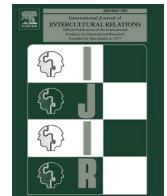




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# Teachers' self-efficacy and intercultural classroom practices in diverse classroom contexts: A cross-national comparison

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## ABSTRACT

This cross-national study provides new insights in teacher efficacy in today's culturally diverse classrooms using survey data of 269 early childhood and primary school teachers in England, Italy, the Netherlands and Poland. Teacher efficacy can be viewed as a two dimensional concept in which both general beliefs are measured alongside (diversity-related) domain-specific beliefs. These beliefs are related to the cultural classroom context and the use of intercultural classroom practices. Our results indicate that policies and professional development targeted at the reciprocal relation between diversity-related efficacy and practices are important when preparing teachers for working in diverse classroom contexts.

## 1 Introduction

In light of ongoing globalization, classroom practices that address the topic of diversity and inclusion are becoming more important. Such intercultural classroom practices are necessary for creating a classroom culture where all students, regardless of their cultural and linguistic background are provided with the best opportunity to learn (Richards, Brown, & Forde, 2007). However, many teachers feel ill-prepared in dealing with cultural and linguistic diversity and find it challenging to work with diverse populations (Slot, Halba, & Romijn, 2017). This raises the need for supporting teachers and improving their intercultural competences. A key component in improving teachers' intercultural competences is their sense of self-efficacy. The concept of teacher efficacy plays an important role in explaining differences in overall teacher effectiveness with high levels of efficacy having positive effects on several student and teacher outcomes. However, little attention has been devoted to teacher efficacy in ethnically diverse classrooms (Geerlings, Thijs, & Verkuyten, 2018). The current cross-national study provides new insights in teachers' self-efficacy beliefs in today's socio-culturally diverse classrooms and it's crucial role in improving intercultural classroom practices.

### 1.1 Teachers' self-efficacy: a multifaceted concept

The concept of teacher efficacy is rooted in Bandura's (1977) social cognitive theory, where self-efficacy refers to an individual's judgement of capability to perform a particular action. Research on teacher efficacy dates back to education studies of the RAND organization in the mid-1970s, who found strong links to teacher success and student performance, and the concept has gained

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increasing research interest ever since (Klassen, Tze, Betts, & Gordon, 2011; Kleinsasser, 2014). Within the field of education, teacher efficacy is commonly defined as a “teacher’s belief in his or her capability to organize and execute courses of action required to successfully accomplishing a specific teaching task in a particular context” (Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998, p. 233). It is a motivational construct based on one’s perception of competence rather than actual level of competence (Tschannen-Moran & Woolfolk Hoy, 2007). The relation between teacher efficacy and practice is therefore reciprocal by nature and self-efficacy beliefs can work as self-fulfilling prophecies. If teachers perceive their teaching performance to be successful, self-efficacy beliefs are raised, which contributes to their expectations of future success. Likewise, self-efficacy beliefs are lowered if teachers perceive their performance as a failure, contributing to the expectation that future performances will also fail (Tschannen-Moran & Woolfolk Hoy, 2007). Teacher efficacy is therefore believed to be one of the key beliefs influencing teachers’ professional behaviors (Durksen, Klassen, & Daniels, 2017) and supporting positive efficacy beliefs may enhance overall teacher effectiveness (Von Suchodoletz, Jamil, Larsen, & Hamre, 2018).

Since the RAND studies, many measurements of the concept have been developed. In their review on teachers’ self-efficacy, Klassen et al. (2011) recommend the use of measures derived from the work of Tschannen-Moran and colleagues (e.g., Tschannen-Moran & Barr, 2004; Tschannen-Moran & Woolfolk Hoy, 2001) for future research as these measures show considerably more congruence with self-efficacy theory compared to many other of the reviewed measures. Tschannen-Moran and Woolfolk Hoy (2001) propose a three-dimensional concept (efficacy regarding *student engagement*, *instructional strategies*, and *classroom management*) that assesses a broad range of teacher capabilities, without being so specific that it becomes useless for comparisons of teachers across contexts, levels, and subjects. Although this general model of teacher efficacy is mostly agreed on today (Fackler & Malmberg, 2016), several researchers, including Tschannen-Moran and Woolfolk Hoy (2007), emphasize that teacher efficacy is context-specific. Depending on this context, teachers may feel more or less efficacious in teaching certain students, subjects or in different settings. Several studies therefore have used domain-specific measurements to address efficacy in teaching areas such as literacy and STEM. Klassen et al. (2011) acknowledge the added value of such domain-specific measurements but stress that too specific measurements of self-efficacy may provide theoretically less useful information and thus they argue for a two-pronged approach including a “multifaceted general teacher efficacy relevant to most teaching situations, along with domain-specific measures” (p. 33).

A key point in the current study is whether self-efficacy regarding teaching diverse student populations can be considered domain-specific in the same way as teaching diverse subjects (e.g., STEM). One line of research stresses that there is nothing particularly special about teachers’ competences to work with different student populations as these competences appear to be part of any good teaching (e.g., Malinen et al., 2013; Mitchell, 2008). On the other hand, it could be argued that teaching diverse student populations consists of more than just good teaching and requires specific pedagogical content knowledge (e.g., Fitchett, Starker, & Salyers, 2012; Richards et al., 2007; Young, 2010). This knowledge goes beyond mere awareness of and respect for the fact that ethnic groups have different values and includes a detailed understanding of the cultural characteristics and contributions of different ethnic groups (Gay, 2002). Likewise, a specific set of skills is needed, such as promoting equity and mutual respect among students and validating students’ cultural identity in classroom practices and instruction materials (Richards et al., 2007; Slot, Romijn, & Wyslowska, 2017). In addition, similar to teachers feeling more or less efficacious in teaching different subjects, recent studies indicate that teachers also perceive differences in their competences when working with different populations and feel less efficacious working with ethnic and linguistic minority students versus majority students (e.g., Geerlings et al., 2018; Malo-Juvera, Correll, & Cantrell, 2018). We therefore argue that teaching socio-culturally and linguistically diverse students can be considered domain-specific and that this domain-specificity should be explored when assessing teacher efficacy in the context of diverse classrooms.

Despite the increasing diversity in classrooms and the well-established importance of teacher efficacy for effective education, many self-efficacy instruments do not specifically assess efficacy to teach in socio-culturally and linguistically diverse educational settings (Siwatu & Starker, 2010). Some exceptions are the *Multicultural Efficacy Scale* (Guyton & Wesche, 2005), the measurement of *immigration-related self-efficacy* as proposed by Tatar, Ben-Uri, and Horenczyk (2011), or the *Culturally Responsive Teaching Self-Efficacy (CRTSE) Scale* (Siwatu, 2007). These first two measurements focus exclusively on teachers’ self-efficacy beliefs regarding working with culturally diverse student populations. Listed competences in these scales include the ability to identify problems that may arise as a result of diversity or the ability to help students examine their prejudices towards other students. In contrast, the CRTSE scale of Siwatu (2007) also includes more general teacher competencies such as the ability to recognize students’ prior knowledge in order to promote deeper learning. However, within this scale both general and more diversity-related competences are taken together into one self-efficacy construct. Thus, with regard to the topic of diversity and inclusion, to the best of our knowledge there are no studies so far that respond to the call of Klassen et al. (2011) for a two-pronged approach on self-efficacy. In the current study we therefore address both general and diversity-related domain-specific self-efficacy as two related, yet separate constructs within the measurement of the concept of self-efficacy.

### 1.2 Teacher efficacy in diverse classroom contexts

A sense of satisfaction with one’s past teaching successes, commonly referred to as *mastery experience*, is believed to be the strongest contributor to self-efficacy beliefs (Bandura, 1977; Tschannen-Moran & Woolfolk Hoy, 2007). The context in which teachers operate is therefore of great importance as it provides them with the actual experiences to build up their efficacy. As different contexts confront teachers with different challenges, there is a need for greater understanding how context variables are linked to higher levels of teacher efficacy (Tschannen-Moran & Woolfolk Hoy, 2007). Although numerous studies have investigated the effects of teacher characteristics (e.g., Fackler & Malmberg, 2016; Pas, Bradshaw, & Hershfeldt, 2012; Von Suchodoletz et al., 2018) and structural classroom characteristics (e.g., Calik, Sezgin, Kavgaci, & Kilinc, 2012; Guo, Justice, Sawyer, & Tompkins, 2011) on teachers’ efficacy beliefs, studies

on the role of the wider classroom context and student population are rare and results are inconsistent. Adams and Forsyth (2006) found that socio-economic status of students in American primary and secondary schools was positively related to teacher efficacy at a school level and Bertoret (2009) showed that lower perceived student diversity in Spanish primary and secondary schools was linked to higher self-efficacy levels. In contrast, Rubie-D, avies, Flint, and McDonald (2012) found that primary school teachers in New Zealand feel more efficacious in schools with higher percentages of low SES students. They hypothesized that this might reflect good and highly experienced teachers' explicit choice to teach in low socio-economic areas, though they did not have the data to support this statement. In relation to this, a cross-national study by Fackler and Malmberg (2016) also shows small positive effects of the percentage of students with a different home language or from low-educated families on teacher efficacy, but these specific findings were not further interpreted in their discussion. Furthermore, the study by Geerlings et al. (2018) shows that Dutch teachers in primary school classrooms with a higher representation of minority students feel more efficacious in teaching minority students compared to teachers in classrooms with a smaller share of minority students. As the ethnic in-group identification of the teacher did not significantly moderate this effect, they state that teachers in more diverse classes might feel more efficacious in teaching minority students, because they have more experience in working with those children. Yet, another recent study by Von Suchodoletz et al. (2018) found no relation between students' socio-economic background and teacher efficacy of American preschool teachers. Thus, more research is necessary to understand if and why teachers feel more or less efficacious in relation to minority group students of various racial and ethnical groups (Geerlings et al., 2018).

A few recent cross-national studies addressed the possible effect of the macro-context on self-efficacy (e.g., Fackler & Malmberg, 2016; Malinen et al., 2013; Vieluf, Kunter, & Van de Vijver, 2013). This wider context is important to include in efficacy research as the concept in itself may be culturally contingent upon the wider national cultural context and prevailing multicultural policies, the psychological and practical relevance of the concept might vary across countries, and differences in average teacher efficacy may display differences in self-presentational norms (Vieluf et al., 2013). Indeed, Fackler and Malmberg (2016) found that a significant proportion of the variance of teacher efficacy was located at the country level. Country differences were smaller than differences between teachers, but larger than differences between schools. Malinen et al. (2013) compared teacher efficacy of Chinese, Finnish and South African teachers and found several unique country characteristics. The Finnish model, for instance, showed that teacher training related to inclusive education had a significant effect on self-efficacy, while this relationship was absent for the other two countries. Overall, these studies indicate that not only the micro-context in which teachers operate affects teacher efficacy, but the macro-context is important to consider as well. Nonetheless, only a limited number of studies so far included this macro-context and more cross-national research is still needed to further test theories on teacher efficacy in diverse contexts (Klassen et al., 2011).

### 1.3 Teacher efficacy and intercultural classroom practices

A substantial body of research demonstrates positive effects of high levels of teacher efficacy, yet studies predominantly address the effects on other within-teacher factors, such as burn-out and job satisfaction (e.g., Schwarzer & Hallum, 2008; Wang, Hall, & Rahimi, 2015) and student outcomes, such as motivation, engagement and learning (e.g., Caprara, Barbaranelli, Steca, & Malone, 2006). In addition, these conclusions are primarily based on results of primary and secondary school teachers and studies on the self-efficacy of professionals working in ECEC are limited (Von Suchodoletz et al., 2018). The relationship between teacher efficacy and actual classroom practices is studied to a much lesser extent. Given the reciprocal relationship between self-efficacy and practice and the notion that the effect of teacher efficacy on student outcomes may be mediated by classroom practices and quality (Goddard & Goddard, 2001; Tucker et al., 2005; Zee & Koomen, 2016), the relationship between teacher efficacy and actual classroom practices is important to consider. Studies that do investigate this relationship generally indicate positive relations between classroom practices and teachers' self-efficacy beliefs. Guo, Piasta, Justice, and Kaderavek, (2010) found strong positive associations between American preschool teachers' self-efficacy beliefs and classroom quality in terms of the instructional and emotional support that teachers provide. Pakarinen et al. (2010) found similar results for emotional support in Finnish kindergartens. Furthermore, Almog and Schechtman (2007) found that Israeli primary school teachers with higher levels of self-efficacy cope better with different problem behaviors such as hostility, hyperactivity and impulsiveness, low achievement and social rejection. Nonetheless, Zee and Koomen (2016) conclude in their review on teacher efficacy and its effect on classroom practices that this research field is still rather fragmented and more knowledge and integration of studies is necessary to yield any valid conclusions.

The lack of knowledge on the effects of teacher efficacy on classroom practices is even more apparent when it comes to intercultural classroom practices. One study that investigated the relationship between teacher efficacy and such practices to some extent is a small scale mixed-method study by Siwatu (2011) using his CRTSE scale and in-depth interview data. American pre-service teachers who were classified as having high self-efficacy beliefs according to the CRTSE scale, also indicated they had more opportunities to practice these competences in actual classroom settings compared to the teachers with low self-efficacy beliefs. In addition, some studies show a positive relation between teacher efficacy and attitudes towards socio-cultural diversity and inclusive practices (Gao & Marger, 2011; Gutentag, Horenczyk, & Tatar, 2018; Siwatu & Starker, 2010). However, the actual effects on intercultural practices were presupposed rather than tested. Thus, more research on this relationship is needed to gain new insights in how self-efficacy beliefs of teachers can play a role in improving intercultural classroom practices.

### 1.4 Current study

As can be concluded from the literature, the concept of teacher efficacy in the context of socio-culturally and linguistically diverse classroom contexts is an understudied topic. This holds for including a diversity-related construct in the measurement of teacher efficacy

itself, as well as for the relation between efficacy and intercultural practices in classrooms. Moreover, studies on how teacher efficacy is affected by classroom diversity or the wider macro context (e.g. multicultural policies) are scarce and results are inconclusive. Given the increasing need for intercultural classroom practices and the challenges many professionals still encounter when working in diverse classrooms, more knowledge is needed on the crucial role of teacher efficacy. The current study intends to add to existing research by analyzing cross-national data of four countries – England, Italy, the Netherlands and Poland – to investigate the role of teacher efficacy in diverse classroom contexts. The included countries were selected since they differ considerably in terms of population, (migration) history, culture, size and adopted policy approaches to inclusive (classroom) practices. For instance, Eurostat data of 2018 shows that the percentage of people born in another country than the country of residence varies considerably across the participating countries, ranging from 1.8 % in Poland to 14.4 % in England. Parent's country of birth has been related to socio-economic status and proven to affect the likelihood of child poverty in several European countries (Cadima, Nata, Evangelou, & Anders, 2017). Despite the lower share of cultural and linguistic diversity in Poland compared to the other three countries, in terms of socio-economic status Poland is characterized by relatively high child poverty rates (22.8 %) and in contrast to other European countries the poverty rates of children in Poland with foreign-born parents are lower than those of children born in the country (Cadima et al., 2017).

Another important macro-contextual difference between the countries concerns the national education system and at what age children enter primary school. Thus, whether teachers working with similar age ranges are considered primary school teachers or teachers working in ECEC differs across the countries. Despite differences between the two systems, we assume that the role of self-efficacy beliefs for teachers successful professional behaviors is similar for teachers working with younger and older children. Moreover, over the past decades ECEC has gained legitimacy as a formal institution due to its increasing role in preparing children for formal education. This marks a shift towards an increasing educational function of early childhood provisions (e.g., Douglass & Gittell, 2012) and therefore we included both teachers working in ECEC provisions as well as in primary schools.

The central model of our study provides an answer to the research question: Is there a relationship between the experienced socio-cultural context of the classroom and the use of intercultural classroom practices and to what extent is this relationship mediated by teacher efficacy? The following sub questions and hypotheses guided our research.

- 1 Can teacher efficacy be viewed as a two-dimensional concept in which both general efficacy beliefs are measured alongside (diversity-related) domain-specific beliefs? We argue that teaching diverse student populations can be considered domain-specific in the same way as teaching diverse subjects and we hypothesized that both dimensions of efficacy are related to each other, but also yield unique information on teachers' efficacy beliefs.
- 2 Is there a relationship between practices and socio-cultural classroom context and to what extent is this relationship mediated by both dimensions of teacher efficacy? We hypothesized a positive direct relation between classroom diversity and intercultural classroom practices as there is more need for such practices in classrooms with higher proportions of children from diverse socio-cultural and linguistic backgrounds. However, as teachers are the one's confronted with this need and the challenges of working in diverse classrooms, we expected this relation to be mediated by diversity-related teacher efficacy. As self-efficacy is strongly affected by mastery experiences, we hypothesized that teachers working in more diverse classrooms would have higher levels of diversity-specific teacher efficacy, since they are more likely to have more experience working with diverse populations. Moreover, given the reciprocal but context-specific relationship between efficacy and behavior, we expected positive relations between diversity-related teacher efficacy beliefs and intercultural classroom practices as well. Within this mediation model, no hypotheses were formulated for the general self-efficacy construct given the lack of prior research on this topic.
- 3 What differences can be found in the predictive models of the four countries? Since the included countries show several macro-contextual differences, it is reasonable to expect some country differences, though no concrete hypotheses were formulated.

## 2 Method

### 2.1 Research design

The current study uses quantitative survey data collected in 2018 as part of a large research project (ISOTIS) with the overall aim to contribute to effective policy and practice development at different system levels in order to effectively combat early arising and persisting educational inequalities. The survey aimed to identify needs and obstacles (para) professionals face in their work with socio-culturally and linguistically diverse children and families in ten European countries and to examine the characteristics of organizational culture and structure that can support professionals in their work. Within the countries, we collected data from professionals in the same sites in which a parent survey was conducted. The sites per country were selected according to the following criteria: a considerable percentage of the targeted groups for the parent survey (*Turkish, North-African, Romani, socioeconomically disadvantaged low-income native-born group*) and a representation of different local policy contexts. The online staff survey collected data from  $N = 1058$  professionals working with children and families in various settings, such as ECEC, primary schools, after-school care and organizations in the social work sector. The collected data provides up-to-date information on a wide range of topics including staff's attitudes and practices related to diversity, staff's support needs and self-efficacy, as well as organizational characteristics and professional development opportunities (for an overview, see Slot, Romijn, Cadima, Nata, & Wyslowska, 2018).

### 2.2 Sample

As a wide range of professionals was included in the staff survey for a variety of purposes, the current paper focusses on a subsample

of countries with similar sample statistics and data collection procedures. We included the data from  $N = 269$  teachers working in ECEC and primary school in four countries: England, Italy, The Netherlands and Poland. A targeted approach was used in which a small number of centers/schools were directly contacted in two sites within each country. A total number of 19 locations from London and Manchester was included in the English sample. On average, 4 teachers per location participated. The Dutch sample consisted of 15 locations from Rotterdam and Utrecht with on average 3 participating teachers per center. The Italian sample consisted of 15 locations from Milan and Turin with on average 5 participating teachers per center. The number of participating locations in Poland was a bit smaller with only 9 locations from Warsaw and Łódź, though the response rates per location were a bit higher with on average 6 teachers per location. This targeted approach resulted in response rates of 52 % (England and Italy), 74 % (The Netherlands) and 100 % (Poland).

The vast majority of the teachers was female (94.2 %). Moreover 4.5 % indicated another nationality than the nationality of the country of residence (either a single other nationality or a combination of nationalities) and 7.6 % indicated the use of another language at home (either a single other language or in combination with the majority language). Participants who were born in a different country or who indicated a dual nationality with both parents born in a different country were categorized as having a non-native background (5.2 %). Approximately half (54.6 %) of the teachers worked in ECEC centers, whereas the other half (45.4 %) worked in primary school. To justify the combined sample of ECEC and primary school teachers, preliminary analyses were conducted to investigate meaningful differences between the two types of professionals. These analyses showed measurement invariance could be established for self-efficacy and intercultural classroom practices. Moreover, no meaningful differences were found for teachers' background characteristics (age, sex and ethnic background), except for teachers' education level. Teachers' education level, expressed in International Standard Classification of Education (ISCED) levels to allow for comparison between countries (UNESCO, 2011), was on average  $M = 5.27$  ( $SD = 1.82$ ) with ISCED 3 (upper secondary education, 25.5 %), ISCED 6 (bachelor or equivalent, 20.9 %) and ISCED 7 (master or equivalent, 37.7 %) being reported most frequently. The larger standard deviation is mostly due to differences in national education requirements of teachers working in ECEC centers or in primary schools, with the minimal education level of ECEC teachers being lower in the four countries. This is reflected in the data with ISCED levels of ECEC teachers being significant lower compared to ISCED levels of primary school teachers for all countries except for the Dutch sample. Therefore, we decided to include ISCED levels in the final model as a control variable.

Descriptive statistics of the sample are displayed in Table 1. It shows that teachers from the English sample are on average somewhat younger compared to the other country samples and have less years of experience, but they do work the most hours per week. Teachers in the Italian sample are somewhat older and have more years of experience compared to the other country samples. Their average education level, however, is lower compared to the three other country samples, as well as the number of hours in their work week. In addition, all participants in Italy and Poland have a native background, whereas 16.3 % of the teachers in the Dutch sample and 9.0 % of the teachers in the English sample indicate a non-native background. No noticeable differences were visible between the country samples for sex and educational setting (percentage of ECEC and primary school teachers).

### 2.3 Measures and procedures

Adapted scales of existing questionnaires were used to draft a first version of the questionnaire, which was piloted in several countries. The final English version of the questionnaire was used to prepare the online version that could be answered in approximately 30–45 min. Translations from the nine other languages were copied into the program resulting in ten language-specific, though structurally identical, versions of the online questionnaire. The questionnaire was ethically approved by the Faculty Ethics Review Board of Utrecht University and all participants consented to the use of their anonymized data for publication purposes. For the current study three scales were used: teachers' self-efficacy beliefs, diversity of the classroom context and intercultural classroom practices.

#### 2.3.1 Teachers' self-efficacy beliefs

Using a 5-point Likert scale teachers were asked to what extent they feel they can perform several competencies, ranging from *not at all* (1), *very little* (2), *somewhat* (3), *quite well* (4), to *a very large degree* (5). A total of seven items was used to measure self-efficacy. Five general competencies – derived from the self-efficacy scale of Tschannen-Moran and Woolfolk Hoy (2001) – were listed, such as making contact with challenging children or adapting activities to individual needs. In addition, we formulated two competencies specifically related to working with children from diverse cultural and linguistic backgrounds. Thus, a two-factor model of self-efficacy was tested with teachers' general self-efficacy beliefs as a first factor and teachers' diversity-related self-efficacy beliefs as a second factor.

**Table 1**

Descriptive statistics of total sample and sample per country.

	<i>N</i>	Age ( <i>SD</i> )	Experience ( <i>SD</i> )	ISCED ( <i>SD</i> )	Work hours ( <i>SD</i> )	Background
England	78	35.35 (11.01)	7.58 (8.11)	5.64 (1.71)	37.63 (8.28)	9.0 %
Italy	94	49.13 (8.71)	21.37 (13.30)	4.43 (1.93)	26.35 (6.19)	0.0 %
The Netherlands	43	43.95 (11.89)	15.85 (10.53)	5.74 (1.27)	29.58 (6.37)	16.3 %
Poland	54	43.10 (10.57)	11.19 (12.05)	5.69 (1.74)	29.11 (12.49)	0.0 %
Total	269	43.05 (11.66)	14.21 (12.49)	5.27 (1.82)	30.74 (9.56)	5.2 %

### 2.3.2 Diversity of the classroom context

Teachers reported on the levels of socio-cultural diversity of the context they worked in, estimating the percentage of children within their school or center with a certain background on a 5-point Likert scale ranging from *almost none* (1), *around 25 %* (2), *around 50 %* (3), *around 75 %* (4), to *almost all* (5). Teachers estimated the percentage of children from low income/low educated families and/or with a cultural or linguistic background that differs from the dominant country culture and language. The estimated levels of diversity were highly interrelated with overall Pearson correlation ranging from 0.65 to 0.87. An average of the three levels of diversity was used in the final model to measure diversity of context (Cronbach's  $\alpha = 0.89$ ).

### 2.3.3 Intercultural classroom practices

Teachers also reported on their intercultural classroom practices on a 5-point Likert scale ranging from *never* (1), *sometimes* (2), *regularly* (3), *often* (4), to *always* (5). A total of 12 items – derived from the multicultural teaching competency scale of Spanierman et al. (2011) – was used to measure a wide range of diversity practices focusing on activities, integrating different cultural values, diversity of materials and provision of information in different languages. A total of 7 items with an exclusive focus on intercultural practices within the classroom (such as celebrating diverse cultural holidays, examining materials to reflect cultural diversity, and creating a warm and inclusive classroom environment) was used to construct the final scale on practices. A one-factor model on these 7 items was investigated to test for internal consistency.

## 2.4 Missing data and analyses

Data analysis proceeded in several steps. First, missing values on the self-efficacy and practices scale were imputed. Approximately 11 % of the participants had missing values on the self-efficacy scale, whereas roughly 17 % of the participants had missing data on the practices scale. Both scales were simultaneously imputed using SPSS 24.0 multiple imputation method with 5 sets of iterations. Age, sex, educational setting, ISCED level, multicultural and multilingual beliefs, job satisfaction, organizational climate and professional development opportunities were included as predictors. Second, we used confirmatory factor analyses (CFA) in Mplus to analyze the scales and test the model fit of the two-factor model of self-efficacy. Third, measurement invariance was investigated for both scales to see whether the countries could be compared on their mean scores. We used the alignment method (Muthén & Asparouhov, 2014) to test to which extent factor loadings and intercepts were completely invariant between groups. Fourth, multivariate and univariate tests of variance on exported latent factor means were used to test for significant differences between countries. Lastly, we tested for an indirect effect of classroom diversity on intercultural classroom practices via teachers' self-efficacy using path analysis in Mplus (Geiser, 2013).

## 3 Results

### 3.1 Teachers' self-efficacy beliefs

A CFA was used to test the hypothesized two-factor structure of the self-efficacy construct. The descriptive statistics and standardized factor loadings of the scale are presented in Table 2. The CFA showed a sufficient fit  $\chi^2(13) = 40.39, p < 0.001, RMSEA = 0.09, CFI = 0.96, SRMR = 0.04$ , with a correlation of .65 between the two latent means. The alignment method showed that all factor loadings and intercepts were completely invariant across countries, confirming we can compare countries on their mean scores. Descriptive statistics and exported latent means per country are shown in Table 3. A MANOVA shows there are significant differences between countries for both general self-efficacy ( $F(3,265) = 6.66, p < 0.001, \text{partial } \eta^2 = 0.07$ ) and diversity-related self-efficacy ( $F(3,265) = 11.78, p < 0.001, \text{partial } \eta^2 = 0.12$ ). LSD Post Hoc analyses show that general self-efficacy is significantly lower in the Italian sample compared to all other country samples, whereas for diversity-related self-efficacy all country differences are significant, with teachers from the Dutch sample scoring the highest, followed by England and Italy. Teachers in the Polish sample score the lowest on this self-efficacy construct and also show larger variation given the relatively large standard deviation.

**Table 2**  
Descriptive statistics and standardized factor loadings of all self-efficacy items.

	<i>N</i>	<i>M</i>	<i>SD</i>	Min	Max	$\Lambda$
<i>General self-efficacy</i>						
Make contact with challenging children	269	3.84	0.75	1.00	5.00	0.66
Intervene in disturbing behavior	269	3.96	0.72	1.00	5.00	0.68
Promote children's understanding	269	3.86	0.74	1.00	5.00	0.84
Adapt to children's individual needs	269	3.83	0.79	1.00	5.00	0.72
Guide families in supporting child learning	269	3.66	0.80	1.00	5.00	0.60
<i>Diversity-related self-efficacy</i>						
Work with culturally diverse children	269	3.83	0.89	1.00	5.00	0.88
Work with linguistically diverse children	269	3.66	0.83	1.00	5.00	0.75

**Table 3**

Descriptive statistics and latent means scores of self-efficacy per country.

	<i>N</i>	<i>M</i>	<i>SD</i>	Min	Max	<i>M F-scores</i>	<i>SD F-scores</i>
<i>General self-efficacy</i>							
England	78	3.91	0.65	1.00	5.00	0.07	0.50
Italy	94	3.62	0.52	2.80	5.00	-0.16	0.41
The Netherlands	43	4.03	0.50	2.80	5.00	0.17	0.40
Poland	54	3.92	0.56	1.80	5.00	0.03	0.46
<i>Diversity-related self-efficacy</i>							
England	78	3.90	0.64	2.50	5.00	0.13	0.66
Italy	94	3.68	0.64	2.50	5.00	-0.08	0.59
The Netherlands	43	4.20	0.66	2.50	5.00	0.40	0.60
Poland	54	3.28	1.01	1.00	5.00	-0.38	0.91

### 3.2 Diversity of classroom context

Table 4 provides an overview of the diversity of the classroom context per country. The average level of diversity in the English sample lies between 50 % and 75 %, with over half of the teachers indicating diversity levels of 50 %. Diversity levels in Italy are rather similar based on mean scores, however, the variance is somewhat larger. The Netherlands shows the highest level of diversity with the vast majority of teachers indicating 75 % to almost all of the children in their classroom have a diverse cultural or linguistic background or come from low income or low educated families. The opposite is true for Poland, where the majority of teachers indicate almost no cultural or linguistic diversity and with the majority indicating 25 % of the children come from low income or low educated families.

### 3.3 Intercultural classroom practices

A CFA was used to investigate the model for intercultural classroom practices. The descriptive statistics and standardized factor loadings of the scale are presented in Table 5. The CFA showed a good fit  $\chi^2(13) = 38.59, p < 0.001, RMSEA = 0.09, CFI = 0.96, SRMR = 0.04$ . The alignment method showed that all factor loadings and intercepts were completely invariant across countries, confirming we can compare countries on their mean scores. Descriptive statistics and exported latent means per country are shown in Table 6. An ANOVA shows there are significant differences between countries ( $F(3,265) = 15.02, p < 0.001, \text{partial } \eta^2 = 0.15$ ). LSD Post Hoc analyses show that intercultural classroom practices are significantly more reported in the English sample compared to all other countries. In addition, such practices are significantly less often reported in the Polish sample compared to the Italian sample.

### 3.4 Relations between self-efficacy, diversity of classroom context and practices

Table 7 shows that self-efficacy, diversity of the classroom context and intercultural classroom practices correlate positively with each other. The results show that though both constructs of self-efficacy correlate positively with classroom diversity and intercultural classroom practices, the relationship is the strongest for the diversity-related self-efficacy. Furthermore, as the data showed no relationships between self-efficacy and practices on the one hand and age, sex and teachers' background on the other hand, these variables were not included in the final model due to the small country sample sizes. However, as we did find significant positive correlations between education levels of teachers and self-efficacy and practices, teacher ISCED level was included in the model as a control variable.

To explore the relationship between the diversity of the classroom context, self-efficacy and intercultural classroom practices, we tested for direct and indirect effects using path analysis in Mplus. Fig. 1 shows the standardized results of the model that we used to test the direct effect of classroom diversity and both constructs of self-efficacy on practices as dependent variable, as well as an indirect effect of classroom diversity via self-efficacy, while controlling for teachers' education level. The model showed a good fit  $\chi^2(1) = 1.27, p = 0.26, RMSEA = 0.03, CFI = 1.00, SRMR = 0.02$ . The results indicate direct effects of all predictors, except for the effect of general self-efficacy on intercultural classroom practices. In addition, it demonstrates a significant effect of education level on both self-efficacy constructs as well as on practices, with higher ISCED levels predicting higher levels of self-efficacy and more reported use

**Table 4**

Levels of diversity of the classroom context per country.

	Cultural		Linguistic		Low-income		Combined diversity	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
England	3.55	1.00	3.37	0.98	2.97	0.77	3.30	0.77
Italy	3.44	1.37	3.32	1.30	3.05	1.18	3.27	1.15
The Netherlands	4.07	1.37	3.63	1.42	3.26	1.36	3.65	1.30
Poland	1.17	0.38	1.17	0.38	2.22	0.63	1.52	0.35

**Table 5**  
Descriptive statistics and standardized factor loadings of all practices items.

	<i>N</i>	<i>M</i>	<i>SD</i>	Min	Max	$\Lambda$
Celebrating diverse cultural holidays	269	3.39	1.22	1.00	5.00	0.64
Activities to increase cultural knowledge	269	3.36	1.18	1.00	5.00	0.75
Integrating different cultural values	269	3.78	1.01	1.00	5.00	0.68
Diverse materials for drawing skin, hair, eye color	269	4.09	1.01	1.00	5.00	0.50
Adapt work to background children	269	3.45	1.18	1.00	5.00	0.73
Create warm and inclusive environment	269	4.29	0.93	1.00	5.00	0.49
Ensure materials reflect cultural diversity	269	3.52	1.14	1.00	5.00	0.75

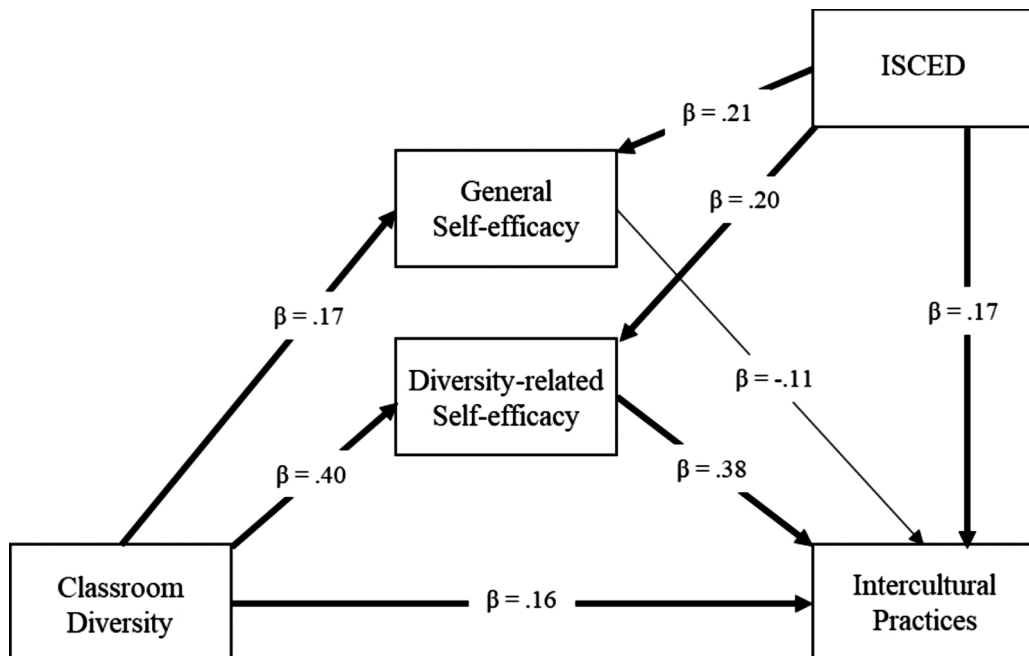
**Table 6**  
Descriptive statistics and latent means scores of practices per country.

	<i>N</i>	<i>M</i>	<i>SD</i>	Min	Max	<i>M F-scores</i>	<i>SD F-scores</i>
England	78	4.11	0.62	2.57	5.00	0.39	0.56
Italy	94	3.65	0.82	1.57	5.00	−0.05	0.75
The Netherlands	43	3.55	0.70	1.43	4.86	−0.17	0.62
Poland	54	3.31	0.74	1.57	5.00	−0.35	0.66

**Table 7**  
Pearson correlations between self-efficacy, diversity of classroom context and practices.

	2	3	4	5	6	7	8
1. Diversity of context	0.16*	0.39**	0.27**	−0.05	−0.10	−0.11	0.15*
2. General self-efficacy		0.73**	0.22**	0.20**	−0.05	−0.05	−0.00
3. Diversity-related self-efficacy			0.39**	0.17*	−0.00	−0.09	0.07
4. Diversity practices				0.19**	−0.05	0.07	0.00
5. ISCED					−0.22**	−0.02	0.13
6. Age					0.01	−0.06	−0.06
7. Sex							−0.17**
8. Background							

Note. \* $p < 0.05$  (2-tailed). \*\*  $p < 0.001$  (2-tailed).



**Fig. 1.** Model of direct and indirect effects of diversity of the context and self-efficacy on practices controlled for ISCED level. Significant effects ( $p < 0.001$ ) are indicated by bold lines.



of intercultural classroom practices.

Table 8 shows the indirect and total effects of the model. The results indicate both a direct effect of diversity of the classroom context on intercultural classroom practices as well as an indirect effect via diversity-related self-efficacy. An indirect effect on practices via general self-efficacy was not found to be significant.

A multigroup model taking the four countries into the equation shows a poor fit when all paths are fully constrained between the four countries,  $\chi^2(31) = 64.65, p < 0.001, RMSEA = 0.13, CFI = 0.91, SRMR = 0.12$ . The modification indices showed that the path between classroom diversity and practices should be freely estimated for the Italian sample as well as the path between classroom diversity and general self-efficacy for the Polish sample to allow for a good model fit,  $\chi^2(29) = 30.53, p = 0.39, RMSEA = 0.03, CFI = 1.00, SRMR = 0.10$ . The multigroup model showed significant effects similar to the overall model, with two exceptions concerning the two freely estimated paths. The freely estimated path in the Italian sample results in no significant effects of diversity of context on diversity practices in the English, Dutch and Polish sample, in contrast to the Italian sample where a significant positive effect was found ( $\beta = 0.33, SE = 0.08, p < 0.001$ ). Furthermore, the freely estimated path in the Polish sample shows there is a significant positive effect of classroom diversity on general self-efficacy in the English, Italian and Dutch sample, in contrast to the Polish sample where a significant negative effect was found ( $\beta = 0.40, SE = 0.09, p < 0.001$ ). Table 9 provides an overview of the direct and indirect effects per country. The indirect effect of classroom diversity on practices via diversity-related self-efficacy is significant in all four country samples, though the estimate is somewhat smaller in the Polish sample.

#### 4 Discussion

Given today's increasingly diverse school populations, the use of intercultural classroom practices becomes more important in order to provide all students with the best opportunities to learn. As many teachers feel ill-prepared in dealing with cultural and linguistic diversity (Slot, Halba et al., 2017), there is a need to support teachers and improve their intercultural competences. The goal of the present study was to provide new insights on the crucial role of teacher efficacy in this. A cross-national design with data from ECEC and primary school teachers from four countries – England, Italy, the Netherlands and Poland – was used to answer our research question: Is there a relationship between the experienced socio-cultural context of the classroom and the use of intercultural classroom practices and to what extent is this relationship mediated by teacher efficacy?

A first goal of this study was to examine to what extent teacher efficacy can be viewed as a two-dimensional concept in which both general efficacy beliefs relevant to most teaching situations are measured alongside (diversity-related) domain-specific beliefs. Knowledge on this domain-specific teacher efficacy is valuable, as we often teach to our strengths and reduced feelings of self-efficacy in some areas may result in teachers avoiding specific content or teaching methods (Wheatley, 2002). Our results indicate that both dimensions of efficacy are interrelated, but also yield unique information on teachers' efficacy beliefs, and thus support our statement that teaching diverse student populations can be considered domain-specific. While some teachers reported similar beliefs for general self-efficacy and diversity-related self-efficacy, others reported differences in their self-efficacy beliefs. These differences may be explained by the relation between efficacy and other within-teacher factors. For instance, a positive relation between teacher efficacy and job stress and satisfaction has been well established (e.g., Schwarzer & Hallum, 2008; Wang et al., 2015), which might explain why teachers in the Dutch sample reported relatively high self-efficacy. Some studies show that Dutch teachers are in general rather satisfied with their overall organizational climate and show low levels of job stress (e.g., Slot, Romijn et al., 2018; Slot, Jepma, Muller, Romijn, & Leseman, 2018), which could be reflected in their higher reported self-efficacy. A second within-teacher factor that might explain these differences is teachers' educational background. In line with previous studies (e.g., Tschannen-Moran & Johnson, 2011) we found that teacher efficacy was positively related to teachers' educational background. Given that the average education level of teachers in the Italian sample is considerably lower, this might explain why these teachers also reported lower general self-efficacy compared to the teachers from the other three countries.

Differences in teacher efficacy can also be explained by the experienced level of diversity of the classroom context. As mastery experiences are a strong contributor to self-efficacy beliefs (Bandura, 1997; Tschannen-Moran & Woolfolk Hoy, 2007) we hypothesized that teachers working in more diverse classroom contexts would show higher levels of diversity-related efficacy as they are more often confronted with the specific needs and challenges of a diverse classroom and thus likely had more opportunities to build up their efficacy beliefs in working with these diverse student populations. Our results confirmed this hypothesis and are in line with the study by Geerlings et al. (2018), who found that teachers feel more efficacious towards minority students when they work in classrooms with a higher share of minority students and interpreted this result as teachers being more experienced in working with diverse populations. This could explain why the teachers in the Polish sample reported significantly lower diversity-related teacher efficacy. Given the

**Table 8**  
Standardized estimates and standard errors of direct and indirect effects on practices.

	$\beta$	SE	<i>p</i>
Indirect effect via general self-efficacy	−0.02	0.02	0.231
Indirect effect via diversity-related self-efficacy	0.15	0.04	<0.001
Total effect	0.29	0.06	<0.001
Total indirect effect	0.13	0.03	<0.001

**Table 9**  
Standardized estimates and errors of direct and indirect effects on practices per country.

	EN $\beta$ (SE)	IT $\beta$ (SE)	NL $\beta$ (SE)	PL $\beta$ (SE)
Indirect effect via general self-efficacy	-0.02 (0.07); $p = 0.251$	-0.03 (0.02); $p = 0.245$	-0.03 (0.03); $p = 0.248$	0.04 (0.03); $p = 0.237$
Indirect effect via diversity-related self-efficacy	0.11 (0.03); $p = 0.001$	0.12 (0.08); $p < 0.001$	0.16 (0.05); $p = 0.001$	0.04 (0.01); $p < 0.001$
Total effect	-0.02 (0.07); $p = 0.806$	0.42 (0.08); $p < 0.001$	-0.03 (0.11); $p = 0.805$	0.04 (0.05); $p = 0.407$
Total indirect effect	0.08 (0.02); $p < 0.001$	0.09 (0.03); $p < 0.001$	0.13 (0.04); $p < 0.001$	0.08 (0.04); $p = 0.042$

lower diversity in the current sample of Polish classrooms compared to the classrooms of the other countries (0–25 % and 50–75 % respectively), Polish teachers might have less experience in working with culturally and linguistically diverse students and may, thus, feel less efficacious in teaching them.

Furthermore, our results show there is a positive relation between general self-efficacy and classroom diversity as well, though the relationship with diversity-related self-efficacy is stronger. Rubie-Davies et al. (2012) found similar results and hypothesized that this positive relationship could reflect good and highly experienced teachers' explicit choice to teach in low socio-economic areas. An alternative explanation of this result could be that the relationship between general self-efficacy and diversity-specific efficacy is reciprocal. If teachers experience success in addressing specific (diversity-related) challenges in the classroom, these experiences might also strengthen their overall feeling of competence as a teacher. Thus, teachers in more diverse classrooms might feel more efficacious in working with diverse students populations, which strengthens their overall teaching efficacy. However, our multigroup model indicated that this relationship is not identical in all four countries. For the Polish model we found a negative relation between socio-cultural diversity in the classroom and teachers' general self-efficacy, in contrast to a positive relation for the other three countries. While some studies found a positive relation between classroom diversity and general self-efficacy (e.g., Fackler & Malmberg, 2016; Rubie-Davies et al., 2012), the negative relation in the Polish sample is in line with others (e.g., Adams & Forsyth, 2006; Bertoret, 2009). These contrasting results may indicate that there are other factors that moderate this relation, which were not included in the present study. The divergent result in the Polish sample could for instance result from less optimal conditions in Polish (pre)schools (e.g., working conditions, group size, professional development resources) that put more stress on these teachers when working with very heterogeneous groups. However, these country differences could also be related to population differences, as the cultural composition of the Polish population is different compared to the other countries (i.e., Cadima et al., 2017). As such, it would be interesting to see what the relation between general and diversity-specific teacher efficacy and classroom diversity looks like in typical immigration countries, such as the USA, Canada or Australia. Overall, future research on this relationship is necessary to confirm these possible explanations for country differences.

The second purpose of this study was to investigate the reciprocal relation between teacher efficacy and intercultural classroom practices and how this is affected by the socio-cultural diversity of the classroom context. Moreover, we were specifically interested whether teacher efficacy plays a mediating role in the relationship between the classroom diversity and intercultural classroom practices. Our results indicate that differences in practices can be explained by both the diversity of the classroom context as well as teacher efficacy. We found a positive relation between classroom diversity and practices, which confirmed our hypothesis that teachers report more intercultural practices in classrooms where there is a higher need for such practices. This direct relationship might explain why teachers from the Polish sample reported a significantly lower use of intercultural classroom practices. As the share of students from cultural and linguistic minority backgrounds is relatively small in Polish classrooms, if not absent, the need for these practices might be less apparent.

Though the classroom context is of great importance for classroom processes (e.g., Zee & Koomen, 2016) it is the teacher who is directly confronted with the challenges and needs of a socio-culturally diverse classroom. Our hypothesis that teacher efficacy can play an important role in the improvement of intercultural classroom practices is supported by our results. Both constructs of teacher efficacy proved to relate positively to teacher-reported classroom practices, though again the relation between diversity-related self-efficacy and practices is stronger than the relation with general self-efficacy. Thus, teachers who feel more efficacious working with children with diverse cultural and linguistic background state that they are more often engaged in intercultural classroom practices. Moreover, we found a significant indirect effect of diversity-specific self-efficacy. These results confirm our hypotheses and are in line with previous studies (e.g., Swatu, 2011), though research on this specific topic is still very limited.

Besides the effect of the direct classroom context and teachers' efficacy beliefs on intercultural classroom practices, a few recent cross-national studies indicate that the macro-context also plays an important role in explaining differences (e.g., Fackler & Malmberg, 2016; Malinen et al., 2013; Vieluf et al., 2013). Policies at the organization, state or country level might also account for part of the variance in practices. For instance, teachers in the English sample reported the most intercultural classroom practices, which could be a result of the mandatory curriculum (Early years foundation stage statutory framework [EYFS]) with standards that all schools and child care providers must meet for the learning, development and care of children from birth to 5 years of age (Department for Education, 2017). Inclusive classroom practices are specifically addressed within this framework. Indeed, it states that all providers must take reasonable steps to provide children from linguistically diverse backgrounds with opportunities to use their home language in play and learning. Such diversity-related policies could also explain why the teachers in the Dutch sample reported relatively low use of intercultural classroom practices despite their rather high self-efficacy beliefs. A national mandatory policy that supports the use of children's home language is lacking. Instead, some of the (pre)schools included in the Dutch sample have explicit organization policies

that stress the importance of Dutch language proficiency and therefore the exclusion of children's home language use in the classroom. Future research should explicitly include country level variables to create a deeper understanding of the wider cultural context in which teacher efficacy and intercultural classroom practices develop.

#### 4.1 Limitations

There are several limitations that should be taken into account when interpreting our findings. An important limitation concerns sampling. The current cross-national study was based on a convenience sample in very targeted areas. As a result, findings from our study cannot be generalized across teachers and countries. This seems especially true for the cross-country results on teachers' self-efficacy. Though measurement invariance showed a comparison between countries was valid, some researchers have argued that such country differences may be more indicative of differences in self-representation and cultural modesty norms than actual levels of self-efficacy (Vieluf et al., 2013). The results on the differences in teacher efficacy beliefs between the four countries should therefore be interpreted with caution. Moreover, given the smaller sample sizes per country we included both ECEC and primary school teachers. Though we argued that a combined sample was justified for the purposes of the current paper, the particular characteristics of ECEC may prevent from generalizing results to primary school settings and vice versa. Further research should therefore strive to validate our results with more homogenous samples of teachers.

A second point concerns the measurement of our key variables. Our current conclusions are solely based on data from self-reported measures, which may be sensitive to response tendencies and social desirability. Such measurements seem inevitable for the concept of teacher efficacy, which entails one's perception of competence rather than actual level of competence. For intercultural classroom practices, the current study elaborates on the relationship between self-efficacy and perceived practices, but lacks independent information on the inclusive practices and quality of these classrooms. Other measurements for these practices, such as classroom observations, should be included in future studies to investigate if teachers with higher levels of diversity-related self-efficacy have better intercultural competences and use indeed more intercultural classroom practices. Likewise, the use of demographic data could provide a more detailed picture of the diversity of the classroom context. In the current study, the self-reported low levels of diversity indicate rather homogenous classrooms in the Polish sample. Though these teachers indicate they experience the group as homogenous, this measurement might not do just to the actual (socioeconomic) diversity in the Polish context.

## 5 Conclusion

Despite the above-mentioned limitations that call for caution in the interpretation of these results, this study has some relevant implications. Overall, our results add to the existing body of research on the reciprocal relationship between self-efficacy beliefs and practice and illustrate that when it comes to intercultural classroom practices feeling competent as a teacher in general is not sufficient. Some teachers showed reduced feelings of efficacy in working with diverse student populations compared to their general self-efficacy. As we teach to our strengths, these reduced feelings of diversity-related efficacy may result in these teachers avoiding intercultural classroom practices. We argue that (pre)school is an important setting in preparing children for their participation in today's culturally diverse society and that the use of these practices is thus important in all classrooms, regardless of students' background. Nonetheless, our results show that context matters. Teachers working in more diverse classrooms, feel more efficacious working with diverse student populations and report they are more often engaged in intercultural classroom practices, which in turn provides them with new opportunities to build up their self-efficacy. However, the socio-cultural composition of the classroom context only explains a part of the variance in teachers' efficacy beliefs and intercultural classroom practices. Therefore, we argue that it is necessary to help teachers' build their self-efficacy beliefs by providing them with opportunities to engage in intercultural classroom practices. This asks for (new) approaches to in-service professional development, such as coaching on the job with culturally diverse groups, teachers reflecting on their own intercultural practices, biases and beliefs, or organizing regular meetings with parents of diverse backgrounds.

In conclusion, our results indicate that if we wish to improve intercultural classroom practices and better prepare teachers for working in diverse classroom contexts, a continuous yet targeted approach is likely to yield the best results. Policies and in-service professional development specifically targeted at the reciprocal relation between diversity-related domain-specific self-efficacy on the one hand and practices on the other hand might be of more importance than interventions and activities that aim to improve teachers' overall feelings of competence.

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