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# The relationship between ethnic school composition, school diversity climate and students' competences in dealing with differences

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## ABSTRACT

In societies that are characterised by diversity, citizens are required to have the competences to handle differences. Schools differ in their degree of ethnic diversity which means that they provide different contexts for learning to deal with differences (DD). This study investigated the association between ethnic school composition, the diversity climate (the importance that teachers collectively attach to diversity and the attention they pay to teaching diversity) and students' competences in DD. Multilevel analyses were performed on data from 4,402 students and 535 teachers across 62 secondary education schools in The Netherlands. The results showed a positive relationship between ethnic school diversity and DD-reflection and DD-attitudes. In addition, the degree of ethnic school diversity was associated with more diversity-related practices. However, no relationship was found between ethnic school diversity and teachers' diversity-related educational goals. Moreover, diversity climate was not related to students' DD competences. Lastly, the diversity climate did not mediate nor moderate the relationship between school composition and DD. Implications and suggestions for future research are discussed.

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Ethnic school composition; school diversity; diversity climate; dealing with differences; secondary education

## Introduction

A cohesive society calls for citizens who, at the very least, have knowledge and understanding of different backgrounds and diversity (Dutch Ministry of Education, Culture and Science 2005; Torney-Purta et al. 2001). But perhaps more importantly, citizens need to possess openness to society and the diversity present in it (Berlet et al. 2008). It follows that in diverse societies where fertile grounds for tension exist, being able to *deal with differences* (DD) is a key competence (Ten Dam and Volman 2007).

For younger generations, the teaching of DD competences is partly entrusted to schools as a part of promoting citizenship competences, which is a legal task assigned

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to schools in many European countries (Eurydice 2012). However, although schools have the same assignment, each school operates within a particular, unique context requiring school-specific approaches to citizenship education (Eidhof 2019). In terms of student backgrounds, for example, the compositional contexts of schools may demand different DD competences and offer different opportunities and constraints for ‘practicing’ such competences. In this study, we explore whether the make-up of the student population matters for students’ DD competences. More specifically, we examine whether there is a relationship between *ethnic school diversity* and students’ DD competences.

Next to our interest in the direct relationship between school diversity and DD competences, a second aim is to examine school practices that may explain the relationship between school composition and DD. Previous research has demonstrated that schools and teachers act upon the student population they serve, in other words: school compositional characteristics and school processes are related (e.g. Agirdag 2018; Brault, Janosz, and Archambault 2014; Opdenakker and Van Damme 2007; Van Maele and Van Houtte 2011). Thus, the association between school composition and DD competences may not be a given, as school processes and practices may influence this relationship.

In line with this, the current study focuses on schools’ *diversity climate*, as a designation of possible relevant school practices. Within the school context, diversity climate could be interpreted as the (possibly various) ways in which teachers and students in a school understand diversity and deal with it. Part of this is the importance that teachers collectively attach to and the attention they pay to teaching diversity and dealing with differences, which is the focus of this article. In short, the objective of this study is to explore the association among school composition, school diversity climate and DD.

### **Competences for dealing with differences (DD)**

It is argued that in diverse, democratic societies, youngsters should acknowledge diversity and acquire the competences to deal with dissimilar others (see e.g. Dutch Ministry of Education, Culture and Science 2005; Schuitema, Dam, and Veugelers 2008; Ten Dam and Volman 2007; Ten Dam et al. 2011; Torney-Purta et al. 2001). This includes attitudes and values such as showing tolerance, respect and valuing diversity. Although such social attitudes can be considered to be self-contained concepts, they can also be viewed as important aspects of citizenship. For example, the promotion of tolerance is repeatedly emphasised in the literature as being one of the aims of citizenship education (see e.g. Eurydice 2012). However, it can be argued that for the co-existence with dissimilar others in society a broader conceptualisation than these social attitudes is needed. In this reasoning, we follow the conceptualisation by Ten Dam et al. (2011), who propose that for young people, citizenship manifests itself in daily social tasks, one of which is dealing with differences (DD). The competence to deal with differences is further subdivided into the knowledge, attitude, skills and reflection component (Ten Dam et al. 2011; Rychen and Salganik 2003). As citizens, young people need to have knowledge and understanding of societal issues, have a democratic attitude, show the ability to act effectively in a particular situation or setting and think critically about societal matters. When applied to DD, a young person, for example, would have to know what tolerance means, be willing to learn about differences between people, have the skills to act tolerant in a

particular situation, and think critically about why people are intolerant and how this may affect social and societal relationships. In short, being able to deal with differences refers to a comprehensive social competence that includes several components that are imperative for an active and critical participation in and contribution to society (Ten Dam et al. 2011). See Table 1 and Ten Dam et al. 2011 for a more elaborate description of DD.

**The school as a practice ground for dealing with differences (DD)**

Schools are public institutions where young people are usually surrounded by more diversity compared to their personal networks in their private lives (Eidhof 2019; Parker 2005; Vermeij, Van Duijn, and Baerveldt 2009). This physical proximity between people (‘propinquity’; Blau 1977; Graham, Munniksmma, and Juvonen 2014) leads to higher chances of getting into contact. As such, the school may carry the potential to serve as a practice ground or a mini-society (Eidhof 2019), where young people, to a greater or lesser extent, meet others with varying cultural and social backgrounds, lifestyles and perspectives (Parker 2005).

In more diverse schools, students may not only have more opportunities to practice with diversity for the future, they are also already at present required to have the capacity to handle differences inside the school, more so than in non-diverse schools. In contrast, students in ethnically homogenous schools may have less sources to practice with differences and become familiar with diversity. In sum, students are embedded in different compositional contexts, creating potentially different conditions and opportunities for dealing with differences.

**School composition and DD**

Earlier studies on the link between school or classroom composition and (concepts related to) DD have predominantly paid attention to outcomes related to attitudes, such as ethnic (in)tolerance (Janmaat 2012; Keating and Benton 2013; Kokkonen, Esaiasson, and Gilljam 2010), inclusive, multicultural, interethnic and outgroup attitudes (Janmaat 2014, 2015; Van Geel and Vedder 2010; Bubritzki et al. 2018; Vervoort,

**Table 1.** Definition of dealing with differences based on the particular components.

| Components  | Knowledge  | Attitudes   | Skills  | Reflection  |
|---|--|---|---|---|
| Social Task   | Knowing, understanding, insight  | Thoughts, desires, willingness  | Estimate of what one can do   | Contemplation of topics   |
| Dealing with differences<br>Handling of social, cultural, religious, and outward differences. | A young person with such knowledge is familiar with cultural differences, has knowledge of rules of behaviour in different social situations, knows when one can speak of prejudice or discrimination. | A young person with such attitudes has a desire to learn other people’s opinions and lifestyles, has a positive attitude towards differences. | A young person with such skills can adequately function in unfamiliar social situations, adjust to the desires or habits of others. | A young person with such reflection thinks about the nature and consequences of the differences between people and cultural backgrounds for behaviour and processes of inclusion and exclusion. |

Note: This is one part of a larger table taken from Ten Dam et al. (2011) on citizenship competences (see their publication for the full table).

Scholte, and Scheepers 2011), ethnocentric prejudice (Dejaeghere, Hooghe, and Claes 2012), ethnic discrimination (Bellmore et al. 2012; Closson et al. 2014), and comfort working with people from different backgrounds (Kurlander and Yun 2006). One study with a somewhat broader scope is that of Carter (2010), who examined the relationship between ethnic composition and students' cultural flexibility. Taken together, the aforementioned studies show varied results, revealing either positive (Bubritzki et al. 2018; Closson et al. 2014; Dejaeghere, Hooghe, and Claes 2012; Janmaat 2012, 2014; Kokkonen, Esaiasson, and Gilljam 2010; Van Geel and Vedder 2010), negative (Vervoort, Scholte, and Scheepers 2011), curvilinear (Bellmore et al. 2012; Kurlander and Yun 2006), or non-relationships (Bubritzki et al. 2018; Carter 2010; Closson et al. 2014; Dejaeghere, Hooghe, and Claes 2012; Janmaat 2012, 2015; Keating and Benton 2013; Kokkonen, Esaiasson, and Gilljam 2010) between school composition and the outcome variable.

It is difficult to reach firm conclusions due to the multitude of school composition measures, outcome measures and methods utilised. Moreover, the addressed outcomes are narrower than the broad concept of dealing with differences that we are interested in. Lastly, in most of these studies there is hardly any attention to possible underlying mechanisms. This may in fact be an additional explanation for the mixed picture emerging from prior studies. Processes taking place in schools may have an influence on how and why school composition relates to DD (-related concepts), and therefore such school processes should be taken into account. In brief, our first objective is to add to the literature by examining the link between school ethnic diversity and the competence of dealing with differences, with a primary focus on the ethnic/cultural dimension (Ten Dam et al. 2011).

### *School composition and schools' diversity climate*

When explaining how the school composition relates to processes within the school, the teaching or pedagogical context seems relevant to consider. Teachers and schools can, consciously or unconsciously, react to or employ the characteristics of the student population in their teaching practices and beliefs (e.g. Agirdag 2018; Brault, Janosz, and Archambault 2014). It is important to gain more insight in such school and teacher factors as the student composition is primarily a given, while teacher and school practices can potentially be adjusted (Marcoulides, Heck, and Papanastasiou 2005).

One such malleable and relevant factor is the school's diversity climate. In a previous qualitative study, we focused on two aspects of the diversity climate in a school: (1) teachers' diversity-related understandings; (2) teachers' practices (in addressing diversity as an educational goal) (Sincer, Severiens, and Volman 2019). Elaborating on this with a quantitative approach, in the current study, we focus on the diversity-related educational goals and practices of teachers in a school.

When it comes to dealing with diversity, different ideological approaches exist (Rosenthal and Levy 2010). Commonly, a distinction is made between colour-blind, multicultural or cultural pluralistic and assimilationist approaches (Celeste et al. 2019; Civitillo et al. 2017; Rosenthal and Levy 2010; Schachner 2019). Leaving aside the exact meaning of these conceptualisations, it can be stated that the most substantial division between the notions is the degree to which emphasis is placed on ethnic-cultural differences regarding the aim of reducing prejudice and fostering prosperity of all groups in society; varying from a focus on similarities (with the risk of colour-blindness) to a

focus on attention for ethnic-cultural differences (multicultural approach). The emphasis on differences is translated to the educational context by the implementation of what is called ‘multicultural education’ (Banks and McGee Banks 2010). Banks’ (1993) framework is most commonly known, however, several conceptualisations and practices exist concerning multicultural education and no clear consensus has been reached on the concept (Banks 1993; Bennett 2001; Zirkel 2008). In the present paper, the self-designated term ‘diversity climate’ is used to refer to the degree to which teachers provide a supportive climate for learning about and handling diversity. That is, a climate in which students get acquainted with cultural diversity, where diversity is regarded to be a resource, where equality is fostered and a climate in which prejudice and discrimination are countered (Civitillo et al. 2017; Schachner 2019).

The question is whether the make-up of the student body is associated with how teachers approach diversity. In more diverse schools teachers may hold the belief that less attention to and practice for diversity is needed due to the assumption that students are already familiar with diversity. Oppositely reasoned, teachers may think that students should be taught to handle differences, precisely because students encounter differences daily within school. In a similar vein, in less or non-diverse schools, on the one hand, teachers may pay explicit attention to diversity, as students have less opportunities to come in contact with and gain understandings of dealing with differences. On the other hand, a focus on diversity may appear less urgent and relevant to teachers in these schools as students are facing less occasions where they must deal with different views and backgrounds.

Available literature on how the compositional context of the school is related to the school’s diversity climate is limited. Related to the topic of teachers’ diversity practices, Flemish research suggests that the more diverse schools are, the more multicultural educational practices teachers implement (Agirdag, Merry, and Van Houtte 2016; Vervae, Van Houtte, and Stevens 2018b). To our knowledge, in the Dutch context only two studies in this area are available. Our own small-scaled qualitative study research has shown that teachers’ diversity-related teaching practices are related to the school context; not so much in terms of amount of attention for diversity but in the sense that practices are tailored to the alleged needs of students (Sincer, Severiens, and Volman 2019). Diversity-related understandings were less influenced by the school’s contextual features (Sincer, Severiens, and Volman 2019). The only Dutch study that we know of with a quantitative design is a study by Verkuyten and Thijs (2002). In their study, according to the pupils, in classrooms where the share of students with a Turkish or Moroccan background was higher, more multicultural education took place, whereas in classes with more Dutch students they perceived the opposite. In the view of teachers, there was no relationship between the make-up of the student body and multicultural education. The scarcity of research in this area warrants the need for more research. Therefore, the second objective of our study is to investigate the association between school composition and teachers’ diversity-related goals and practices.

### *Schools’ diversity climate and students’ DD competences*

Students differ in their citizenship competences and although student level factors explain most of the variance in citizenship outcomes, schools play a role in these

differences as well (Dijkstra et al. 2015; Geboers et al. 2013; Isac et al. 2014; Munniksmma et al. 2017). However, when it comes to the broad concept of DD there is a lack of knowledge on effective school practices. Rather, previous studies, again, predominantly focused on students' racial/ethnic attitudes as an outcome variable, such as racial stereotyping and ethnic prejudice (Aboud et al. 2012; Bigler 1999; Vervaet, Van Houtte, and Stevens 2018a), inter-ethnic attitudes (Verkuyten and Thijs 2013), and interpersonal relationships (Aboud et al. 2012; Zirkel 2008). These studies all address the effectiveness of some form of education on multiculturalism/diversity, ranging from more structural forms of multicultural education (e.g. Vervaet, Van Houtte, and Stevens 2018a, 2018b) to short-term interventions programmes. Review studies show a mixed picture (Bigler 1999; Aboud et al. 2012), with a trend toward a positive impact on students' attitudes and/or intergroup relations (Verkuyten and Thijs 2013; Zirkel 2008).

It is assumed that education about other cultures develops children's knowledge and understanding of different cultures, positively influencing their out-group attitudes (Thijs and Verkuyten 2013). When children receive new information that defies stereotypes and thus learn about the outgroup, negative out-group attitudes may be adjusted (Pettigrew 1998). Moreover, multicultural education sets norms about treating others in an anti-discriminatory way (Thijs and Verkuyten 2013). In a similar vein, Pettigrew and Tropp (2008) showed that increased knowledge, reduced anxiety and enhanced empathy and perspective taking is the principle that underlies the effect of contact on prejudice reduction.

Applying the abovementioned principles to the current study, we expect that the importance attached to diversity by teachers and the actual teaching of diversity, which we designate as the diversity climate, may possibly contribute to students gaining understanding of (knowledge), thinking about (reflection), being positive about (attitude) and having the skills to act upon differences. Following, the third objective of our study is to explore whether there is an association between the diversity climate and students' DD competences.

### *School diversity climate as a mediator or moderator*

Next to examining the three associations explained above (school composition → DD, school composition → school diversity climate and, lastly, school diversity climate → DD) our additional aim is to gain understanding of the possible role of the diversity climate as a mediator or moderator. Given the contradictory hypotheses on the direct relationship between school composition and DD, we would also have contrasting expectations regarding the mediating effect of the diversity climate. On the one hand, the more diverse schools are, the less strong the diversity climate may be and consequently, the less competent students are in DD. On the other hand, the more diverse schools are, the stronger the diversity climate that teachers create, and in turn, the more competent students are in DD.

It is also possible that the diversity climate operates as a moderator and changes the strength of the association between school diversity and DD. As the study is explorative, several hypotheses are possible, revealing either an enhancing or buffering effect. For example, a strong diversity climate could reinforce a positive effect of school diversity on DD because of the higher relevance in such a context (Thijs and Verkuyten 2014).



In contrast, a stronger diversity climate could buffer the positive relationship between the degree of school diversity and DD; students in native homogenous schools are more likely to have less encounters and familiarity with students from different backgrounds, both inside and outside school. A stronger diversity climate could therefore mitigate the relationship between school diversity and DD, as a way of compensating for the possible lack of diversity in students' daily interactions.

To summarise, in this article we address the following research questions:

- (1) What is the relationship between ethnic school diversity and students' competence in dealing with differences?
- (2) Is ethnic school diversity related to the school's diversity climate?
- (3) What is the relationship between schools' diversity climate and students' competence in dealing with differences?
- (4) Is the relationship between school diversity and students' competences in dealing with differences mediated or moderated by the diversity climate?

## Method

### *Participants and procedure*

Data were collected as part of the large-scale ESC research project (*Understanding the Effects of Schools on students' Citizenship*) in 2016 in Dutch secondary schools. The project's aim was to gain insight in citizenship education in secondary education and 9th grade students' citizenship competences. As such, the dataset was used for other articles as well (submitted). Initially, 82 schools across the Netherlands agreed to participate based on, firstly, a random sampling procedure resulting in 52 schools confirming participation. For this, we used a stratified sampling approach, based on a list of all secondary education schools in the Netherlands that include 9th-grade classes. From this list, 100 schools – subdivided into the vocational, general and mixed school tracks – were drawn and for each school a first and second replacement school was selected in case of non-participation of the first approached school. Secondly, in order to enhance statistical power, 30 additional schools were obtained by contacting schools within the professional networks of the research team. The total sample appeared to be largely representative of Dutch secondary education schools, with a small overrepresentation of public schools and schools in the province of North-Holland. Schools providing only lower level vocational education were slightly underrepresented. One school decided to discontinue their partaking at an early stage of the study. Ultimately, 5,297 students in a sample of 81 secondary schools took part in the study. Besides students, in each school, the school leader, one team leader and approximately fifteen teachers were invited to participate in the study.

For the current study, we used student and teacher data which was gathered by anonymous online questionnaires; one for teachers and two for students. Schools received instructions that described how to randomly select three 9th grade classes. Prior to participation, letters were sent to students' parents, explaining the study aims and procedures. With this letter, parents were given the opportunity to deny permission for their child's participation. Administration of the two student questionnaires took place within two regular classes and in presence of a trained test leader.

The first questionnaire concerned student background characteristics (e.g. age, ethnic background), students' perception of school factors relating to the school climate or citizenship education (e.g. the degree of an open classroom climate) and attitudes regarding social tasks (as part of the Citizenship Competences Questionnaire (CCQ); for an extensive description, see Ten Dam et al. 2011). The second questionnaire contained items of the CCQ (see Ten Dam et al. 2011), and newly constructed knowledge items (see below for a description).

In addition, schools were given instructions on how to randomly select 15 9th-grade teachers who taught the three selected classes. The schools were asked to select teachers teaching across all subject areas, including teachers of social studies, history, cultural education and other social subjects. The teacher questionnaire took approximately 30 min to complete and teachers were allowed to fill out the questionnaire at any location and any time within the duration of the study.

Criteria were set up on the basis of which students, classes, teachers and schools were included in the analysis. For inclusion (1) data had to be available on at least student background characteristics; (2) no less than 10 students per class had to participate in the study (3) a minimum participation rate of 60% per class was required and (4) after applying the foregoing criteria, schools should not have more than 1 class that was excluded from the analysis. These four criteria were intended to obtain representative data as much as possible on school compositional features. Additionally, in line with previous studies (Vervaeke, Van Houtte, and Stevens 2018a, 2018b; Van Maele and Van Houtte 2009), schools with at least five teachers participating in the study were included. For our analysis, these five teachers had to have at least completed the items related to the diversity climate. Lastly, apart from the five criteria, two schools were excluded due to sharing their school location and thus causing ambiguity regarding their interrelatedness. A third school was excluded due to a high proportion of students with special needs, causing a mismatch with the characteristics of the overall sample. Taken together, the selection criteria resulted in an ultimate sample of 4,042 students and 535 teachers across 62 schools.

## Variables

### *Student background variables*

To ensure that the effects of school composition and diversity climate are not spurious ones, we included several control variables on the individual-level and school-level, some of which have been shown to be associated with DD-related and citizenship-related outcomes (see, for example, Dijkstra et al. 2015; Janmaat 2012; Munniksmas et al. 2017; Schulz et al. 2010).

On the student level, *migrant background* was measured by information drawn from the student questionnaires on parents' country of birth. A dichotomous variable (1 = migrant background, 0 = native) was constructed based on Statistics Netherlands' (2016) definition of having a migrant background. If both parents were born in the Netherlands, the student was classified as native. Students with either of the parents born elsewhere were classed as having a migrant background. If no parent data were available, the student's country of birth was considered instead. In our sample, 22.8% of the students had a migrant background.

Students' *socioeconomic status* (SES) was measured using the educational level of parents, information on which was provided by the students. We assessed SES by determining the parent with the highest educational level. Research shows that parents' educational level is a strong predictor for citizenship outcomes (Schulz et al. 2010; Wanders et al. 2020), as high-educated parents may provide a richer environment for learning opportunities in the area of citizenship (Wanders et al. 2020). Conversely reasoned, we expect that students with low-educated parents would be in a more disadvantageous position, and therefore a dummy variable was created for SES (1 = low SES, 0 = not-low SES). Next, to be able to include students in the analysis who had missings on SES (18.1%), we additionally created a variable for missingness on SES (1 = missing, 0 = not missing). Students whose parents had completed maximally secondary vocational education were classified as having low SES. In our sample, 11.7% of the students was classified as 'low SES' (see Table 2).

Two other individual level control variables concerned students' *gender*, which was equally distributed across the sample (51.6% female), and *educational track*, for which we dichotomised students' educational level (1 = vocational track, 0 = other tracks). Vocational education was well represented, as 44.2% of our respondents were enrolled in this track (see Table 2).

### *School level variables*

In line with previous research, as an indicator of *ethnic school diversity* we calculated the Herfindahl Index (Dijkstra et al. 2015; Lancee and Dronkers 2011; Putnam 2007), which takes into account the number and size of different ethnic groups. The formula for calculating the index is:  $(\text{proportion ethnic background}_1)^2 + (\text{proportion ethnic background}_2)^2 + \dots + (\text{proportion ethnic background}_n)^2$ . Originally, the index was intended to reflect the degree of homogeneity (Putnam 2007) but since we were interested in the degree of heterogeneity, we subtracted the index from 1. An index of zero indicates an entirely homogenous context and an index of 1 corresponds to a fully heterogeneous context. For the calculation of the Herfindahl index, students were assigned to ethnic groups, according to parents' country of birth. The students were classed into nine large ethnic groups. If both parents were born abroad, we considered mothers' country of birth to assign students to an ethnic group. In case of non-availability of information regarding parents' birth place, the student's country of birth was used. The following nine groups were constructed: Native-Dutch (77.2%), Turkish (3.9%), Moroccan (4.9%), former Dutch colonies (Surinam, Netherlands Antilles and Aruba, 2.2%), European (North, West, South, 3.3%), Mid- and Southeast European and other Western (2.0%), Middle Eastern (1.4%), Asian (2.4%), Sub-Saharan African and other Non-Western (2.4%). The small number of students in certain groups made it difficult to create more distinct groups, causing the merger of multiple groups or regions. The average diversity index of the schools in our sample was .32 (SD = .22).

The *school diversity climate* consisted of two components, being *teachers' diversity-related education goals* and *teachers' diversity-related teaching practices*. For educational goals, including citizenship goals, we used a 17-item scale adapted from the Dutch Inspectorate of Education (2017), Pulinx (2017) and Zaman (2006). Respondents could answer on a 5-point Likert scale (1 = not important at all; 5 = very important). Within the educational goals scale, we selected 4 items that referred to diversity-

related educational goals. A scale of the 4 items was constructed by averaging the responses. The scale was internally consistent with a Cronbach's alpha of .82. The educational goal items were introduced with the question: 'With education, a variety of goals can be pursued. Which goals do you think are important?' A sample item of the diversity-related educational goals scale is: 'learning to handle differences (e.g. social or ethnic differences between people)'. The school average for this scale was 4.38 (SD = .18). For the diversity-related teaching practices we selected several items on teaching practices that we deemed relevant in terms of teaching diversity content. These items were inspired by scales of the Dutch Inspectorate of Education (2017), Agirdag, Merry, and Van Houtte (2016) and Torney-Purta et al. (2001). Next, the Cronbach's alpha of the selected items were checked and items that lowered the Cronbach's alpha considerably were successively omitted. This resulted in the selection of 5 items with the best alpha (.68). Subsequently, a scale was created by taking the mean score of the 5 items. All items could be answered with a 5-point Likert scale, whereby a higher value indicated more diversity practices. An example of the items is: 'I offer learning content or learning material that reflects multicultural society'. On the school level, the average score for teachers' diversity-related practices was 3.43 (SD = .22). Finally, we performed a Principal Component Analysis (PCA) with varimax rotation. Based on eigenvalues > 1, the PCA indicated a two-factor structure, explaining 54% of the variance. All items loaded highly (between .55 and .86) on the respective intended constructs. Given these indications, we assume that goals and practices concerning teaching diversity are conceptually distinct aspects of diversity climate. See the online appendix for an overview of all items on the diversity climate.

School level variables that were included as control variables were *school SES composition*, *school size*, *degree of urbanisation* and *school type*. To measure *SES composition*, we aggregated individual SES to the school level. In our sample, schools had a mean proportion of students with a low SES of .12 (SD = .08; see Table 2) (with missing-SES students included in the proportion). *School size* was operationalised as the total number of students per school, information on which was drawn from a dataset of the Education Executive Agency (2015). The average school size in our sample was 846 (SD = 521).

For the *degree of urbanisation* we used data published by Statistics Netherlands (2012), that classifies five categories (rural to highly urban) based on the number of home addresses per postal code area. Young people in more urbanised settings may encounter more complex and challenging circumstances compared to youngsters in less or non-urban environments (see e.g. Geijsel et al. 2012; Zwaans et al. 2008), which may impact the way they are challenged to practice with citizenship. The average degree of urbanisation was 3.55 (SD = 1.33). Lastly, we determined the *school type*. In the Netherlands, some schools are referred to as 'categorical', which means that a school provides education solely for a specific track (e.g. vocational education). Other types of schools are 'comprehensive' in the sense that at least two or more tracks are offered. We therefore distinguished between categorical vocational schools (=1) and other school types (=0), as we expect students in categorical vocational schools to have a double potential 'disadvantage', given the expectation to perform at relatively low cognitive level and the fact that they have less opportunities to come in contact with students from other tracks and thus to deal with differences. The categorical vocational school type made up 32% of the sample.

### Dealing with differences

DD competences were measured using the CCQ (for an extensive description see Ten Dam et al. 2011). This questionnaire contains items on four social tasks, one of which is dealing with differences, that are regarded as exemplary for the daily citizenship practices of youngsters between the age of 11 and 16. All social tasks consist of four components: knowledge, attitude, skills and reflection. In total, the original questionnaire contained 94 items, 22 of which belonged to DD. However, the research team constructed new items for the knowledge component of all social tasks, including DD. This new knowledge measure was intended to prevent a ceiling effect and to build a larger database of knowledge items, which in turn could also be standardised, as this was not possible with the original CCQ knowledge items. In addition, the new knowledge measure makes it possible to differentiate the separate social tasks within the knowledge component. The new knowledge measure included 39 items on DD, with a reliability coefficient (measurement of accuracy) of .91. A multiple-choice test with three response options was used to measure students' knowledge. Students were instructed to choose what they thought to be the best option. An example of a DD-knowledge item is 'What is another word for tolerance?', accompanied by the following response options: (a) 'Forbearance', (b) 'Respect', and (c) 'Peacefulness' (the correct answer is 'a').<sup>1</sup> Students' scores on the DD-knowledge items were determined with item response theory analysis (IRT). On average, the students in our sample had a score of .79 (SD = 1.29). The other components – attitudes, skills and reflection – were measured with survey items and rated with 4-point Likert scales. The attitude

**Table 2.** Descriptive statistics for variables.

| Variables                             | $\bar{X}$ , proportion or % |
|---------------------------------------|-----------------------------|
| <i>Outcome variables (n = 4042)</i>   |                             |
| DD – knowledge                        | .79 (1.29)                  |
| DD – attitude                         | 2.71 (.66)                  |
| DD – reflection                       | 1.97 (.66)                  |
| DD – skills                           | 3.01 (.46)                  |
| <i>School level (n = 62)</i>          |                             |
| Ethnic school diversity               | .32 (.22)                   |
| Diversity climate                     |                             |
| Teachers' diversity-related goals     | 4.38 (.18)                  |
| Teachers' diversity-related practices | 3.43 (.22)                  |
| SES composition                       |                             |
| Proportion low SES                    | .12 (.08)                   |
| Degree of urbanisation                | 3.55 (1.33)                 |
| School type                           |                             |
| Vocational                            | 32%                         |
| School size                           | 846 (521)                   |
| <i>Individual level (n = 4042)</i>    |                             |
| Ethnic background (migrant)           | 22.8%                       |
| Gender                                |                             |
| Female                                | 51.6%                       |
| SES                                   |                             |
| Low                                   | 11.7%                       |
| missing                               | 18.1%                       |
| Educational track                     |                             |
| Vocational                            | 44.2%                       |

Note. Standard deviations are in parentheses.

items were introduced with the question ‘How well does this statement apply to you?’ An example DD-attitude statement is: ‘Differences in cultures make life more enjoyable’. The mean score on this component was 2.71 (SD = .66; Cronbach’s alpha = .85). The skills-items were accompanied by the question: ‘How good are you at...’, followed by, for example: ‘adapting to other people’s rules and habits’. Our respondents had an average score of 3.01 (SD = .46; Cronbach’s alpha = .72) on the DD-skills items. Lastly, the reflection items started with the question: ‘How often do you think about...?’ A sample DD-reflection item is: ‘why some students think better of themselves than of others’. The mean score of our respondents on the DD-reflection items was 1.97 (SD = .66; Cronbach’s alpha = .90). See the online appendix for an overview of all items on DD attitude, skills and reflection.

Additionally, we checked whether the four DD-scales were equivalent across groups and, consequently, whether cross-group comparisons would be valid (Van de Schoot, Lugtig, and Hox 2012). To this end we performed multigroup factor analyses for migrant background (native and migrant background) and for educational track (vocational track and other track) on attitude, skills and reflection. We consecutively tested the configural, metric and scalar invariance in MPlus. The analysis showed that the model fits were acceptable, as in all models TLI was above .90 and CFI above .95 (Hu and Bentler 1999; Van de Schoot, Lugtig, and Hox 2012). In addition,  $\Delta$ CFI (baseline – metric and metric – scalar) did not exceed the 0.01 threshold (Cheung and Rensvold 2002) in any of the models. We used jMetrik 4.0.5 (Meyer 2014) to test measurement invariance for the knowledge items (regarding sex, ethnic background, SES and educational level). Overall, based on the analyses, we concluded that measurement invariance was established for all DD components and consequently, that meaningful group comparisons could be made.

### **Analyses**

Firstly, given the hierarchical structure of our sample, with students in schools, taking a multilevel approach is the most appropriate for analysing the data (Hox 2002; Snijders and Bosker 1999). Before actually proceeding with the multilevel analysis, we first inspected whether the amount of school-level variance was significant, which was confirmed (see Results section). Two-level models, with levels being schools and students, were specified in Mplus version 7.4 software (Muthén and Muthén 2012). Secondly, since we have multiple outcome variables (DD-knowledge, DD-attitude, DD-reflection, DD-skills), multivariate multilevel analysis would have been the most appropriate way of analysing the data, as this leads to more statistical power and reduces the risk of Type I error (Hox 2002). However, the number of parameters was greater than the number of schools in our sample, and therefore our analysis could have led to less reliable results. We have nevertheless conducted the multivariate analysis and as it did not yield different conclusions compared to univariate analyses, in this paper we will report the results of the univariate analyses. Lastly, possible outliers for both students and teachers were checked. The results of the analyses with and without possible outliers did not change the conclusions of the study. Therefore, in this article, we will report on the results that include data on the outliers.

Variables included in the models at the school level were ethnic school diversity (predictor), teachers’ diversity-related educational goals and practices (mediator), their interaction terms to examine moderation effects, and the control variables school SES composition, school type, school size and degree of urbanisation. At the individual level, the following variables were all included as control variables: educational track, gender, SES, SES missingness, and ethnic background. Ethnic school diversity, teachers’ diversity-related educational goals and practices and the interaction terms were grand mean centred.

The model was built up in 5 steps. The first step refers to the null model, or intercept – only model, in which no predictor variables are included. In the second step, all control variables from both levels were entered simultaneously. Subsequently, in the third step, we entered ethnic school diversity to examine the relationship between school composition and DD (research question 1). To assess the relationship between school diversity and the diversity climate (research question 2), the diversity climate and DD (research question 3) and the mediating role of the diversity climate (research question 4) in the fourth step, we entered teachers’ diversity goals and practices. In the final, fifth step, we investigated whether the diversity climate acts as moderator by entering the interaction terms, after having removed the mediating relationships from the previous step.

## Results

The correlations between individual level variables are presented in Table 3 and between school level characteristics in Table 4. As a first step in the multilevel analyses we commenced with an unconditional model to ensure that a multilevel approach was suitable. We used Satorra-Bentler difference test to compare model fits, which is similar to difference testing using loglikelihood but in this test a correction factor is applied to account for MLR estimation. For all four outcome variables, the addition of the school level resulted in a significantly better fit compared to the model where only variance on the student level was allowed (all TRd’s exceeded the  $\chi^2$  cut-off score (3.84) corresponding to  $\Delta df=1, p<.001$ ). As the model fit improved, both levels were included in the analyses. The multilevel analyses for each of the DD components are presented in separate tables in the next section.

**Table 3.** Correlations between individual level variables ( $n = 4042$ ).

| Measures             | 1       | 2      | 3      | 4      | 5      | 6      | 7      | 8      | 9       |
|----------------------|---------|--------|--------|--------|--------|--------|--------|--------|---------|
| 1. SES               | 1       | -.17** | .01    | .16**  | .003   | -.11** | -.08** | -.04*  | -.004** |
| 2. SES missing       | -.17**  | 1      | .12**  | .22**  | .05**  | -.16** | -.07** | -.06** | -.04*   |
| 3. Ethnic background | .01     | .12**  | 1      | .12**  | -.01   | -.10** | .16**  | .13**  | -.02**  |
| 4. Educational track | .16**   | .22**  | .12**  | 1      | .05**  | -.41** | -.13** | -.02   | -.08**  |
| 5. Gender            | .003    | .05**  | -.01   | .05**  | 1      | -.16** | -.25** | -.09** | -.08**  |
| 6. DD-knowledge      | -.11**  | -.16** | -.10** | -.41** | -.16** | 1      | .21**  | -.06** | .18**   |
| 7. DD-attitude       | -.08**  | -.07** | .16**  | -.13** | -.25** | .21**  | 1      | .30**  | .27**   |
| 8. DD-reflection     | -.04*   | -.06** | .13**  | -.02   | -.09** | -.06** | .30**  | 1      | .14**   |
| 9. DD-skills         | -.004** | -.04*  | -.02** | -.08** | -.08** | .18**  | .27**  | .14**  | 1       |

Note: Pearson’s correlation coefficients are reported for the correlation between continuous and dichotomous variables and Phi coefficients are reported for the correlation between dichotomous variables.

\* $p \leq .05$ .

\*\* $p \leq .01$ .

**Table 4.** Correlations between school level variables ( $n = 62$ ).

| Measures                         | 1     | 2     | 3     | 4      | 5      | 6      | 7      |
|----------------------------------|-------|-------|-------|--------|--------|--------|--------|
| 1. Ethnic school diversity       | 1     | .16   | .25*  | -.09   | -.13   | .60**  | .15    |
| 2. Teachers' diversity goals     | .16   | 1     | .36** | .10    | -.19   | .06    | .00    |
| 3. Teachers' diversity practices | .25*  | .36** | 1     | .14    | .02    | .15    | .09    |
| 4. School size                   | -.09  | .10   | .14   | 1      | -.37** | .22    | -.64** |
| 5. SES composition               | -.13  | -.19  | .02   | -.37** | 1      | -.37** | .40**  |
| 6. Degree of urbanisation        | .60** | .06   | .15   | .22    | -.37** | 1      | -.10   |
| 7. School type                   | .15   | .00   | .09   | -.64** | .40**  | -.10   | 1      |

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

Table 5 refers to DD-knowledge. Table 6 presents the findings on DD-attitudes. DD-reflection is presented in Table 7 and DD-skills in Table 8.

### Research question 1

The first research question examined the direct relationship between school diversity and DD outcomes. In the first model, we entered control variables (see Tables 5–8). In model 2, ethnic school diversity was added to the model to test its effect on DD outcomes. After controlling for several student characteristics, school diversity turned out to be positively related to DD-attitudes (standardised coefficient  $\beta = .46$ ,  $p < .01$ ) and DD reflection ( $\beta = .48$ ,  $p < .001$ ). Moreover, these relationships remained significant after including diversity climate in the models (see models 3 and 4). Thus, the more diverse schools are, the more students express positive attitudes about and contemplate about differences between people.

### Research questions 2, 3 and 4

Next, in Model 3, teachers' diversity goals and practices were added to the model to address the second, third and fourth research question. Concerning research question 2 (on the relationship between school diversity and the diversity climate, not presented in the tables), the findings indicate that ethnic school diversity is not associated with teachers' diversity goals, while a significant positive relationship was found between school diversity and teachers' diversity practices ( $\beta = .25$ ,  $p < .05$ ). This means that the more diverse schools are, the greater the amount of the teaching of diversity is, as reported by the teachers. However, the results demonstrated neither an effect of the diversity climate on any of the DD-outcomes (research question 3, see Tables 5–8), nor a mediating effect of the diversity climate (research question 4).

### Research question 4 (moderation)

Finally, in model 4, the interaction term was included to assess the moderating effect of the diversity climate. The results revealed that the interaction between school diversity and the diversity climate is nonsignificant. Thus, the diversity climate has no moderating effect in the relationship between school diversity and any of the DD components. In other words, the relationship between school diversity and DD did not change according to the levels of the diversity climate.



**Table 5.** Associations between ethnic school composition, school diversity climate and dealing with differences – knowledge.

|  | Model 1: control variables | Model 2: + ethnic composition | Model 3: + diversity climate | Model 4: + ethnic school composition x diversity climate |
|--|----------------------------|-------------------------------|------------------------------|--|
| <i>Fixed</i>                             |                            |                               |                              |  |
| Intercept                                | 1.62(.25)***               | 1.48(.21)***                  | 1.48(.22)***                 | 1.47(.21)***   |
| <b>School level</b>                      |                            |                               |                              |  |
| Ethnic composition (Herfindahl index)    |                            |                               |                              |  |
| B  |                            | -.44(.31)                     | -.33(.31)                    | -.34(.28)  |
| β  |                            | -.27                          | -.20                         | -.21   |
| School size                              |                            |                               |                              |  |
| B  | .00(.00)*                  | .00(.00)                      | .00(.00)*                    | .00(.00)*  |
| β  | .29                        | .25                           | .31*                         | .34*   |
| Degree of urbanisation                   |                            |                               |                              |  |
| B  | .02(.04)                   | .06(.03)                      | -.05(.04)                    | -.05(.04)  |
| β  | .07                        | .23                           | .19                          | .18  |
| School type (vocational)                 |                            |                               |                              |  |
| B  | -.15(.12)                  | -.13(.12)                     | -.09(.12)                    | -.11(.12)  |
| β  | -.41                       | -.36                          | -.25                         | -.31   |
| SES composition (proportion low)         |                            |                               |                              |  |
| B  | -.98(.76)                  | -.99(.71)                     | -1.10(.75)                   | -1.07(.73)   |
| β  | -.22                       | -.22                          | -.25                         | -.24   |
| School diversity climate                 |                            |                               |                              |  |
| Diversity goals                          |                            |                               |                              |  |
| B  |                            |                               | -.25 (.24)                   | -.43(.25)  |
| β  |                            |                               | -.13                         | -.22   |
| Diversity practices                      |                            |                               |                              |  |
| B  |                            |                               | -.20(.15)                    | -.06(.16)  |
| β  |                            |                               | -.12                         | -.04   |
| Indirect effect                          |                            |                               |                              |  |
| Ethnic composition=> Diversity goals     |                            |                               |                              |  |
| B  |                            |                               | -.03 (0.04)                  |  |
| β  |                            |                               | -.02                         |  |
| Ethnic composition=> Diversity practices |                            |                               |                              |  |
| B  |                            |                               | -.05 (.04)                   |  |
| β  |                            |                               | -.03                         |  |
| Ethnic composition x diversity goals     |                            |                               |                              |  |
| B  |                            |                               |                              | -1.88(1.08)  |
| β  |                            |                               |                              | -.20   |
| Ethnic composition x diversity practices |                            |                               |                              |  |
| B  |                            |                               |                              | 1.42(.74)  |
| β  |                            |                               |                              | .18  |
| <b>Individual level</b>                  |                            |                               |                              |  |
| Gender                                   |                            |                               |                              |  |
| B  | -.37(.05)***               | -.37(.05)***                  | -.37(.05)***                 | -.37(.05)***   |
| β  | -.31***                    | -.31***                       | -.31***                      | -.31***  |
| Ethnicity                                |                            |                               |                              |  |
| B  | -.07(.05)                  | -.06 (.05)                    | -.05 (.05)                   | -.06 (.05)   |
| β  | -.06                       | -.05                          | -.05                         | -.05   |
| Vocational track                         |                            |                               |                              |  |
| B  | -.70(.11)***               | -.70(.11)***                  | -.70(.11)***                 | -.70(.11)***   |
| β  | -.59***                    | -.59***                       | -.59***                      | -.59***  |

(Continued)

**Table 5.** Continued.

|  | Model 1: control variables | Model 2: + ethnic composition | Model 3: + diversity climate | Model 4: + ethnic school composition x diversity climate |
|--|----------------------------|-------------------------------|------------------------------|--|
| SES low  |                            |                               |                              |  |
| B  | -.16(.06)**                | -.16(.06)**                   | -.16(.06)**                  | -.16(.06)**  |
| $\beta$  | -.14**                     | -.14**                        | -.14**                       | -.14**   |
| SES missing  |                            |                               |                              |  |
| B  | -.17(.05)**                | -.17(.05)**                   | -.17(.05)**                  | -.17(.05)**  |
| $\beta$  | -.14**                     | -.14**                        | -.14**                       | -.14**   |
| <i>Random</i>  |                            |                               |                              |  |
| $\sigma^2_{\epsilon}$ (residual individual variance) | 1.23(.04)***               | 1.23(.04)***                  | 1.23(.04)***                 | 1.23(.04)***   |
| $\sigma^2_{\nu 0}$ (residual school variance)        | .08(.03)**                 | .08(.02)**                    | .07(.02)***                  | 0.07(.02)**  |
| TRd  | 229.09***                  | 2.51                          | 50.45***                     | 9.41   |
| $\Delta df$  | 9                          | 1                             | 8                            | 4  |
| ICC level 2  | 0.08                       | 0.08                          | 0.08                         | 0.08   |

Notes. Standard errors are in parentheses.

In model 4, the diversity climate as a mediator (from model 3) was removed and included as a moderator. Thus, both models 3 and 4 are compared with model 2.

ICC of the null-model: 0.22

\* $p < .05$ .

\*\* $p < .01$ .

\*\*\* $p < .001$ .

## Discussion and conclusion

With this study, we aimed to gain insight in the relationship between ethnic school diversity, the diversity climate created by teachers and students' competences to deal with differences. Regarding the direct association between school diversity and DD outcomes, our analysis showed that ethnic school composition is related to DD-attitudes and DD-reflection. That is, students in more ethnically heterogeneous schools reported higher levels of positive attitudes towards differences and contemplating about differences. No association was found between school diversity and students' DD-knowledge and DD-skills.

Our result that school diversity is not related to DD-knowledge may be explained by the fact that civic knowledge is a cognitive citizenship outcome (Isac et al. 2014), and may therefore be influenced by cognitive abilities more than by other student and school characteristics. The observed effect of vocational track, which indicates cognitive abilities, supports this interpretation.

The absence of the relationship between ethnic school heterogeneity and DD-skills implies that students do not feel better equipped for acting in unfamiliar situations in more diverse schools. Apparently, being surrounded by diversity is associated with more positive feelings about diversity and thinking about diversity-related issues, but it does not necessarily influence the competence of acting adequately in unfamiliar situations and adjusting to others' desires or habits. In fact, as we used self-reports for assessing DD skills, this finding may reflect that students in more diverse schools are more aware of how complex dealing with differences in reality can be.

Regarding the second research question, our results indicate that the degree of diversity of schools is related to teachers' diversity-related practices, but not to their diversity-related goals. Concerning diversity practices, our findings are similar to the scarcely available studies showing that the school composition is positively related to multicultural educational practices reported by teachers (Agirdag, Merry, and Van Houtte 2016; Vervaet, Van Houtte, and Stevens 2018b) or as perceived by students (Verkuyten

**Table 6.** Associations between ethnic school composition, school diversity climate and dealing with differences – attitude.

|  | Model 1: control variables | Model 2: + ethnic composition | Model 3: + diversity climate | Model 4: + ethnic school composition x diversity climate |
|--|----------------------------|-------------------------------|------------------------------|--|
| <i>Fixed</i>                             |                            |                               |                              |  |
| Intercept                                | 3.20(.07)***               | 3.27(.07)***                  | 3.27(.07)***                 | 3.27(.07)***   |
| <b>School level</b>                      |                            |                               |                              |  |
| Ethnic composition (Herfindahl index)    |                            |                               |                              |  |
| B  |                            | .22(.07)**                    | .24(.07)**                   | .25(.08)**   |
| β  |                            | .46**                         | .50**                        | .52**  |
| School size                              |                            |                               |                              |  |
| B  | .00(.00)*                  | .00(.00)*                     | .00(.00)                     | .00(.00)   |
| β  | -.44**                     | -.36*                         | -.32                         | -.33   |
| Degree of urbanisation                   |                            |                               |                              |  |
| B  | .04(.01)**                 | .02(.01)                      | .02(.01)                     | .02(.01)   |
| β  | .48**                      | .21                           | .19                          | .19  |
| School type (vocational)                 |                            |                               |                              |  |
| B  | -.06(.05)                  | -.07(.05)                     | -.06(.05)                    | -.07(.05)  |
| β  | -.60                       | -.65                          | -.59                         | -.62   |
| SES composition (proportion low)         |                            |                               |                              |  |
| B  | -.29(.23)                  | -.27(.22)                     | -.29(.22)                    | -.28(.23)  |
| β  | -.23                       | -.21                          | -.23                         | -.22   |
| School diversity climate                 |                            |                               |                              |  |
| Diversity goals                          |                            |                               |                              |  |
| B  |                            |                               | -.04(.08)                    | -.03(.09)  |
| β  |                            |                               | -.07                         | -.06   |
| Diversity practices                      |                            |                               |                              |  |
| B  |                            |                               | -.04(.07)                    | -.03(.07)  |
| β  |                            |                               | -.09                         | -.06   |
| Indirect effect                          |                            |                               |                              |  |
| Ethnic composition=>                     |                            |                               |                              |  |
| Diversity goals                          |                            |                               |                              |  |
| B  |                            |                               | -.01(.01)                    |  |
| β  |                            |                               | -.01                         |  |
| Ethnic composition=>                     |                            |                               |                              |  |
| Diversity practices                      |                            |                               |                              |  |
| B  |                            |                               | -.01(.02)                    |  |
| β  |                            |                               | -.02                         |  |
| Ethnic composition x diversity goals     |                            |                               |                              |  |
| B  |                            |                               |                              | -.19(.42)  |
| β  |                            |                               |                              | -.07   |
| Ethnic composition x diversity practices |                            |                               |                              |  |
| B  |                            |                               |                              | -.08(.36)  |
| β  |                            |                               |                              | -.03   |
| <b>Individual level</b>                  |                            |                               |                              |  |
| Gender                                   |                            |                               |                              |  |
| B  | -.32(.02)***               | -.32(.02)***                  | -.32(.02)***                 | -.32(.02)***   |
| β  | -.49***                    | -.49***                       | -.49***                      | -.49***  |
| Ethnicity                                |                            |                               |                              |  |
| B  | .23(.02)***                | .21(.03)***                   | .21(.03)***                  | .21(.03)***  |
| β  | .36***                     | .33***                        | .33***                       | .33***   |
| Vocational track                         |                            |                               |                              |  |
| B  | -.10(.03)**                | -.10(.03)***                  | -.10(.03)**                  | -.10(.03)**  |
| β  | -.15***                    | -.16***                       | -.16**                       | -.16***  |

(Continued)

**Table 6.** Continued.

|   | Model 1: control variables | Model 2: + ethnic composition | Model 3: + diversity climate | Model 4: + ethnic school composition x diversity climate |
|---|----------------------------|-------------------------------|------------------------------|--|
| SES low                                     |                            |                               |                              |  |
| B   | -.14(.03)***               | -.14(.03)***                  | -.14(.03)***                 | -.14(.03)***   |
| $\beta$                                     | -.21***                    | -.21***                       | -.21***                      | -.21***  |
| SES missing                                 |                            |                               |                              |  |
| B   | -.12(.02)***               | -.12(.02)***                  | -.12(.02)***                 | -.12(.02)***   |
| $\beta$                                     | -.18***                    | -.18***                       | -.18***                      | -.18***  |
| <i>Random</i>                               |                            |                               |                              |  |
| $\sigma_e^2$ (residual individual variance) | .38(.01)***                | .38(.01)***                   | .38(.01)***                  | .38(.01)***  |
| $\sigma_{v0}^2$ (residual school variance)  | .01(.002)***               | .01(.002)**                   | .01(.002)**                  | .01(.002)**  |
| TRd   | 427.55***                  | 5.21*                         | 47.01***                     | 1.51   |
| $\Delta df$                                 | 9                          | 1                             | 8                            | 4  |
| ICC level 2                                 | 0.02                       | 0.03                          | 0.03                         | 0.03   |

Notes: Standard errors are in parentheses.

In model 4, the diversity climate as a mediator (from model 3) was removed and included as a moderator. Thus, both models 3 and 4 are compared with model 2.

ICC of the null-model: 0.06

\* $p < .05$ .

\*\* $p < .01$ .

\*\*\* $p < .001$ .

and Thijs 2002). Moreover, our findings resemble the findings in our previous qualitative study showing that Dutch teachers, despite differences in school composition, did not differ that much concerning their attitudes towards diversity, being mostly embracing and positive (Sincer, Severiens, and Volman 2019). However, when it comes to the teaching of diversity, teachers did employ diversity practices that they assumed to be tailored to the needs of the student population. Furthermore, the data on diversity-related teacher goals were highly skewed, indicating that teachers on average, attach high importance to educational goals related to diversity. This could be explained in two ways. Firstly, the high scores on goals could be indicative of a social desirability bias. Secondly, it could be the case that all teachers, regardless of the student population, truly value diversity-related educational goals highly. However, the differences in teachers' practices according to the degree of school diversity, may indicate that actually putting diversity-related teaching into practice, is viewed more urgent and/or relevant in diverse schools. Teachers in such schools are probably more aware of or feel a stronger need to pay attention to diversity-related themes and may feel bound to address diversity to both create a harmonious school environment and prepare students for participation in a diverse society. Moreover, diversity-related matters may emerge more naturally in more diverse schools, as students may initiate diversity-related topics and questions in class.

Nevertheless, no association was found between the diversity climate and students' DD competences. Teacher goals that are not supplemented with practices are perhaps too distal to impact student learning. As regards teachers' diversity practices, a possible explanation is the way we operationalised teachers' diversity practices; it measures the quantity more than the quality of diversity teaching practices and therefore there is no assurance that the quality was high enough to have impact on DD competences. The possibility exists that the teaching quality in this area is low. This claim corresponds with teachers in diverse classes finding it difficult to discuss controversial issues in class (Radstake and Leeman 2010), or have low self-efficacy in the area of cultural responsiveness (see e.g. Siwatu et al. 2016; Tucker et al. 2005).

**Table 7.** Associations between ethnic school composition, school diversity climate and dealing with differences – reflection.

|  | Model 1: control variables | Model 2: + ethnic composition | Model 3: + diversity climate | Model 4: + ethnic school composition x diversity climate |
|--|----------------------------|-------------------------------|------------------------------|--|
| <i>Fixed</i>                             |                            |                               |                              |  |
| Intercept                                | 2.04(.09)***               | 2.13(.08)***                  | 2.14(.08)***                 | 2.15(.08)***   |
| <b>School level</b>                      |                            |                               |                              |  |
| Ethnic composition (Herfindahl index)    |                            |                               |                              |  |
| B  |                            | .29(.10)**                    | .26 (.10)**                  | .29(.10)**   |
| β  |                            | .48***                        | .43**                        | .48***   |
| School size                              |                            |                               |                              |  |
| B  | .00(.00)*                  | .00(.00)                      | .00(.00)*                    | .00(.00)*  |
| β  | -.29*                      | -.21                          | -.27*                        | -.28   |
| Degree of urbanisation                   |                            |                               |                              |  |
| B  | .05(.02)**                 | .02(.02)                      | .03(.02)                     | .03(.01)   |
| β  | .53***                     | .24                           | .25                          | .25  |
| School type (vocational)                 |                            |                               |                              |  |
| B  | .00(.06)                   | -.01(.06)                     | -.02(.05)                    | -.03(.05)  |
| β  | .003                       | -.07                          | -.14                         | -.21   |
| SES composition (proportion low)         |                            |                               |                              |  |
| B  | -.30(.27)                  | -.28(.24)                     | -.28(.26)                    | -.24(.24)  |
| β  | -.19                       | -.17                          | -.17                         | -.15   |
| School diversity climate                 |                            |                               |                              |  |
| Diversity goals                          |                            |                               | .03 (.10)                    | .04(.12)   |
| B  |                            |                               | .04                          | .06  |
| β  |                            |                               |                              |  |
| Diversity practices                      |                            |                               | .09(.06)                     | .14(.08)   |
| B  |                            |                               | .14                          | .23  |
| β  |                            |                               |                              |  |
| Indirect effect                          |                            |                               |                              |  |
| Ethnic composition=>                     |                            |                               |                              |  |
| Diversity goals                          |                            |                               | .004(.01)                    |  |
| B  |                            |                               | .01(.02)                     |  |
| β  |                            |                               |                              |  |
| Ethnic composition=>                     |                            |                               |                              |  |
| Diversity practices                      |                            |                               | .02(.02)                     |  |
| B  |                            |                               | .04(.03)                     |  |
| β  |                            |                               |                              |  |
| Ethnic composition x diversity goals     |                            |                               |                              |  |
| B  |                            |                               |                              | -.67(.60)  |
| β  |                            |                               |                              | -.20   |
| Ethnic composition x diversity practices |                            |                               |                              |  |
| B  |                            |                               |                              | -.18(.49)  |
| β  |                            |                               |                              | -.06   |
| <b>Individual level</b>                  |                            |                               |                              |  |
| Gender                                   |                            |                               |                              |  |
| B  | -.10(.03)***               | -.10(.03)***                  | -.10(.03)***                 | -.10(.03)***   |
| β  | -.16**                     | -.16**                        | -.16***                      | -.16**   |
| Ethnicity                                |                            |                               |                              |  |
| B  | .12(.03)***                | .10(.03)**                    | .10(.03)**                   | .10(.03)**   |
| β  | .18***                     | .15**                         | .15**                        | .15**  |

(Continued)

**Table 7.** Continued.

|   | Model 1: control variables | Model 2: + ethnic composition | Model 3: + diversity climate | Model 4: + ethnic school composition x diversity climate |
|---|----------------------------|-------------------------------|------------------------------|--|
| Vocational track                              |                            |                               |                              |  |
| B   | .02(.04)                   | -.01(.04)                     | .01(.04)                     | .01(.04)   |
| $\beta$                                       | .02                        | .02                           | .02                          | .02  |
| SES low                                       |                            |                               |                              |  |
| B   | -.08(.03)*                 | -.08(.03)*                    | -.08(.03)*                   | -.08(.03)*   |
| $\beta$                                       | -.12*                      | -.12*                         | -.12*                        | -.12*  |
| SES missing                                   |                            |                               |                              |  |
| B   | -.13(.03)***               | -.13(.03)***                  | -.13(.03)***                 | -.13(.03)***   |
| $\beta$                                       | -.21***                    | -.21***                       | -.21***                      | -.21***  |
| <i>Random</i>                                 |                            |                               |                              |  |
| $\sigma_e^2$ (residual individual variance)   | .41(.01)***                | .41(.01)***                   | .41(.01)***                  | .41(.01)***  |
| $\sigma_{\nu 0}^2$ (residual school variance) | .01(.004)*                 | .01(.004)*                    | .01(.003)*                   | .01(.003)*   |
| TRd   | 70.33***                   | 10.43***                      | 47.83***                     | 5.82   |
| $\Delta df$                                   | 9                          | 1                             | 8                            | 4  |
| ICC level 2                                   | 0.04                       | 0.04                          | 0.04                         | 0.04   |

Notes. Standard errors are in parentheses.

In model 4, the diversity climate as a mediator (from model 3) was removed and included as a moderator. Thus, both models 3 and 4 are compared with model 2.

ICC of the null-model: 0.06

\* $p < .05$ .

\*\*\* $p < .01$ .

\*\*\* $p < .001$ .

Lastly, our findings did not show a mediating or moderating effect of the diversity climate on the association between school diversity and DD. In other words, neither teachers' diversity goals nor their diversity practices in any way account for (mediate) the relationship between ethnic school diversity and students' DD competences. In addition, the link between school diversity and DD remains unchanged, regardless of the levels of the diversity climate. Given the importance of DD in an increasingly diverse society, it is important to continue looking for possible school practices that enhance DD.

Before turning to the implications of our findings, some limitations of our study and suggestions for future research should be pointed out. Firstly, we used correlational data and observed that certain phenomena are associated but we cannot conclude that one causes the other. Secondly, as mentioned previously, our measure of teachers' diversity practices captures the degree to which diversity is covered during classes, but it does not measure the quality of how and what teachers teach. Therefore, we encourage future research to include a quantitative or qualitative measurement of teachers' diversity practices that also covers the quality of teaching. Assessing DD competences by using students' self-reports (except for the knowledge component of DD) is another limitation of the current study. In future research additional, more objective measures could be applied, such as assessments by teachers.

The results of our study lead to some implications for teachers, schools and policy makers. Firstly, following Agirdag et al.'s (2016) conclusions, it is problematic that ethnic school diversity is significantly linked to diversity-related teaching practices, as the need for diversity teaching may be just as, or even more relevant, in less or non-diverse contexts (Agirdag, Merry, and Van Houtte 2016). Given their context and personal backgrounds, students in more diverse schools probably have more

**Table 8.** Associations between ethnic school composition, school diversity climate and dealing with differences – skills.

|  | Model 1: control variables | Model 2: + ethnic composition | Model 3: + diversity climate | Model 4: + ethnic school composition x diversity climate |
|--|----------------------------|-------------------------------|------------------------------|--|
| <i>Fixed</i>                             |                            |                               |                              |  |
| Intercept                                | 3.22(.06)***               | 3.18(.06)***                  | 3.18(.06)***                 | 3.18(.06)***   |
| <b>School level</b>                      |                            |                               |                              |  |
| Ethnic composition (Herfindahl index)    |                            |                               |                              |  |
| B  |                            | -.12(.07)                     | -.10 (.07)                   | -.09(.07)  |
| β  |                            | -.37*                         | -.31                         | -.27   |
| School size                              |                            |                               |                              |  |
| B  | .00(.00)                   | .00(.00)*                     | .00(.00)                     | .00(.00)*  |
| β  | -.31                       | -.35*                         | -.30                         | -.31   |
| Degree of urbanisation                   |                            |                               |                              |  |
| B  | .00(.01)                   | .01(.01)                      | .01(.01)                     | .01(.01)   |
| β  | .01                        | .22                           | .19                          | .18  |
| School type (vocational)                 |                            |                               |                              |  |
| B  | -.04(.04)                  | -.04(.03)                     | -.03(.03)                    | -.03(.04)  |
| β  | -.55                       | -.49                          | -.39                         | -.42   |
| SES composition (proportion low)         |                            |                               |                              |  |
| B  | -.33(.20)                  | -.33(.19)                     | -.36(.20)                    | -.34(.20)  |
| β  | -.36*                      | -.37*                         | -.39*                        | -.37*  |
| School diversity climate                 |                            |                               |                              |  |
| Diversity goals                          |                            |                               |                              |  |
| B  |                            |                               | -.05(.06)                    | -.03(.06)  |
| β  |                            |                               | -.12                         | -.08   |
| Diversity practices                      |                            |                               |                              |  |
| B  |                            |                               | -.04(.05)                    | -.03(.06)  |
| β  |                            |                               | -.12                         | -.09   |
| Indirect effect                          |                            |                               |                              |  |
| Ethnic composition=>                     |                            |                               |                              |  |
| Diversity goals                          |                            |                               |                              |  |
| B  |                            |                               | -.01(.01)                    |  |
| β  |                            |                               | -.02                         |  |
| Ethnic composition=>                     |                            |                               |                              |  |
| Diversity practices                      |                            |                               |                              |  |
| B  |                            |                               | -.01(.01)                    |  |
| β  |                            |                               | -.03                         |  |
| Ethnic composition x diversity goals     |                            |                               |                              |  |
| B  |                            |                               |                              | -.14(.35)  |
| β  |                            |                               |                              | -.07   |
| Ethnic composition x diversity practices |                            |                               |                              |  |
| B  |                            |                               |                              | -.14(.29)  |
| β  |                            |                               |                              | -.09   |
| <b>Individual level</b>                  |                            |                               |                              |  |
| Gender                                   |                            |                               |                              |  |
| B  | -.07(.02)***               | -.07(.02)***                  | -.07(.02)***                 | -.07(.02)***   |
| β  | -.15***                    | -.15***                       | -.15***                      | -.15***  |
| Ethnicity                                |                            |                               |                              |  |
| B  | -.002(.02)                 | .01(.02)                      | .01(.03)                     | .01(.03)   |
| β  | -.01                       | .02                           | .02                          | .02  |

(Continued)

**Table 8.** Continued.

|   | Model 1: control variables | Model 2: + ethnic composition | Model 3: + diversity climate | Model 4: + ethnic school composition x diversity climate |
|---|----------------------------|-------------------------------|------------------------------|--|
| <b>Vocational track</b>                       |                            |                               |                              |  |
| B   | -.03(.03)                  | -.03(.03)                     | -.03(.03)                    | -.03(.03)  |
| $\beta$                                       | -.07                       | -.07                          | -.07                         | -.07   |
| <b>SES low</b>                                |                            |                               |                              |  |
| B   | .02(.03)                   | .02(.03)                      | .02(.03)                     | .02(.03)   |
| $\beta$                                       | .04                        | .04                           | .04                          | .04  |
| <b>SES missing</b>                            |                            |                               |                              |  |
| B   | -.02(.02)                  | -.02(.02)                     | -.02(.02)                    | -.02(.02)  |
| $\beta$                                       | -.04                       | -.04                          | -.04                         | -.04   |
| <b>Random</b>                                 |                            |                               |                              |  |
| $\sigma_e^2$ (residual individual variance)   | .21(.01)***                | .21(.01)***                   | .21(.01)***                  | .21(.01)***  |
| $\sigma_{\nu 0}^2$ (residual school variance) | .004(.002)**               | .004(.001)**                  | .004(.001)**                 | .004(.001)**   |
| TRd   | 33.82***                   | 4.33*                         | 49.04***                     | 2.88   |
| $\Delta df$                                   | 9                          | 1                             | 8                            | 4  |
| ICC level 2                                   | 0.03                       | 0.03                          | 0.03                         | 0.03   |

Notes. Standard errors are in parentheses.

In model 4, the diversity climate as a mediator (from model 3) was removed and included as a moderator. Thus, both models 3 and 4 are compared with model 2.

ICC of the null-model: 0.03.

\* $p < .05$ .

\*\* $p < .01$ .

\*\*\* $p < .001$ .

awareness and experiences regarding diversity, while students surrounded by more homogeneity have less natural opportunities to familiarise with diversity (Agirdag, Merry, and Van Houtte 2016). Therefore, especially school boards and teachers with less diverse or non-diverse populations should have a clear vision on the needs of their students in this regard and, consequently, take action to develop and offer diversity-related teaching. Secondly, the absence of an effect of diversity teaching on DD competences does not necessarily indicate that diversity teaching is useless or ineffective, but it does ask for a critical examination of the content and quality of teachers' diversity teaching. Improvement in this area may be needed as Dutch teachers are not extensively prepared for diversity as policy goals related to diversity are not included in a structural and integral manner in Dutch teacher education (Public Policy and Management Institute 2017; Severiens, Wolff, and van Herpen 2014). This leads to the ultimate recommendation that Dutch teacher education, and schools and teachers alike, regardless of the student body, should consider the quality of teaching diversity in more detail as well as their professional development programmes, in order to guarantee teaching quality and raise the awareness of the relevance of teaching in this area.

## Note

1. The cognitive items can be retrieved from the first author

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