al., 2012; Yada et al., 2018) and that female teachers tend to have more positive attitudes toward inclusion than male teachers (Avramidis & Norwich, 2002; Schwab et al., 2021). At least, the latter seems to be true for female teachers' diversity beliefs, yet not necessarily for their vision on the responsibility of the education system in terms of diversity. Therefore, a more detailed analysis between the association of teachers' gender and their attitudes is recommended.

An unfortunate limitation in our study is that teachers who identified as "Other" could not be compared to the teachers who identified as female or male, as their percentage in this sample did not allow for a meaningful statistical analysis. Furthermore, we could not confirm whether this percentage is representative for the Flemish proportion of schoolteachers that does not identify as female or male, as this population percentage is not measured by the Flemish Department of Education (see e.g., Departement Onderwijs en Vorming, 2021). Nevertheless, we found it important to include this data in Section 3.2. As Fraser (2018) emphasizes: it is our responsibility as researchers to report our data

on small groups, whether in terms of gender or otherwise. This should be done out of respect for the participants, but also because it is good methodological practice to do so.

6. Conclusion

The “Education for All”-perspective on inclusion promotes the idea that *all* learners should have access to educational professionals that have the correct competences - that is the knowledge, skill and attitude - to make a positive impact on their learning (Caena, 2014; Crick, 2008). In terms of attitude, it has been stated that teachers should have a positive outlook on diversity (Caena, 2014; Dyson et al., 2002), as well as optimistic self-efficacy beliefs in regard to inclusive practices (Sharma et al., 2012). As there is now a need for quantitative studies in the field of EfA that can support these claims (Ainscow & Miles, 2008), this study was aimed at providing a quantitative analysis of the relationship between teachers’ attitudes toward diversity and their self-efficacy for inclusive practices. Our findings indicate that a more optimistic attitude toward diversity is associated with a high sense of efficacy for noticing student diversity, creating stimulating learning environments for all students, and collaborating with colleagues and diverse parents. Hence, this study supports the statement made by other researchers that greater efforts should be made to increase teachers’ self-efficacy for inclusive practices (Avramidis et al., 2019; Desombre et al., 2019; Yada et al., 2022). Furthermore, our results show that different school cultures regarding diversity might exist in Flemish (pre-)primary and secondary schools. Although further analysis of this potential difference is necessary, it is important to acknowledge that analysing school cultures is crucial to achieve EfA, as truly inclusive education systems can only become a reality if harmful beliefs at each level of the educational system are recognised and dismantled (Ainscow, 2005; Opertti et al., 2014; UNESCO, 2017).

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Appendix A

DISCO Items for Measuring Teachers' attitudes & Self-efficacy beliefs

From Vantieghem et al. (2021)

Teachers' professional beliefs about diversity.

1. Ethnic and cultural diversity is a valuable resource in education.
2. If there are more "native-born" pupils in a school, it means that academic achievement will be higher across the board. (-)
3. If an additional language is spoken at home, the student will fall behind in their learning. (-)
4. Immigrant students are not as good at mathematics as native students. (-)
5. Students who speak a different language at home will never speak Dutch properly. (-)
6. The more immigrant students in a school, the more discipline problems the school will face. (-)
7. Many students experiment with their sexuality just to get noticed. (-)
8. LGBT teachers (lesbian, gay, bisexual, transgender), have the right to be open with parents about their sexual orientation.
9. In order for their time in school to go smoothly, it is better for LGBT students not to openly display their sexual orientation. (-)
10. I feel sorry for students who grow up in an LGBT family because it is not easy for them. (-)
11. Boys shouldn't wear earrings or nail varnish when in school. (-)
12. Two boys can dance together for the entire evening at the school dance without attracting undue attention.
13. I find it difficult to understand transgender students. (-)
14. I think it's good that girls are not asked to help out with jobs in school that involve heavy lifting. (-)
15. Care for students with a disability is worthwhile but is often at the expense of other students. (-)
16. Students with a disability always score worse on tests than other students. (-)
17. Students with a disability reduce the learning opportunities for the other students in the class. (-)
18. Students with a disability often abuse the support that they receive. (-)
19. I think that many teachers show too much understanding for the behaviour of students with a disability. (-)
20. Underprivileged parents are often less interested in their children's progress in school than other parents. (-)
21. It is difficult to be sympathetic towards poorer students if they or their parents always have the latest mobile phones or gadgets. (-)
22. Schools that educate many underprivileged students have lower standards. (-)
23. Underprivileged students rarely succeed in difficult subjects because they do not have supportive parents. (-)
24. It is normal for teachers to have higher expectations of students from good backgrounds. (-)

Teachers' responsibility beliefs.

1. The school should provide specific services for students who want to follow religious practices (e.g., prayer room, halal/kosher food).

2. The school must allow students with a migration background to speak a language other than Dutch at school.
3. The school library should have books in the different home languages of the students.
4. I find it important to encourage students of immigrant origin to be proud of their ethnic and cultural background.
5. It is time that we give children with a disability a full place in mainstream education. It is their right.
6. It is sensible to not send students to special educational support too quickly.
7. The school's infrastructure must be made accessible at all levels to people with physical and sensory disabilities (vision, hearing, motor).
8. You cannot expect the teacher to meet the needs of a child with a disability in mainstream education. (-)
9. Teachers must be capable of working with students from different home situations.
10. Students from families with financial problems should be provided with appropriate support (e.g. payment plan, special support fund for students who cannot pay the school fees).
11. A teacher can make a difference for students from all kinds of home environment.
12. As a school, it is important to break the traditional divide between subjects that are stereotypically for boys or for girls.
13. It is every teacher's job to contribute to a school policy that is mindful of diversity.

Teachers' self-efficacy in noticing student diversity

1. Make time for in-depth individual conversations with all of your students in order to provide more effective support.
2. Gain insight into the learning needs of an individual student by consciously looking at how he/she responds to different tasks and works in different groupings.
3. Gain insight into a student's plans and dreams for the future.
4. Start a conversation with a student who is not attentive or is having a difficult time outside of the classroom.
5. Gain insight into social relationships among students.
6. Gain insight into the students' feelings about their family situation.

Teachers' self-efficacy in creating stimulating learning environments for diverse students

1. Ensure that teaching materials reflect diversity in society.
2. Use a wide range of evaluation methods in order to evaluate students in a broad way as possible.
3. Specifically check that students with a language delay have understood the question.
4. Enter into dialogue with students about their results.
5. Occasionally use a short moment of evaluation (e.g., quiz) to tailor your lesson in a more nuanced way to the students' needs.
6. Give students opportunities beyond traditional tests and exams to demonstrate their knowledge and skills (e.g. through portfolios, writing tasks, oral presentations).
7. Allow students to give input about content that they would like to cover in lessons.
8. Have students evaluate your lessons.
9. When managing the pace of your lessons, take account of students who work faster/slower than the others.
10. Offer a variety of activities so that students can choose what to do themselves.
11. Allow students to choose whether or not to use certain tools/support.
12. Use a variety of teaching materials and media which invite pupils to draw on different senses.

13. When necessary, adapt your learning objectives (knowledge and skills) to take account of differences between students (e.g., by creating main and advanced learning goals).

Teachers' self-efficacy in creating high-quality student-interactions

1. Allow students with learning difficulties to be helped by other pupils.
2. Give tasks where the students have to work together to complete the task successfully (for example, each having a different role).
3. Provide feedback on how students work together.
4. Create space in or outside the classroom to support students in the resolution of conflicts.
5. In group work, ensure that all pupils get to work with others from all across the class?
6. In the case of bullying, discuss a plan of action with the students involved.

Teachers' self-efficacy in collaborating with colleagues

1. Address the school team (e.g.: teachers, care coordinator, ...) when there are extra needs for one of your students.
2. Integrate lesson ideas from colleagues into your own teaching practice.
3. Ask colleagues for feedback to improve your teaching.
4. Create new teaching methods or materials together with colleagues in order to support students with learning difficulties.

Teachers' self-efficacy in collaborating with diverse parents

1. Make parents from different backgrounds feel comfortable about coming into school.
2. Help parents to support their children to do well in school.
3. Involve the parents of students with special needs in their children's educational career.
4. Adapt the way you communicate with different kinds of families (e.g. single parents, LGBT+ parents, non-native speakers...).
5. Use the insights that parents give you about their child.
6. Establish a good relationship with all parents, even if you do not like them.
7. Always be available for questions from parents during school hours.
8. Allow parents to give some input about my lessons.

Appendix B

Table B1

Estimated Unstandardized Parameters and Standard Errors Models 9 – 12.

Variables	Model 9	S.E.	Model 10	S.E.	Model 11	S.E.	Model 12	S.E.
Fixed Part								
Dependent variables								
<i>Cons.A1</i>	4.229***	0.031	4.228***	0.030	4.239***	0.031	4.067***	0.040
<i>Cons.A2</i>	4.017***	0.034	4.018***	0.033	4.024***	0.034	3.968***	0.043
Teacher-level variables								
<i>(B1-gm).A1</i>	0.021	0.013	0.023	0.012	0.021	0.013	0.021	0.013
<i>(B1-gm).A2</i>	0.041**	0.013	0.043***	0.013	0.042***	0.013	0.042**	0.013
<i>(B2-gm).A1</i>	0.054***	0.015	0.060***	0.015	0.060***	0.015	0.055***	0.015
<i>(B2-gm).A2</i>	0.089***	0.016	0.091***	0.016	0.093***	0.016	0.091***	0.016
<i>(B4-gm).A1</i>	0.053***	0.011	0.037***	0.011	0.051***	0.011	0.045***	0.011
<i>(B4-gm).A2</i>	0.035**	0.011	0.025*	0.011	0.034**	0.011	0.032**	0.011
<i>(B5-gm).A1</i>	0.020	0.011	0.033*	0.011	0.022*	0.011	0.016	0.011
<i>(B5-gm).A2</i>	0.036**	0.012	0.045***	0.012	0.036**	0.012	0.033**	0.012
School-level variables								
<i>Secondary.A1</i>	-0.140**	0.049	-0.129**	0.048	-0.154**	0.049	-0.106*	0.049
<i>Secondary.A2</i>	-0.072	0.054	-0.064	0.053	-0.081	0.054	-0.062	0.054
Control variables								
<i>(TeachingExperience-gm).A1</i>			-0.014***	0.001				
<i>(TeachingExperience-gm).A2</i>			-0.009***	0.001				
<i>(ExperienceDivStu-gm).A1</i>					-0.037**	0.013		
<i>(ExperienceDivStu-gm).A2</i>					-0.028*	0.014		
<i>Female.A1</i>							0.190***	0.031
<i>Female.A2</i>							0.058	0.032
Random Part								
School-level variance								
<i>Var(Cons.A1)</i>	0.047***	0.009	0.043***	0.008	0.046***	0.009	0.046***	0.009
<i>Covar(Cons.A2/Cons.A1)</i>	0.045***	0.009	0.041***	0.008	0.044***	0.009	0.044***	0.009
<i>Var(Cons.A2)</i>	0.059***	0.011	0.055***	0.010	0.059***	0.011	0.057***	0.011
Teacher-level variance								
<i>Var(Cons.A1)</i>	0.460***	0.012	0.442***	0.011	0.459***	0.012	0.453***	0.012
<i>Covar(Cons.A2/Cons.A1)</i>	0.285***	0.010	0.274***	0.010	0.285***	0.010	0.281***	0.010
<i>Var(Cons.A2)</i>	0.506***	0.013	0.497***	0.013	0.505***	0.013	0.503***	0.013

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.