



## Research paper

# Diversity beliefs are associated with orientations to teaching for diversity and social justice: A study among German and Finnish student teachers

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## HIGHLIGHTS

- Statistical analyses identified polyculturalism and multiculturalism as the most prominent diversity beliefs.
- Polyculturalism was strongly associated with student teachers' orientations to teaching for diversity and social justice.
- Qualitative data revealed a weaker degree of polyculturalism than did quantitative measures.
- Developing approaches to strengthen polyculturalist diversity beliefs in intercultural teacher education is recommended.

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## ABSTRACT

This mixed methods study explored German ( $n = 477$ ) and Finnish ( $n = 379$ ) student teachers' color-blind, multiculturalist, and polyculturalist diversity beliefs. Statistical analyses identified polyculturalism and multiculturalism as the most prominent diversity beliefs among the student teachers and detected associations between diversity belief profiles and student teachers' orientations to teaching for diversity and social justice. Polyculturalism, in particular, emerged as significant predictor of student teachers' orientations to teaching for diversity and social justice. Qualitative analysis of responses to open-ended questions revealed that polyculturalism was internalized by the student teachers superficially. The implications of the findings for further research and teacher education are discussed.

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## 1. Introduction

Ethnic and cultural heterogenization of classrooms and manifestations of educational inequity, such as the existing achievement gaps, have led to widespread acknowledgement of the need to develop intercultural teacher education. However, there is little consensus over what core intercultural competencies are needed or how these can be articulated and developed in teacher education (Dervin, 2020; Fantini, 2009; Leh et al., 2015). The terms used to define the desirable orientations are often rather vague, such as

“multicultural awareness” or “openness to diversity” (Cherng & Davis, 2019). However, teachers' pedagogical practices are known to be largely shaped by their implicit and explicit beliefs (Baumert & Kunter, 2013; Gay, 2010a). It has been noted that teachers' work in managing complex social dynamics and rapidly changing situations is reactionary and governed by implicit beliefs rather than well informed and internalized professional principles (Thornberg, 2008). Scholars call for the empirical identification of beliefs that are truly relevant for the moral work of teaching in a context of increasing cultural diversity (Gay, 2010a; Sanger & Osguthorpe, 2011). In the fields of critical intercultural and social justice education, this diversity is understood in terms of intersecting identity factors, such as ethnicity, language, and gender, that are connected to power and privilege in education and in society (Mikander et al., 2018; O'Sullivan, 2013; Shi-Xu, 2001).

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A potential insight for identifying an important set of teachers' core beliefs comes from research on diversity beliefs. Diversity beliefs refer to people's underlying beliefs about cultural diversity and how to approach it in society in order to promote social equality (Rattan & Ambady, 2013). These beliefs shape intergroup attitudes and behavior in educational settings and also elsewhere (Bernardo et al., 2013; Bernardo & Presbitero, 2017; Civitillo et al., 2019; Rosenthal et al., 2015; Wolsko et al., 2000). Color-blindness, multiculturalism, and polyculturalism are among the most researched diversity beliefs (Rosenthal et al., 2019; Rosenthal & Levy, 2012). Ways of thinking and ideals for action shaped by these beliefs are also referred to as lay theories, diversity strategies, diversity ideologies or intergroup ideologies (Pedersen et al., 2015; Rosenthal & Levy, 2010, 2012). The benefits and weaknesses of different diversity beliefs for developing fair and equitable intergroup relations have been demonstrated in social psychological research, but these findings are underused in the development of the research and practice of teaching and teacher education (Rissanen, 2021; Rosenthal et al., 2019). Color-blindness and multiculturalism, in particular, appear in educational research as philosophical-political concepts (see e.g., Gay, 2010a), but there is a need for more empirical research on them as diversity beliefs with discernible influences for intercultural interaction in educational settings. In the study reported in this article, we explored German and Finnish student teachers' diversity beliefs and how these are related to these teachers' social justice orientation as well as to their enthusiasm for teaching in the context of diversity.

### 1.1. Diversity beliefs

*Color-blindness* refers to beliefs about the irrelevance of cultural difference and the strategy of tackling prejudices and discrimination by de-emphasizing group categories and paying attention to either similarity across groups of people or to the uniqueness and individuality of every person (Rattan & Ambady, 2013; Rosenthal & Levy, 2010). When color-blindness takes the form of creating a new common "we", it sometimes promotes the development of social cohesion (see e.g., Gaertner & Dovidio, 2000), decreasing ingroup bias and stereotyping (Wolsko et al., 2000, 2006). However, both experimental studies and ethnographic research in educational settings have demonstrated how color-blindness inhibits the recognition of bias and discrimination, and naturalizes dominant identities and their privileges (Andersen, 2003; Apfelbaum et al., 2010; Bonilla-Silva, 2015; Wolsko et al., 2000, 2006). Furthermore, it is more commonly advocated by members of the majority, while minorities typically prefer multiculturalism (Ryan et al., 2010). Educators who rely on color-blindness tend to avoid cultural identification of students in order to avoid appearing biased and to give no offence: however, this inhibits them from countering the stigma attached to some minority identities (Rissanen, 2021; Mabokela & Madsen, 2005). *Multiculturalism* refers to beliefs about the significance of group difference. In multiculturalist thinking, prejudice reduction is seen to follow from the recognition and maintaining of cultural identities (Rosenthal & Levy, 2010). Color-blindness is sometimes referred to as an "identity blind" and multiculturalism as an "identity-conscious" diversity belief (Leslie et al., 2020). There is ample evidence of the benefits of multiculturalism in intergroup relations (Rattan & Ambady, 2013; Rosenthal & Levy, 2010). Multicultural education and culturally responsive/relevant education are typically based on multiculturalist beliefs and perspectives, manifest as aims of learning about cultural heritage and cultural diversity in the classroom (in addition to learning about issues of inequity) (Banks, 2020; Ladson-Billings, 2014; Schachner et al., 2021). Multicultural beliefs are associated with many positive intergroup attitudes such as interest in and respect

for diversity as well as positiveness and openness in interaction. However, despite its demonstrable benefits, multiculturalism also has unwanted consequences. These include, for example, increased stereotyping and greater perceived differences between groups (Leslie et al., 2020; Rattan & Ambady, 2013; Rosenthal & Levy, 2012; Ryan et al., 2010; Wolsko et al., 2000, 2006). Multicultural education has been heavily criticized for exacerbating these adverse effects when it celebrates stereotypical differences (Gorski, 2016). Moreover, those members of minorities who do not identify strongly with their group sometimes find multiculturalism threatening (Verkuyten, 2009). Diversity beliefs can be dimension-specific and vary when applied, for instance, to linguistic, ethnic or religious diversity: a Finnish study found color-blindness to be a more typical strategy for dealing with religious diversity (Rissanen, 2021).

Research on the consequences of color-blindness and multiculturalism as the basis of educational thinking and practices is beginning to accumulate. A study comparing 66 Flemish schools found that schools which implemented diversity policies based on multiculturalist ideals succeeded better in narrowing achievement gaps between immigrant and native students, whereas achievement gaps were widening and students' feelings of belonging diminishing in schools relying on color-blind or assimilative policies (Celeste et al., 2019). Studies have also demonstrated that diversity beliefs influence teachers' pedagogical thinking and practice. Teachers with a tendency to color-blind thinking are reluctant to adapt their pedagogical practices when teaching culturally diverse groups (Hachfeld et al., 2015). They tend to avoid topics that are deemed difficult (e.g., those related to race, ethnicity, and religion) in their classrooms; ignoring diversity is associated with teachers' color-blind beliefs and ideals of promoting equity by concentrating on individuality and similarities, whereas teachers with multiculturalist beliefs are more likely to implement culturally responsive teaching practices based on the recognition and affirmation of diversity (Castagno, 2008; Civitillo et al., 2019). However, these studies neither discuss nor aim to lay bare the problems of multiculturalism identified by social-psychological research, such as increased stereotyping.

A more recently identified diversity belief is *polyculturalism*, which refers to beliefs concerning the interconnectedness and malleability of cultures. Polyculturalism is based on a network rather than a categorical view of cultural influence: it emphasizes the continuous exchanges and interconnectedness between cultural groups and understands individuals' engagement with cultures as partial and plural. It aligns with the multiculturalist recognition of the relevance of cultural differences but avoids static views of culture and emphasizes cultural change (Morris et al., 2015; Rosenthal & Levy, 2010). Many positive intergroup effects have been associated with polyculturalism: appreciation of and feeling comfortable with diversity, and willingness for intergroup contact (Rosenthal & Levy, 2012), positive attitudes towards people from other countries and cultural groups (Bernardo et al., 2013; Rosenthal et al., 2015), as well as cultural intelligence (Bernardo & Presbitero, 2017). Many of the influences of polyculturalism are similar to those of multiculturalism, and these two diversity beliefs are known to correlate positively with each other and negatively with explicit discrimination. However, factor analyses establish them as distinct constructs (Bernardo et al., 2016; Pedersen et al., 2015; Rosenthal & Levy, 2010). There is a growing body of literature showing that when multiculturalist recognition of diversity is paired with polyculturalist belief in the malleability and interconnectedness of cultures, many of the problems associated with multiculturalism are avoided (Osborn, 2020; Schachner et al., 2021). For instance, a study by Osborn et al. (2020) found an association between multiculturalism and perceptions of threat

regarding increasing demographic diversity, but this effect was reversed by the embracing of polyculturalist belief. Polyculturalism is also associated with a key aspect of cultural awareness – a willingness to criticize one's own tradition (Rosenthal et al., 2012).

Research on polyculturalism in educational settings is still scarce. Polyculturalism can be implemented in classrooms and schools by conceptualizing cultures as dynamic and teaching about interactions between cultures throughout history (Rosenthal et al., 2019; Rosenthal & Levy, 2010). Higher education students who begin their studies in a culturally diverse educational institution and have polyculturalist beliefs have been found to engage in positive intercultural interaction and to have feelings of belonging as well as less anxiety (Rosenthal et al., 2016). A German study analyzing classroom cultural diversity climate and intercultural relations found that cultural diversity beliefs vary not only individually but also between classrooms. A polyculturalist climate in which intercultural connections and malleability of cultures were emphasized seemed to lessen the experiences of discrimination occasionally arising from the multiculturalist celebration of stereotypical diversities. A polyculturalist classroom diversity climate also predicted stronger commitment to school in the case of immigrant students (Schachner et al., 2021).

## 1.2. Orientations to teaching for diversity and social justice

In the field of intercultural teacher education, willingness to acknowledge the sociopolitical context as well as the courage to expose forms of injustice are increasingly presented as key signifiers of the desirable orientation of teachers (Gorski, 2016). This orientation is defined in different ways, e.g., as teachers' passion for equity and social justice (Nieto, 2005, p. 204), or willingness to recognize and challenge practices that reproduce inequity in classrooms, schools, and societies (Cochran-Smith et al., 2016). These critical views have mainstreamed in parallel fields such as culturally responsive education (Gay, 2010b) and critical multicultural education (e.g., May & Sleeter, 2010; Vavrus, 2014). The centrality of the concept of culture has been harshly criticized by many multicultural and intercultural education scholars (Dervin, 2015; Gorski, 2016). "Traditional" approaches in these fields, which emphasize learning about and from cultural differences, are seen to reinforce culturalism (an approach emphasizing the significance of cultures as organic wholes and their power to determine the behavior of individuals and groups), essentialism (a belief that groups of people or cultures have an underlying essence) and, consequently, views and practices that are othering towards cultural minorities and inadequate for recognizing and combating structural injustices (Gorski, 2008). Shifting teachers' attention from culture to equity and social justice is deemed vital. Awareness of the intersectionality of differences is regarded as a basis for promoting equity and emphasized through terminological shift from culture to "culturality" or "diversity" (Abdallah-Preteuille, 2006; Dervin, 2015; Gorski, 2016; Holliday, 2010). Avoidance of the notion of culture has led to the development of frameworks parallel to intercultural and multicultural education, such as teaching for social justice (e.g., Cochran-Smith, 2010; McDonald & Zeichner, 2009). In contrast to the above views, some scholars argue that avoiding culturalism and essentialism takes a step too far in renouncing the concept of culture (see e.g., O'Sullivan, 2013). Essentialism can be regarded as a facet of human cognition that needs to be constantly and consciously regulated - there is no doing away with it. Culture continues to be a relevant concept indispensable to understand human behavior, but it should be used without applying cultural traits to nations or static cultures (O'Sullivan, 2013). This study also subscribes to the notion of culture having continuing relevance. Thus, the aim of the authors is

not to promote a shift of focus away from culture, but instead, towards conceptions of culture as possible signifiers of teachers' orientations to equity and social justice. Furthermore, teachers' willingness and motivation to teach diverse groups are regarded here as important orientations that steer ethical teaching praxis in the context of diversity (Kaukko & Wilkinson, 2018). Self-efficacy (perceived ability to succeed in bringing about the desired student outcomes) and enthusiasm are two important dimensions of teachers' motivational orientation enhancing their chances of success in their profession (Lazarides et al., 2018; Petrović et al., 2016). When teachers experience positive effect at work, this builds their self-efficacy, which in turn is likely to increase their experienced enthusiasm (Burić & Moè, 2020). Enthusiasm predicts the quality of teaching, ways of motivating the students as well as student interest and achievement (Baumert & Kunter, 2013; Dewaele & Li, 2021; Kunter et al., 2011; Lazarides et al., 2019; Moè et al., 2021; Petrović et al., 2016) and, therefore, has obvious links to teachers' capability to promote educational equity. Teachers' enthusiasm to interact with students and families from diverse backgrounds and their enjoyment of teaching diverse groups are important factors for teachers' motivational orientation and can predict active engagement rather than avoidance in challenging situations (Petrović et al., 2016).

## 1.3. The German and Finnish contexts

Currently, 27% of the German population and 39.43% of school-aged children have a migrant history (Federal Statistical Office of Germany, 2022), the proportions being higher in urban areas. This diversity is not reflected in the members of the German teaching profession, of whom fewer than 1.4% have a migrant history (Statistisches Bundesamt, 2022). Teacher education in Germany is the responsibility of the federal states. Degree programs are divided for different types of school: for primary schools (grades 1–4), there is an emphasis on pedagogical subjects; studies for teachers at secondary schools are more focused on knowledge of subjects to be taught and didactics. Kindergarten teachers are not educated at universities but at technical colleges. Intercultural pedagogy has been included in teacher education since the 1970s and is now firmly ensconced in educational science throughout the country. In 2000, a commission on teacher education formulated dealing with cultural and social heterogeneity as one of the three most important topics for teacher education (Keuffer & Oelkers, 2001), and the topic was subsequently integrated into the Standards for Teacher Education, according to which teachers are to be aware of the social and cultural living conditions of pupils, as well as of "Differentiation, integration and promotion: diversity and heterogeneity as conditions of school and teaching" (Kultusministerkonferenz, 2004, p.5, p. 9).

Participation in international benchmarking studies such as the Program for International Student Assessment (PISA) has driven efforts to better adapt the German schools to the changing demographic situation (German PISA Consortium, 2001; OECD, 2020). Low academic achievement was previously attributed to individuals and their deficiencies, but after the so-called PISA shock, systemic factors reproducing educational inequalities have been acknowledged (Gomolla & Radtke, 2002). However, disadvantage in relation to students' backgrounds in Germany remains relatively high. Students with migrant backgrounds are over-represented in the *Hauptschule* schools, which are the lowest level public schools in Germany. There is also a relatively high risk of migrant background students remaining without a school leaving certificate (Statistisches Bundesamt, 2022). Pedagogical practices are slow to follow the political and general directions which emphasize the importance of intercultural openness and integration. It remains a

challenge, for instance, to overcome the monolingual habitus of school (Gogolin, 1994; Gogolin & Lange, 2010).

Finland has a long history of two official languages (Finnish and Swedish), two national churches (Lutheran and Orthodox), and historical minorities (Roma, Russian Jews and Turkish Tatars) (Holm & Londen, 2010). Moreover, Finland is partially located in the lands of the only indigenous population in Europe (the Sámi). At the end of 2020, approximately 7.8% of the population of Finland were residents speaking non-domestic languages, which is an all-time record (Official Statistics of Finland, 2018).

Finnish teacher education has a reputation for excellence: Finland's success in PISA was notable at the beginning of the 21st century, and this was widely attributed to the high quality of Finnish teacher education and the high professional competence of teachers. Finnish teachers are highly valued, trusted, and autonomous professionals with university-level education (Tirri, 2014). Despite its reputation for excellence, Finnish teacher education has traditionally "been very ethnocentric and based on monocultural views of Finns and Finnish culture" (Räsänen, 2009, p. 46). Furthermore, the PISA results show that underachievement among second-generation immigrants is particularly severe in Finland, even when the impact of socio-economic status is controlled for (Borgna & Contini, 2014). According to a recent report, the need to support teachers' intercultural competencies is widely acknowledged; however, student teachers typically participate in sporadic mandatory courses focused on questions of diversity and social justice, and there is much to improve in the resources and practices of intercultural preservice and in-service teacher education (Räsänen et al., 2018).

Thus, as in the German context, there seems to be a remarkable gap between the official principles and practical reality of intercultural education in the Finnish education system as well. The Finnish *National Core Curricula for Basic Education* (NCCBE, 2014) and also the *National Core Curriculum for Early Childhood Education and Care 2016* (ECEC, 2016) are decidedly multiculturalist in their orientation. NCCBE 2014 seems to promote a non-essentialist understanding of cultural identities by articulating diversity as common to all students, and Finnish cultural heritage as being constantly shaped by different cultures in the course of history as well as in the present (Zilliacus et al., 2017). However, research on Finnish teachers paints a different picture. Despite the relatively widespread (superficial) acknowledgement of the value of diversity, educators' beliefs and attitudes continue to reflect monolingual and monocultural ideologies (Alisaari et al., 2019; Kimanen et al., 2019; Rissanen, 2019; Rissanen, Kuusisto, & Tirri, 2015).

## 2. Data and methods

### 2.1. Research questions

This study aims to explore what kind of diversity profiles German and Finnish student teachers have and how these profiles are associated with student teachers' orientations to teaching for diversity and social justice. In light of the research reviewed above, we hypothesize that multiculturalism and polyculturalism are associated with student teachers' social justice orientation and enthusiasm for teaching diverse students. However, as diversity beliefs may manifest in different combinations (Rosenthal & Levy, 2010), identification of diversity profiles is an exploratory aim of our research, i.e., we do not set hypotheses on what combinations of diversity beliefs can be found among our respondents, or how these particular profiles relate to orientations to teaching for diversity and social justice. We also aim to analyze differences between German and Finnish student teachers. In both Germany and Finland, the publicly declared aim of teacher education is to equip

future teachers with competences to foster social change towards greater equity, sustainability, and social justice (Keuffer & Oelkers, 2001; Räsänen et al., 2018). Since experience of diversity has been identified in earlier research as one of the key factors influencing the development of teachers' intercultural competences (Garmon, 2004; Leh et al., 2015), we could expect student teachers studying in the German context, characterized by a greater degree of ethnic and linguistic diversity, to express a stronger orientation to teaching for diversity and social justice, as well as stronger multiculturalist and polyculturalist diversity beliefs.

Our research questions are: 1) What kind of diversity belief profiles can be identified among German and Finnish student teachers? 2) How are student teachers' diversity belief profiles associated with their orientations to teaching for diversity and social justice, as well as their experience of diversity? 3) How do the diversity beliefs manifest in student teachers' thinking? 4) How do German and Finnish students differ in terms of their diversity beliefs?

To answer the research questions, we utilized a convergent mixed methods design, collecting quantitative and qualitative data simultaneously in a survey with structured scales and open-ended questions (Creswell, 2015). This design afforded us an opportunity to study more pervasive trends in student teachers' diversity beliefs using validated quantitative measures and statistical analysis, and also to gain a more profound, qualitative understanding of each diversity belief, and to triangulate quantitative and qualitative results to strengthen the trustworthiness of the study. The fourth research question concerning differences between German and Finnish student teachers will be answered in parallel with the first three questions.

### 2.2. Procedure and participants

German ( $n = 477$ ) and Finnish ( $n = 379$ ) student teachers at Otto-Friedrich University Bamberg and Tampere University respectively, responded to an online self-report questionnaire in fall 2021. The survey was distributed as a task on different courses by the teacher educators. Although the survey was part of coursework, participation in this research was voluntary. The student teachers were asked to give their informed consent to their responses being used in this study.

The vast majority of participants in both countries were females ( $n_{Ge} = 389$ , 82%  $n_{Fi} = 327$ , 86%) (Table 1), which reflects the current gender ratio in the teaching profession. Most student teachers ( $n_{Ge} = 418$ , 88%,  $n_{Fi} = 222$ , 58%) had no or less than one year of teaching experience, ranging from 0 to 12 years among German students and from 0 to 31 years among Finnish student teachers. Participants were studying to become teachers at various levels of education. Over half (61%) of those in Germany were studying to become primary school teachers (grades 1–4) or middle school teachers (grades 5–9), while in the Finnish data the biggest group (40%) consisted of prospective teachers in early childhood education. They evaluated how much experience they had of cultural diversity on a scale 1–5 ( $M_{Ge} = 3.2$ ,  $SD = 0.88$ ;  $M_{Fi} = 3.05$ ,  $SD = 0.98$ ). Experiences of belonging to a minority group were relatively low in both countries ( $M_{Ge} = 1.62$ ;  $M_{Fi} = 1.75$ ). Most of the respondents reported Christianity as their religion, Roman Catholic (41%) or Lutheran (34%) among Germans and Lutheran (77%) among Finns. The age range was slightly lower in German group ( $M = 20.57$ ,  $SD = 3.26$ ) than in the Finnish group ( $M = 27.84$ ,  $SD = 8.91$ ). Table 1 presents the background information on the respondents. Note that those leaving some questions unanswered were excluded from the data as was one Finnish respondent who was identified as an outlier in her responses.

**Table 1**  
Participants' background information.

Background variables	Bamberg, Germany $n = 477$	Tampere, Finland $n = 379$
Age	$M = 20.57$ ( $SD = 3.26$ ) min 17, max 45	$M = 27.84$ ( $SD = 8.91$ ) min 20, max 60
Gender	389 (82%)	327 (86%)
Female	86 (18%)	47 (12%)
Male	1 (.02%)	1 (.03)
Other		
Did not want to answer	1 (.02%)	4 (1%)
Teaching experience in years	$M = 0.2$ ( $SD = 0.83$ ) min 0, max 12	$M = 1.49$ ( $SD = 3.91$ ) min 0, max 31
Studying to become teacher at		
Early childhood education		152 (40%)
Grundschule/Mittelschule - Primary education	292 (61%)	74 (20%)
Realschule/Gymnasium - Secondary education	107 (22%)	94 (25%)
Adult education	42 (9%)	33 (9%)
Other	36 (7.5%)	27 (7%)
Having experience of cultural diversity (scale 1–5)	$M = 3.21$ ( $SD = .88$ )	$M = 3.05$ ( $SD = .98$ )
Having experience of being in minority (scale 1–5)	$M = 1.62$ ( $SD = 1.08$ )	$M = 1.75$ ( $SD = 1.13$ )
Religion		
Roman Catholic	196 (41%)	5 (1%)
Lutheran	164 (34%)	292 (77%)
Other Christian denomination	10 (2%)	20 (5%)
Islam	7 (1.5%)	6 (2%)
Other religion	6 (1%)	4 (1%)
None	94 (20%)	52 (13%)

### 2.3. Measures

The *Lay Theories of Culture Scale* by Rosenthal and Levy (2012) was utilized to measure color blindness (BLIND) (e.g., “At our core, all human beings are really all the same, so racial and ethnic categories do not matter”), multiculturalism (MULTI) (e.g., “Each ethnic group has its own strengths that can be identified”) and polyculturalism (POLY) (e.g., “Different cultural groups impact one another, even if members of those groups are not completely aware of the impact”). Each dimension was evaluated with five items.

The respondents' orientation to teaching for social justice was measured using a six-item version (items 1, 2, 3, 4, 7, 8) of the *Learning to Teach for Social Justice-Beliefs Scale* (SJB) (Ludlow et al., 2008), that focus on beliefs concerning the responsibility of teachers to aim at developing social justice and equity in the context of diversity (e.g., “Part of the responsibilities of the teacher is to challenge school arrangements that maintain societal inequities”). This six-item version has been validated among Finnish teachers (Rissanen & Kuusisto, 2022). Enthusiasm for teaching in the context of diversity was measured using the *Teacher Cultural Diversity Enthusiasm Scale* that has six items (e.g., “I would like to teach students from different cultural backgrounds”) (ENT) (Petrović et al., 2016).

All the instruments used a 5-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. A five-point Likert scale was also used to measure teachers' experience of cultural diversity (EoD) by asking how much they agreed with the statement “I have a lot of experience of cultural diversity”. All the scales were translated double-blind into Finnish. German translations were arrived at by translating items from both Finnish and English versions and negotiating these translations in the research team.

The reliabilities of all scales were on the acceptable and good level (Table 2). The correlation matrix in Table 3 shows that the correlations between scales were in line with the theoretical underpinnings and earlier research (Rosenthal & Levy, 2010) – multiculturalism and polyculturalism positively correlated with each other but not with color-blindness.

The survey also included an open-ended question “Everyone has their own understanding of cultural diversity. What does it mean to you?” This question was formulated to qualitatively explore student teachers' diversity beliefs.

### 2.4. Analysis of quantitative data

IBM SPSS Statistics 25 was utilized for descriptive statistics and t-tests was used to evaluate differences in variables between countries (see Table 2). Multi-group latent profile analysis (LPA) was conducted with the Mplus 8.0 program (Muthén & Muthén, 1998–2017) and computed in three phases (see McMullen et al., 2018): First, the ideal number of profiles was searched for separately in the German and Finnish data; secondly, the analysis was again computed for the whole data with the ideal number found, in unconstrained and fully constrained manner; thirdly, unconstrained and fully constrained models were compared using the Satorra-Bentler Chi-square Difference Test (Satorra & Bentler, 2000, McMullen et al., 2018) to find the best fitting model for the whole data.

### 2.5. Analysis of qualitative data

The student teachers wrote short answers to the open-ended question “Everyone has their own understanding of cultural diversity. What does it mean to you?”. These answers were analyzed by means of deductive qualitative content analysis (Elo & Kyngäs, 2008). Based on theory and existing research on diversity beliefs, we formed a categorization matrix and coded the data according to six sub-categories representing the three diversity beliefs (main categories) under study. Categories for Color-blindness were *Blind 1 Similarity and equality of all people*, and *Blind 2 Individuality and the value of an individual*; for multiculturalism *Multi 1 Acknowledging diversity* and *Multi 2 Appreciating diversity*; and for polyculturalism *Poly 1 Interconnections and interaction between cultures* and *Poly 2 Cultural change, influences and learning*. We developed a codebook (Appendix 1) providing a detailed description of the coding rules according to which the answers were coded into these categories. A single answer could be marked with several codes or only one. Kappa values were calculated for ten percent of the data in both countries to measure interrater reliabilities among coders for the main categories Color-blindness, Multiculturalism, and Polyculturalism. The first author was the main coder for both the German and the Finnish data. To check the reliability of the coding a German-speaking author randomly coded chosen ten percent of the German data and another Finnish-speaking author coded ten

**Table 2**  
Descriptive statistics of scales and t-test between countries.

Scale	Country	n	$\alpha$	Min	Max	M (SD)	t(df), p, d
<b>DIVERSITY BELIEFS</b>							
Color-blindness (BLIND) 5 items	Ge	477	.822	1.00	5.00	2.69 (.91)	-2159 (854) *, .89
Multiculturalism (MULTI) 5 items	Fi	379	.844	1.00	5.00	2.82 (.86)	
Polyculturalism (POLY) 5 items	Ge	477	.730	1.80	5.00	3.78 (.63)	-1.532 (854), .61
	Fi	379	.734	2.00	5.00	3.83 (.57)	
	Ge	477	.836	2.00	5.00	4.10 (.60)	-.543 (854), .58
	Fi	379	.836	2.80	5.00	4.12 (.54)	
<b>ORIENTATIONS and EXPERIENCE</b>							
Social justice (SJB) 6 items	Ge	477	.699	1.17	5.00	4.33 (.56)	.436 (854), .54
Enthusiasm (ENT) 6 items	Fi	379	.692	2.67	5.00	4.31 (.51)	
Experience (EoD) 1 item	Ge	477	.916	1.17	5.00	4.0 (.78)	3.875 (854) ***, .81
	Fi	379	.940	1.17	5.00	3.78 (.84)	
	Ge	477	–	1.00	5.00	3.21 (.88)	2.405 (854) **, .92
	Fi	379	–	1.00	5.00	3.05 (.98)	

\*\*\*p < .001, \*\*p < .01, \*p < .05.

**Table 3**  
Pearson's correlation matrix.

	1	2	3	4	5	6
1 Color blindness	–	-.153**	-.100	-.115*	-.011	-.041
2 Multiculturalism	-.101*	–	.259**	.078	-.020	.059
3 Polyculturalism	-.044	.238**	–	.385**	.176**	.129*
4 Social Justice	-.016	.133**	.480**	–	.408**	.035
5 Enthusiasm	-.153**	.073	.329**	.428**	–	.392**
6 Experience	.082	.099*	.167**	.135**	.308**	–

\*\*p < .01, \*p < .05, German student teachers below hypotenuse, Finnish student teachers above.

percent of the Finnish data. If the kappa value was too low (below 0.50) the coders discussed the discrepancies and coded a new set of randomly chosen ten percent of responses. After the kappa calculations, the first author finished the coding of all data. Final kappa values varied from weak (Color-blindness<sub>Finnish</sub> 0.586, Polyculturalism<sub>German</sub> .587) to moderate (Color-blindness<sub>German</sub> 0.677, Multiculturalism<sub>German</sub> 0.621, Multiculturalism<sub>Finnish</sub> 0.621, Polyculturalism<sub>Finnish</sub> .712) (McHugh, 2012). These kappa values can be regarded as acceptable, since the frequency of analysis units in Polyculturalism and Color-blindness was low, making kappa values sensitive to very few differences in coding under these categories. After the coding process, the frequencies of diversity beliefs among student teachers in each dataset were calculated and Chi-square test was used to triangulate findings and to compare the Finnish and German student teachers.

### 3. Results

#### 3.1. What kind of diversity belief profiles can be identified among German and Finnish student teachers?

In the quantitative data polyculturalism emerged as the strongest ( $M_{Ge} = 4.10, SD = 0.91; M_{Fi} = 4.12, SD = 0.86$ ) and color-blindness the weakest ( $M_{Ge} = 2.69, SD = 0.63; M_{Fi} = 2.82, SD = 0.57$ ) diversity belief among both German and Finnish student teachers. Multiculturalism was fairly typical in both groups ( $M_{Ge} = 3.78, SD = 0.60; M_{Fi} = 3.83, SD = 0.54$ ) (Table 2). The Finnish student teachers reported slightly higher levels of color-blindness than the German student teachers ( $t(854) = -0.2159, p < .05, d = 0.89$ ), while the German student teachers scored higher on enthusiasm for teaching in the context of diversity ( $t(854) = 3.875, p < .001, d = 0.81; M_{Ge} = 4.00, SD = 0.78; M_{Fi} = 3.78, SD = 0.84$ ) and on experience of cultural diversity than their Finnish peers ( $t$

(854) = 2.405,  $p < .001, d = 0.92; M_{Ge} = 3.21, SD = 0.88; M_{Fi} = 3.05, SD = 0.98$ ) (Table 2).

With these variables (Color-blindness, Multiculturalism, Polyculturalism), we computed several rounds of LPAs separately for both countries in order to find the ideal number of profiles of diversity beliefs. In the LPA all variances were kept equal. Models with two, three, four, five, six, and seven profiles were tested. A mix of the following statistical indicators was evaluated to identify the best models (Nylund et al., 2007): The lowest levels of Bayesian Information Criterion (BIC) and adjusted BIC were considered to indicate the best model. In entropy, which should ideally be close to 1, values above 0.6 were deemed sufficient (McMullen et al., 2018). In the Vuong-Lo-Mendell-Rubin Likelihood Ratio Test (VLMR) and the Parametric Bootstrapped Likelihood Ratio Test (BLRT) a significant result indicated that the model tested was more suitable than a model with fewer profiles. According to these indicators (Table 5), three profiles in the German data and four profiles in the Finnish data proved to be the best options.

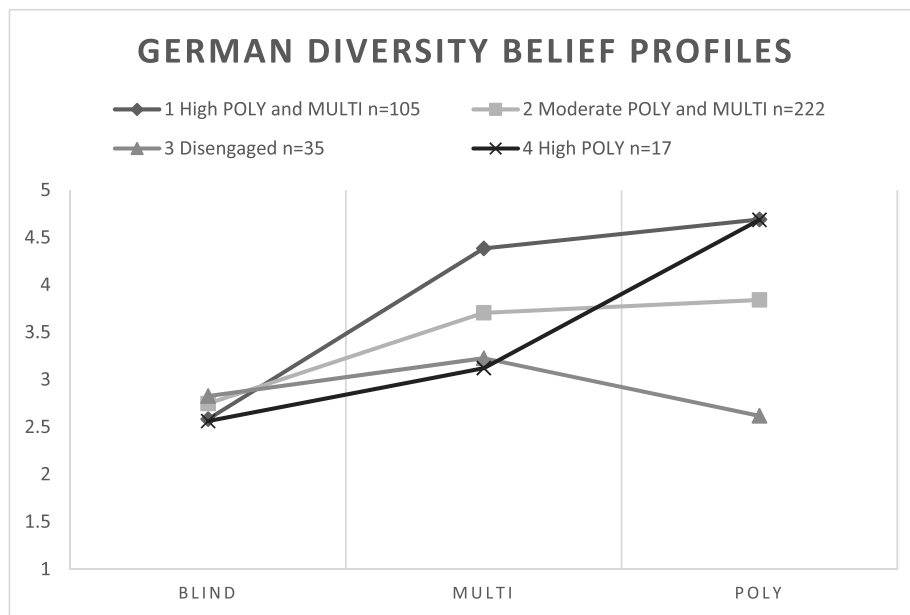
Secondly, multi group LPA with four profiles was computed in the whole data in unconstrained and fully constrained versions indicating that in the unconstrained model profile structure and membership could vary across the German and Finnish data and in the fully constrained model the structure of the profiles was constrained to be equal between countries. Four profiles were chosen to capture the wide range of variation. Three of the four profiles in the Finnish sample aligned with the three German profiles, thus using four should capture all the profiles across the two countries. The Satorra-Bentler Chi-square Difference Test (Satorra & Bentler, 2000) showed that the unconstrained model was more appropriate than the fully constrained model  $\Delta\chi^2(12) = 23.8097, p < .05$ . No-constraint models with four profiles per country can be seen in Fig. 1a and b.

The four diversity belief profiles identified by LPA were named 1) *high polyculturalism and multiculturalism*, 2) *moderate polyculturalism and multiculturalism*, 3) *disengaged*, and 4) *high polyculturalism*. The most typical profile in both countries was profile 2. In all profiles color-blindness was on a low level and in this regard, there were no statistically significant differences between profiles in the German data. However, the Finnish data showed more variation and differences between the profiles (Table 6).

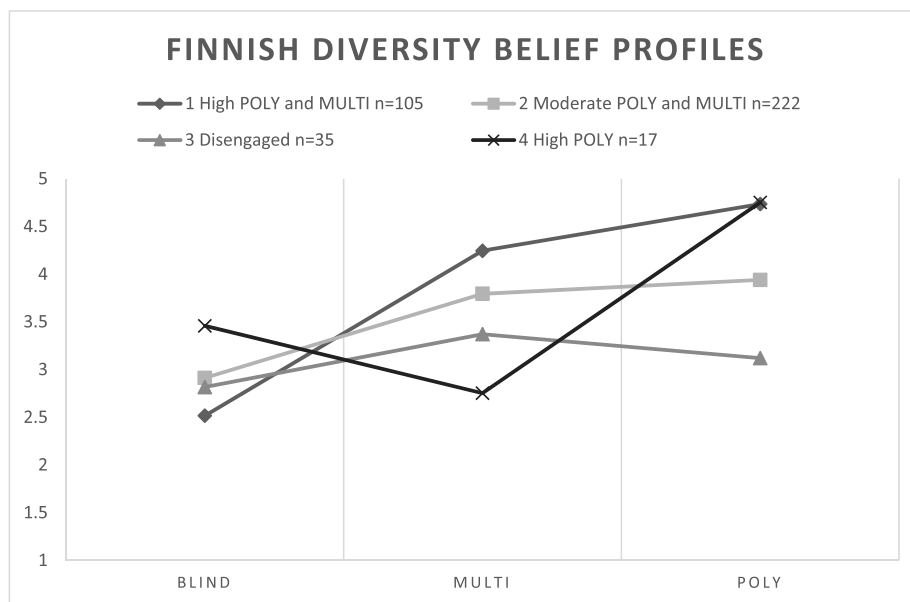
As Fig. 1a and b shows, profiles 1–3 resembled each other (weak color-blind beliefs combined with stronger multiculturalist and polyculturalist beliefs) but differed in the extent to which the student teachers inclined towards polyculturalism and multiculturalism, profile 1 presenting those who most wholeheartedly agreed

**Table 5**  
Statistical indicators for German and Finnish LPA models.

# of	German models						Finnish models					
pro-files	Loglikelihood (df)	VLMR (p)	BLRT (p)	BIC	aBIC	Entro-py	Loglikelihood (df)	VLMR (p)	BLRT (p)	BIC	aBIC	Entro-py
2	-1502.482 (10)	0.0000	0.0000	3066.640	3034.901	0.966	-1093.418 (10)	0.0008	0.0000	2246.211	2214.483	0.396
3	-1489.570 (14)	0.0191	0.0000	3065.485	3021.050	0.698	-1076.914 (14)	0.0002	0.0000	2236.954	2192.535	0.792
4	-1480.029 (18)	0.3745	0.0000	3071.073	3013.943	0.669	-1059.277 (18)	0.0493	0.0000	2225.430	2168.320	0.806
5	-1472.212 (22)	0.3014	0.0000	3080.109	3010.284	0.646	-1054.178 (22)	0.0901	0.1395	2238.981	2169.180	0.818
6	-1462.697 (26)	0.0050	0.0000	3085.749	3003.228	0.797	-1049.647 (26)	0.3521	0.1463	2253.671	2171.178	0.757
7	-1457.040 (30)	0.3478	0.1538	3099.105	3003.889	0.759	-1043.493 (30)	0.7296	0.0779	2265.112	2169.929	0.752



**Fig. 1a.** Profiles of diversity beliefs among German student teachers.



**Fig. 1b.** Profiles of diversity beliefs among Finnish student teachers.

with polyculturalist and multiculturalist beliefs. In profile 3, all diversity beliefs were on a rather low level, indicating a disengaged attitude towards diversity. Profile 4 was marked by high

polyculturalism with lower levels of multiculturalism than in the other profiles.

**Table 6**  
Diversity beliefs profiles and one-way analyses of variance (ANOVA).

	1 High POLY and MULTI		2 Moderate POLY and MULTI		3 Disen-gaged		4 High POLY		ANOVA
German	n = 116, 24%		n = 275, 58%		n = 23, 5%		n = 63, 13%		
	M	SD	M	SD	M	SD	M	SD	
BLIND	2.58 <sup>a</sup>	1	2.75 <sup>a</sup>	0.83	2.83 <sup>a</sup>	0.91	2.56 <sup>a</sup>	1.01	F (3) = 1.506 <sup>a</sup> , $\eta_p^2 = .009$
MULTI	4.38	0.42	3.7	0.49	3.23 <sup>a</sup>	0.78	3.12 <sup>a</sup>	0.44	F (3) = 109.948***, $\eta_p^2 = .411$
POLY	4.69 <sup>a</sup>	0.27	3.84	0.31	2.62	0.35	4.69 <sup>a</sup>	0.26	F (3) = 485.922***, $\eta_p^2 = .755$
Finnish	n = 105, 28%		n = 222, 59%		n = 35, 9%		n = 17, 4.5%		
	M	SD	M	SD	M	SD	M	SD	
BLIND	2.52 <sup>ab</sup>	0.8	2.91 <sup>a</sup>	0.85	2.82	0.62	3.46 <sup>b</sup>	1.17	F (3) = 8.882***, $\eta_p^2 = .066$
MULTI	4.25	0.48	3.79	0.45	3.37	0.48	2.75	0.33	F (3) = 72.704***, $\eta_p^2 = .368$
POLY	4.74 <sup>a</sup>	0.23	3.94	0.26	3.12	0.18	4.75 <sup>a</sup>	0.26	F (3) = 483.914***, $\eta_p^2 = .795$

\*\*\*p < .001, \*p < .05.

<sup>a</sup> Howell-Games pairwise comparisons: means not sharing a letter differ significantly at p < .05.

3.2. How are student teachers' diversity belief profiles associated with their orientations to teaching for diversity and social justice, and also to their experiences of diversity?

We computed series of one-way analysis of variance (ANOVA) to analyze how the profiles were associated with the student teachers' orientations to teaching for social justice (SJB), enthusiasm for teaching in the context of diversity (ENT), and experiences of diversity (EoD) (see Table 7).

In both countries, diversity belief profiles were associated with orientation to social justice (SJB) ( $F_{Ge}(3) = 51.397, p < .001, \eta_p^2 = 0.246; F_{Fi}(3) = 16.126, p < .001, \eta_p^2 = 0.114$ ) and enthusiasm for teaching in the context of diversity (ENT) ( $F_{Ge}(3) = 14.139, p < .001, \eta_p^2 = 0.082; F_{Fi}(3) = 5.156, p < .01, \eta_p^2 = 0.040$ ). Pairwise comparisons showed more closely the differences between profiles. Student teachers belonging to profiles 1 and 4 (*High polyculturalism and multiculturalism; High polyculturalism* respectively) rated their orientation to social justice and enthusiasm for teaching in the context of diversity equally high and higher than the student teachers in profiles 2 and 3 (see Table 7 for means and standard deviations). The student teachers in profile 3 (*Disengaged*) reported the lowest social justice orientation and enthusiasm. In Germany, they differed statistically significantly ( $p < .05$ ) from all other profiles while in Finland, profile 3 differed from all other profiles in social justice orientation ( $p < .05$ ), but only from profile 1 in enthusiasm ( $p < .05$ ). In Germany, experience of diversity was associated with profiles ( $F(3) = 2.161, p < .05, \eta_p^2 = 0.018$ ), but in Finland this was not the case. In both countries, the explanatory power of the profiles was strongest in regard to social justice orientation (25% in Germany and 11% in Finland), while their power to explain enthusiasm and experience of diversity it was lower.

**Table 7**  
Diversity belief profiles and orientation to teaching for social justice, enthusiasm for teaching diverse students, and experience of diversity.

	1 High POLY and MULTI		2 Moderate POLY and MULTI		3 Disen-gaged		4 High POLY		ANOVA
German	n = 116, 24%		n = 275, 58%		n = 23, 5%		n = 63, 13%		
	M	SD	M	SD	M	SD	M	SD	
Social justice	4.52 <sup>a</sup>	0.52	4.29	0.46	3.21	0.9	4.56 <sup>a</sup>	0.31	F (3) = 51.397***, $\eta_p^2 = .246$
Enthusiasm	4.22 <sup>a</sup>	0.76	3.92	0.72	3.25	1.1	4.22 <sup>a</sup>	0.7	F (3) = 14.139***, $\eta_p^2 = .082$
Experience	3.36 <sup>a</sup>	0.88	3.17 <sup>ab</sup>	0.84	2.83 <sup>b</sup>	0.72	3.21 <sup>ab</sup>	1.02	F (3) = 2.161*, $\eta_p^2 = .018$
Finnish	n = 105, 28%		n = 222, 59%		n = 35, 9%		n = 17, 4.5%		
	M	SD	M	SD	M	SD	M	SD	
Social justice	4.52 <sup>a</sup>	0.41	4.27 <sup>b</sup>	0.5	3.9	0.62	4.48 <sup>ab</sup>	0.38	F (3) = 16.126***, $\eta_p^2 = .114$
Enthusiasm	3.97	0.8	3.75 <sup>a</sup>	0.81	3.35	1.04	3.87 <sup>a</sup>	0.79	F (3) = 5.156**, $\eta_p^2 = .040$
Experience	3.27 <sup>a</sup>	0.95	3.00 <sup>a</sup>	0.97	2.86 <sup>a</sup>	0.88	2.88 <sup>a</sup>	1.22	F (3) = 2.604*, $\eta_p^2 = .020$

\*\*\*p < .001, \*\*p < .01, \*p < .05.

<sup>a</sup> Howell-Games pairwise comparisons: means not sharing a letter differ significantly at p < .05.

3.3. How do diversity beliefs manifest in student teachers' thinking?

Multiculturalist beliefs manifested in 55% of German and 78% of Finnish student teachers' answers to the open-ended survey question (see Table 8), being significantly more typical among Finnish respondents ( $\chi^2(1) = 48.390, p < .001$ ). Multiculturalism emerged in forms of merely acknowledging cultural diversity and group differences as a fact, and indicating they should be accepted or tolerated (Multi1), or believing in the value of diversity and emphasizing that it should be learned about, appreciated, celebrated, and the rights of cultural groups protected (Multi 2):

For me, cultural diversity means that there are different religions, languages, different roles that people have in a society, different customs and traditions (Finnish student teacher 1331, multi1)

Other customs, traditions, religions and culinary delights (German student teacher, 1561 multi1)

I am happy to be able to gain insights into cultures that are foreign to me and to expand my knowledge about other cultures. Of course, there are also certain areas that can seem frightening at first due to their unfamiliarity, but you can also learn something from such events. For me personally, it is important to get to know other cultures. (German student teacher, 1559, multi2)

Cultural diversity is nothing else than richness. Understanding this strengthens equality between people who come from different cultures, and step by step it will lead to a more equitable world and society (Finnish student teacher, 1333, multi2)



**Table 8**  
Manifestation of diversity beliefs in open-ended answers.

	Germany		Finland		Total		$\chi^2$ (df), p
	n = 477	%	n = 379	%	N = 856	%	
Color-blindness	53	11	71	19	124	14.5	9.906 (1) **
Blind1: Similarity and equality of all people	22	5	49	13	71	8	19.204 (1) ***
Blind2: Individuality and the value of an individual	36	7.50	29	8	65	7	.003 (1)
Multiculturalism	261	55	294	78	555	65	48.390 (1) ***
Multi1: Acknowledging diversity	139	29	191	50	330	39	40.278 (1) ***
Multi2: Appreciating diversity	162	34	165	43.5	327	38	8.199 (1) **
Polyculturalism	121	25	98	26	219	26	.027 (1)
Poly1: Interconnections and interaction between cultures	77	16	57	15	134	16	.195 (1)
Poly2: Cultural change, influences and learning	54	11	46	12	100	12	.136 (1)

\*\*\*p < .001, \*\*p < .01.

Generally, statements about diversity as richness that should be celebrated and “other/different cultures” as something that should be learned about were the most typical expressions in both countries. Polyculturalism was equally typical in both countries, but less apparent in this qualitative data than suggested by the quantitative results. Only 26% of Finnish and 25% of German student teachers expressed polyculturalist beliefs in their answers to the open-ended questions. Furthermore, we found that their answers tended to point to rather superficial forms of polyculturalism. Typically, they referred to the interconnections and interactions between cultures, indicating that people from different cultures actively interact or that an individual participates in several cultures (poly 1):

Meeting, getting to know, accepting and possibly mixing with people from different countries or cultures. (German student teacher 1566, poly 1)

For me cultural diversity means that people who have different languages, beliefs, religions, identities, and so forth are able to live together despite their differences and to interact. A person who understands the diversity of culture also understands that minorities represent the country as well and are part of its manifold culture. (Finnish student teacher 1040, poly 1)

I think a person belongs to several different groups, be they ethnic, linguistic or religious groups or related to sexual orientation. A human being is manifold and diverse cultures coexist. (Finnish student teacher 1174, poly 1)

Beliefs about (the possibility of) cultural change as well as the prospects of learning not only *about* but also *from* cultures and cultural diversity also emerged (poly 2). They were mostly related to an individual level change in perspective and broadening of horizons through learning from cultures - references to development and change in cultural groups were less common:

For me, cultural diversity implies that there are different cultures that get linked to each other when people interact. In my view, it means that the perspectives, beliefs as well as patterns of thought and behavior of people who come from different cultures get mixed and are made visible. I see cultural diversity as an opportunity to learn from other cultures, but also about my own, mirroring my culture to others. (Finnish student teacher 1308, poly 1 + poly 2)

Cultural diversity means to me that we can learn from each other and look at things in a different way that we have not perceived before. (German student teacher 1759, poly 2)

Getting to know new points of view, broadening one's horizons, changing one's perspective, but also perhaps recognizing commonalities (German student teacher 1406, poly 2)

Typically, even those student teachers who expressed beliefs of cultures getting “mixed” and referred to a change in perspective or learning from cultures, used rather essentialist phrasing – for example, referring to “my own culture” as a singular entity.

Both qualitative and quantitative data indicated that color-blindness is not a very typical diversity belief among Finnish and German student teachers. However, Finnish student teachers expressed more color-blind beliefs in their answers than did their German peers ( $\chi^2(1) = 9.906, p < .001$ ). Color-blindness appeared in two forms: as references to the irrelevance of diversity, emphasizing the similarity or equality of all people – e.g., treating everyone the same “regardless of their background” (blind 1), or as a manner of emphasizing the relevance of individual differences rather than differences between groups, and as a belief in the importance of treating everyone as individuals (blind 2):

People are accepted as they are without looking at their race, nationality, political views, religion or looks (Finnish student teacher 1323, blind 1)

The feeling of equality and the equality of every single human being, no matter what origin, age, sexuality ... (German student teacher 1484, blind 1)

It is important to see every person for who they are, not as members of a certain group or community (Finnish student teacher 1089, blind 2)

Means to me that people are all individuals in every sense of the word. That means variety. (German student teacher 1592, blind 2)

That I have to take into account the subjective perceptions of the individual student in my teaching. (German student teacher 1754, blind 2)

Color-blindness did not manifest in the data in its “strongest” forms: the student teachers did not directly challenge the relevance of group categories or emphasize the need to focus only on similarities between people. Sometimes color-blind beliefs occurred together with polyculturalist and multiculturalist beliefs, e.g., when student teachers referred to the need to appreciate and learn from cultures but also to understand the individuality of everyone.

## 4. Discussion

### 4.1. Key findings and their implications for teacher education

This mixed methods study explored German ( $n = 477$ ) and Finnish ( $n = 379$ ) student teachers' diversity beliefs (color-blindness, multiculturalism and polyculturalism). Social psychological research has reported irrefutable evidence of the implications of these different diversity beliefs in intergroup interaction. Both social psychological and educational research has shown the deficiencies of particularly color-blind but sometimes also of multiculturalist thinking as a basis for educational practices and policies (Andersen, 2003; Apfelbaum et al., 2010; Bonilla-Silva, 2015; Wolsko et al., 2000, 2006). Multiculturalist recognition and appreciation of group differences seem to be beneficial for the development of well-functioning intergroup relations when combined with the more recently identified diversity belief, polyculturalism, which emphasizes the interconnectedness and malleability of cultures (Bernardo et al., 2013, 2016; Rosenthal et al., 2015). Research on the benefits of polyculturalism in educational settings is also beginning to emerge (Schachner et al., 2021). Our findings based on quantitative data revealed polyculturalism and multiculturalism as the most typical diversity beliefs among German and Finnish student teachers. Through latent profile analysis we identified four diversity belief profiles: 1) high polyculturalism and multiculturalism, 2) moderate polyculturalism and multiculturalism, 3) disengaged, and 4) high polyculturalism. Profile 2 was the most typical in both countries. We found a strong association between diversity beliefs and student teachers' orientation to teaching for social justice: in our sample, student teachers in profiles 1 and 4 had the strongest (self-rated) social justice orientation, which indicates that polyculturalist beliefs in particular are associated with student teachers' willingness to teach for social justice.

Since diversity beliefs powerfully shape intergroup attitudes and interaction (Rosenthal & Levy, 2010), and as there is clear evidence of multiculturalism and particularly polyculturalism exerting more positive influence than others (Bernardo et al., 2013, 2016, 2017; Rosenthal & Levy, 2010), they should be targeted in teacher education aiming to support the development of teachers' intercultural competencies. Earlier research has produced some evidence of the benefits of polyculturalism in educational settings (Rosenthal et al., 2019; Schachner et al., 2021), but our results are the first to demonstrate its important implications for teachers' orientations to teaching for diversity and social justice. As the benefits of polyculturalism are well recognized, strengthening polyculturalist beliefs by teaching about the malleability and interconnectedness of and interactions between cultures by using historical examples and drawing on cultural studies (see e.g., Morris, 2015), as well as representing cultures as layered and dynamic processes rather than static entities (Dervin, 2020), are recommended practices for teacher education.

Furthermore, we endeavored to achieve a more profound and more detailed understanding of student teachers' diversity beliefs by analyzing their answers to an open-ended survey question about their personal views of cultural diversity. In this qualitative data, multiculturalist beliefs dominated while polyculturalism was clearly less apparent than in the quantitative data. Furthermore, the answers related to polyculturalism remained at a rather superficial level. Despite claims of cultures interacting and blending, cultures were spoken of in rather essentialist language. Taken together, our results indicate that student teachers may recognize polyculturalism as an ideal and are willing to agree with polyculturalist claims when they meet them. This could reflect the fact that a non-

essentialist understanding of culture increasingly appears in official educational discourses (Zilliacus et al., 2017). However, these beliefs are not well internalized as polyculturalist notions of the interconnectedness of cultures rarely appear in student teachers' written responses. Moreover, student teachers' thinking about cultural diversity is mostly shaped by multiculturalist acknowledgement and appreciation of diversity based on rather static views of culture. This finding aligns with earlier research, demonstrating that the gap between the lofty ideals of non-essentialist intercultural education and practical reality is hard to bridge since ideas of intercultural exchange and dialog remain superficial when power imbalances are not acknowledged (Dervin, 2020; Gorski, 2008, 2016). These findings also have implications for teacher education: guiding student teachers to reflect profoundly on their own diversity beliefs but also on questions of power and privilege are necessary starting points in intercultural teacher education.

Color-blindness was on a low level among the student teachers in both countries, which can be regarded as a positive finding. In Finland, color-blindness has been found to be a more typical diversity belief among in-service than pre-service teachers, which reflects a development towards more multiculturalist and interculturalist discourses in curricula and teacher education (Rissanen & Kuusisto, 2022). In Germany, multiculturalism (rather than color-blindness) has been identified as a stronger diversity belief among teachers with immigrant backgrounds (Hachfeld et al., 2011). The disadvantages of color-blindness as a primary diversity belief have been well demonstrated in earlier research: it has proven to be a very inefficient strategy for countering discrimination and racism when based on ethnocentric ideas of what "common humanity" or "shared values" entail. Individuality-focused color-blindness typically fails to acknowledge the different positionings of cultural groups in a society (Andersen, 2003; Apfelbaum et al., 2010; Bonilla-Silva, 2015). However, the emergence of color-blind beliefs as a part of more balanced diversity ideologies also including multicultural and polycultural beliefs is not a concerning finding – there are situations and contexts where a focus on the individuality and equality of all is a necessary starting point for intercultural interaction (Rosenthal & Levy, 2010). Thus, teacher education should raise awareness of the consequences of different diversity beliefs and promote understanding of the importance of their contextual and situational implementation.

We found no association between Finnish student teachers' diversity belief profiles and their experience of cultural diversity; in Germany the association was statistically significant but not very powerful. Experience of cultural diversity has commonly been identified as an important factor influencing the development of teachers' intercultural competencies (Garmon, 2004; Leh et al., 2015). However, the finding that it is not strongly associated with diversity beliefs aligns with theoretical assumptions. Diversity beliefs form lay theories that influence attention allocation and sense-making in intercultural situations. People who participate in the same situation but have different diversity beliefs may interpret social interaction in very different ways and end up with different ideals for action in spite of sharing the same aims (e.g., promoting equality) (Morris et al., 2015; Rosenthal & Levy, 2010). Furthermore, since it is typical for human beings to unconsciously seek information that accords with their lay theories and ignore observations that run contrary to their core beliefs (Plaks et al., 2005), it is likely that mere exposure to cultural diversity does not effectively change diversity beliefs. This is reflected in the fact that in this study there was very little difference between German and Finnish student teachers' diversity belief profiles and their typicality despite the fact that the context of students from Bamberg is in many ways more diverse.

#### 4.2. Limitations and avenues for future research

There are limitations to this study that should be conceded. The data were collected on teacher education courses, which may have primed the student teachers to answer according to learned ideals. Furthermore, the samples in Germany and Finland were somewhat different in terms of age and field of study. A methodological limitation is that it is hard to arrive at a comprehensive understanding of deep and complex concepts such as diversity beliefs relying on short answers. This was also apparent in the rather low kappa values of interrater reliability indicating that some cautiousness is needed in interpreting qualitative results. Qualitative research enabling a more detailed and profound analysis of teachers' diversity beliefs is needed: most research on diversity beliefs is quantitative. Due to the limitations of our data and to ensure the validity of the analysis, we avoided making excessively detailed interpretations and kept our interpretations to a general level. However, the findings of this study contribute to developing an understanding of student teachers' diversity beliefs and how they shape their orientations to teaching for diversity and social justice. They highlight the importance of mixed methods approaches for developing an understanding of teachers' thinking in an area where social desirability effects may bias responses. An interesting and necessary next step is to explore the actualization of diversity beliefs in teachers' pedagogical thinking and practice through more profound case studies and observation methods. Furthermore, the development of effective approaches in teacher education could be supported by investigating how student teachers with different diversity belief profiles respond to intercultural teacher education, as well as developing and researching interventions to strengthen polyculturalist diversity beliefs in both pre-service and in-service teacher education.

#### 5. Conclusions

This study focused on German and Finnish student teachers' diversity beliefs and found a strong association between diversity beliefs and student teachers' orientations towards social justice. Polyculturalist beliefs in particular were associated with student teachers' willingness to teach for social justice. On the basis of our results, we argue that intercultural teacher education should guide student teachers to reflect on their own diversity beliefs, raise awareness of the consequences of different diversity beliefs and strategies, and strengthen polyculturalist beliefs by teaching about the malleability and interconnectedness of cultures.

#### Declaration of competing interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

#### Data availability

Data will be made available on request.

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## Appendix 1

### Codebook

Research question: How do color-blind, multiculturalist, and polyculturalist diversity beliefs manifest in German and Finnish student teachers' thinking?

Survey question "Everyone has their own understanding of cultural diversity. What does it mean to you?"

CODES: **Blind 1, Blind 2, Multi 1, Multi 2, Poly 1, Poly 2.**

### COLOR-BLINDNESS

#### Blind 1: Similarity and equality of all people

Statements on the similarity/equality/rights of all people/individuals.

For example: Understanding other people, treating people equally who come from different cultural backgrounds, an attitude of equality/tolerance, everyone has a right to be themselves, in the context of diversity everyone needs to be treated equally, accepting people as they are, recognizing commonalities. All expressions ending with "despite/regardless of their culture/background", e.g., "everyone has the same rights regardless of their cultural background".

#### Blind 2: Individuality and the value of an individual

Statements about the importance of understanding individuality and individual differences.

For example: Every person is different, individual differences are important, all people should be seen and treated as individuals, individual treatment is important, individuality is more important than cultural background.

NOTE: The right of an individual to express/practice their culture is coded as Multi 2.

### Multiculturalism

#### Multi 1: Acknowledging difference/diversity

Fairly neutral statements about cultural diversity as a fact and acceptance of diversity:

For example: People belong to different cultures/groups, members of different cultures live/reside/work together, encountering people who belong to different cultures, acknowledging there are different cultural ways of seeing the world, tolerating/accepting cultural diversity, there are different religions/cultures/ethnicities/habits/rituals/cuisines/values etc.

#### Multi 2: Appreciating difference/diversity

Expressions indicating there is value in cultural difference/diversity or that cultures have rights and need to be treated equally, expressing personal appreciation of difference/diversity, importance of learning about cultures/diversity.

For example: Understanding cultures, accepting cultures, diversity is important, openness and respect, my way of seeing the world is not the only good one, diversity/difference as richness, the right of cultures to exist, right individuals to express their culture, promoting equality by taking account of diversity, learning about and getting to know diversity/other cultures.

NOTE: mere tolerance/acceptance is coded as Multi 1.

### Polyculturalism

#### Poly 1: Interconnections and interaction between cultures

Expressions about active interaction between cultures or

individuals from different cultural backgrounds, the participation of an individual in different cultures, a network view of culture.

For example: an individual participates in/moves between many cultures, cultures/people from different cultures interact, cultures get “mixed” and overlap, an individual draws on many different cultures, experiencing other cultures.

NOTE: if the statement is merely about the fact that people from different cultures encounter each other/individual encounters different cultures it is coded as Multi 2. Referring to the fact that there is diversity within one culture is coded as Multi 1. If the statement includes ideas of active interaction between cultures, it is coded as Poly 1.

#### Poly 2: Cultural change, influences, and learning

Expressions about individuals learning from different cultures, cultural groups learning from each other, and about the change/development of cultural groups:

Individuals who belong to different cultures learn from each other, getting new perspectives through intercultural interaction, learning from cultures, ability to look at one's culture critically, “opening eyes”, absorbing cultural influences, developing one's thinking & understanding through learning from diversity/cultures.

NOTE: learning about other cultures is coded as Multi 2 learning from and between cultures is coded as Poly 2.

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