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# Multicultural teaching competences of preservice teachers in the Netherlands: the role of previous and current interethnic contact

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## ABSTRACT

Universities offering teacher training programmes have been criticized for decades for failing to provide preservice teachers with sufficient training in multicultural teaching competences. To develop these competencies, universities are now advised to provide programs that facilitate interethnic contact between preservice teachers and pupils during internships or community-based exposure. Based on the literature, it was hypothesized that contact experiences should occur both within and beyond school settings and should extend over a prolonged period of time. This study aims to reveal the potential role of different types of interethnic contact for multicultural teaching competences among second-year preservice teachers using a repeated measures design. The findings show the crucial role of previous interethnic contact in the neighbourhood over an extended period of time on the perceived quality of multicultural teaching competences of preservice teachers.

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Teachers need multicultural teaching competences to meet the needs of the pupils they teach and to prepare pupils for life in a multicultural society. A focus on the importance of developing multicultural teaching competences in preservice teachers was initiated decades ago and is now part of teacher training curricula in several western countries. For instance, multicultural teaching has been part of the certification standards of Teacher Accreditation in the United States since 1978 and in the Netherlands since the mid-1980s, which is relatively long compared to for instance Korea where multicultural education policies has been developed since 2006 (Kim, 2021). Consequently, modules focusing on multicultural teaching competences have been part of the curriculum at teacher training universities in the United States (Lehman, 2017; Nelson & Guerra, 2013) and in teacher education programmes in the Netherlands (Leeman & Ledoux, 2003). These programmes have been criticized in the past decades, however, as they have failed to provide sufficient training in multicultural teaching competences (Gay, 2010; Landa & Stephens, 2017; Leeman & Ledoux, 2003; McAllister & Irvine, 2000; Nelson & Guerra, 2013; Spanierman

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et al., 2011). In OECD countries, 33% of the teachers feel underprepared to teach in multicultural classrooms (Schleicher, 2020; Severiens et al., 2019). Given this lack of sufficient training, scholars have provided suggestions to strengthen multicultural teaching training. Some of these suggestions relate to the key role of interethnic contact in developing preservice teachers' multicultural teaching competences. Universities are therefore advised to provide modules that facilitate interethnic contact with peers at the university (Gay, 2010, p. 149; McAllister & Irvine, 2000, p. 20) and during internships (Chisholm, 1994; Gaikhorst et al., 2017, 2020, Leeman & Ledoux, 2003; Matsko & Hammerness, 2014; Milner et al., 2003).

### *Within and beyond school settings contact*

Despite the fact that the recommendation to provide modules that facilitate interethnic contact, not much research has been conducted to examine whether such interventions actually affect the development of multicultural teaching competence in preservice teachers. Geneva Gay (Gay, 2010) states that a large number of non-migrant background preservice teachers encounter ethnic diversity in their classrooms only. These preservice teachers have sporadic interethnic encounters beyond the school setting as most preservice teachers reside in neighbourhoods that are not ethnically diverse at all. Most preservice teachers' beliefs about ethnic diversity are therefore not based on interethnic interactions beyond the school setting but based mainly on mass media (Gay, 2010) and experiences in their classrooms or at their universities. Interethnic interactions are interpreted through these possibly biased beliefs. In order to counter these biased beliefs, preservice teachers need 'multiple and varied opportunities, within and beyond school settings' (Chisholm, 1994, p. 10). This means that preservice teachers also need community-based field exposure in which they gain experience with cultural and physical settings of ethnically diverse neighbourhoods (Matsko & Hammerness, 2014; Matsko et al., 2022). This could be realized by temporarily living in a multicultural setting (Leeman & Ledoux, 2003; Matsko et al., 2022), or by a short cultural immersion experience (Wiest, 1998). The question is whether preservice teachers benefit from interethnic contacts during internships and peer meetings at the university in the same way and to the same extent as contacts in local communities. Moreover, combining internships with opportunities for interethnic contact and temporarily living in a multicultural setting implies a relatively short period of contact (Chisholm, 1994), and McAllister and Irvine (2000) claim that the development of this competency takes time and follows a number of stages (McAllister & Irvine, 2000). Based on a review of studies on process-oriented models of multicultural competency development, McAllister and Irvine (2000) state that interventions pertaining to interethnic contact may even lead to an initial resistance towards other ethnic groups after initial contact with such groups.

In short, the impact of interethnic contact on multicultural teaching competence during teacher training programmes is likely to be small, as they are not based on daily interactions and the period of the programmes is too brief. In this article, we will distinguish between the role of previous daily and school-based interethnic contacts and current internship interethnic contact experiences for multicultural teaching competency of preservice teachers. These preservice teachers are students at a university in the Netherlands with a mainly non-migrant origin population. Our aim is to reveal the

potential role of different types of interethnic contact for multicultural teaching competences of teachers.

## Literature review

### *Multicultural teaching competency*

Different approaches for dealing with diversity in education have been suggested for teachers. These approaches vary from assimilationist, colour-blind, polyculturalism to multicultural approaches (Alhanachi, 2023; Rissanen et al., 2023; Sincer et al., 2021). Where colour-blind approaches emphasize the importance of focusing on similarities between students, assimilationist approaches emphasize adaption of the culture of the receiving country, polyculturalist approaches on intergroup interaction and multicultural educational approaches emphasize ethnic and cultural differences between students (Banks, 1993; Rissanen et al., 2023; Sincer et al., 2021; Veerman et al., 2022). Given the focus on multicultural teaching competences of preservice teachers in this study, we first introduce briefly different conceptualizations and aims of multicultural education. Following this, we elaborate which specific multicultural teaching competences are mentioned in the current literature.

Scholars have developed different conceptualizations of multicultural education (C. Sleeter, 2018) that relate to different aims in multicultural education. This has led to a lack of consensus regarding the concept of multicultural education (Sincer et al., 2021; C. Sleeter, 2018). Banks conceptualize multicultural education by distinguishing five dimensions of multicultural education: (1) content integration, (2) the knowledge construction process, (3) prejudice reduction, (4) an equity pedagogy, (5) and an empowering school culture and social structure (Banks, 1993, p.5). Other authors emphasize specific aims of multicultural education such as stimulating awareness of cultural differences and recognizing these differences (Thijs & Verkuyten, 2014) to creating interethnic friendships and mutual understanding (Alismail, 2016).

The implementation of multicultural education demands the adoption of specific aims relating to multicultural education in the curriculum, teaching materials and teachers' multicultural competence (Banks, 1993). Considering the multicultural teacher competencies, three partly overlapping clusters (Lehman, 2017) are distinguished in literature (Alismail, 2016; Lehman, 2017; Spanierman et al., 2011): (1) multicultural knowledge, (2) multicultural awareness and (3) multicultural teaching skills (MTS).

*Multicultural knowledge* in general refers to (preservice) teacher's knowledge of backgrounds of and differences between cultural groups and knowledge of their own cultural background (Lehman, 2017; Pope & Reynolds, 1997; Spanierman et al., 2011). Multicultural teaching knowledge (MTK) refers to knowledge of pedagogical approaches such as cultural responsive teaching (CRT) and instruction strategies that contextualize lessons in students' lives (Spanierman et al., 2011). Lastly, MTK encompasses knowledge concerning the way in which cultural resources from different groups can be structurally integrated in all other core teaching competencies of teachers (Pope & Reynolds, 1997).

In addition to multicultural knowledge, *multicultural awareness* is also distinguished as a cluster within multicultural teaching competence (Alismail, 2016; Garmon, 2004; Pope & Reynolds, 1997; Spanierman et al., 2011). Multicultural awareness refers to the recognition

of cultural-ethnic differences (Garmon, 2004; Pope & Reynolds, 1997; Spanierman et al., 2011). In this view, attitudes and beliefs concerning multicultural education are regarded as an essential part of multicultural teaching awareness (Pope & Reynolds, 1997; Spanierman et al., 2011).

Thirdly, *MTS* are regarded as an essential part of the teacher's multicultural competences. Discussing cultural-ethnic differences (Lehman, 2017; Pope & Reynolds, 1997; Spanierman et al., 2011) is regarded as one of the multicultural teaching skill that teachers need to be able to apply in classrooms. Furthermore, being able to apply CRT (Civitillo & Juang, 2019; Gay, 2018; Spanierman et al., 2011) also is regarded as an essential multicultural teaching skill. CRT can be regarded as an extension of how teachers relate to students' daily life experiences in their teaching (Lavigne et al., 2022). CRT discusses and includes the entire curriculum and classroom climate (Civitillo & Juang, 2019). There is general consensus that CRT is a multidimensional approach that requires teachers to strengthen the cultural identities and native languages of students, and to provide space for different perspectives and multiple opportunities to learn (Civitillo & Juang, 2019). Lastly, the ability to adapt multicultural competency to a specific context (Lehman, 2017; Pope & Reynolds, 1997) and the ability to review instructional materials on ethnic bias (Spanierman et al., 2011) are regarded as essential skills in providing multicultural teaching as a teacher.

### *The role of interethnic contact*

Preservice teachers who enter teacher training programs arrive with preconceived attitudes regarding multicultural teaching, based on earlier interethnic contact (Gay, 2010). Given that only 13% of the preservice teachers in the Netherlands have a migration background (Centraal Bureau voor de Statistiek, 2022), most preservice teachers lack the experience of migration. Moreover, a considerable proportion of teachers without a migration background are likely have grown up in neighbourhoods communities alongside mostly Dutch natives due to the moderately segregated nature of cities in the Netherlands (Boterman, 2019). These preservice teachers are thus likely to have had only sporadic daily interactions with people from other ethnic backgrounds. Preservice teachers who have had such sporadic interethnic contact are likely to have biased attitudes towards other ethnic groups, which potentially slows down or hinders the development of multicultural teaching competences (Gay, 2010; Matsko & Hammerness, 2014).

While a certain proportion of preservice teachers will have had sporadic interethnic contacts, other preservice teachers without a migration background will have had previous opportunities of interethnic contact in their daily lives in neighbourhoods. For example, empirical research on interethnic contact between teenagers in the Netherlands without a migration background shows that 13% of these teenagers have at least monthly contact with peers from Turkish migration backgrounds in their neighbourhood (van Tubergen & Smith, 2018, p. 179). Based on the general notion that opportunity for contact facilitates actual contact (Blau, 1974), preservice teachers without a migration background who grew up in a neighbourhood with a relatively high proportion of migrant-origin people can be expected to have had more interethnic contacts.

Another possibility is that while growing up in a neighbourhood with a low proportion of migrant-origin people, preservice teachers may have had opportunities of preservice interethnic contact by attending diverse classrooms in high school. In line with the notion that opportunity for contact facilitates actual contact, empirical research shows that Dutch teenagers who attend schools with more opportunities for interethnic contacts actually have more interethnic friendships (van Tubergen & Smith, 2018, p. 187). However, the same study also shows that a large number of these Dutch teenagers do not attend classrooms where they have the opportunity for interethnic contact (van Tuirghen & Smith, 2018, p. 187).

Opportunities for interethnic contact during teacher education can be provided by attending ethnically diverse universities, by attending programs that stimulate interethnic peer contact (Gay, 2010, p. 149; McAllister & Irvine, 2000, p. 20), living with host families in settings of ethnically diverse neighbourhoods (Matsko et al., 2022) or by attending internships in classrooms with a high proportion of pupils with a migration background (Chisholm, 1994; Gaikhorst et al., 2017, 2020; Leeman & Ledoux, 2003; Matsko & Hammerness, 2014; Milner et al., 2003).

Matsko et al. (2022) suggest that preservice teachers who participate in programs that provide opportunities to learn about diversity, both during internships and through contact with families within the communities, express strong intentions to teach in these settings upon graduation. However, they question whether these preservice teachers, despite having opportunities to learn about diversity beyond school settings, had sufficient opportunities to apply this knowledge in their teaching (Matsko et al., 2022, p. 19).

Their study focuses on the intention to teach in these diverse settings upon graduation. However, it remains unclear whether opportunities for intercultural contact during preservice education, both within and beyond school settings (Chisholm, 1994; Matsko & Hammerness, 2014), automatically lead to the development of multicultural teaching competencies among preservice teachers.

Aside from the importance of context-specific education within and beyond school settings, the role of interethnic contact in developing multicultural competencies indicates two essential conditions: (1) Contact experiences should occur both within and beyond school settings (Chisholm, 1994; Matsko & Hammerness, 2014), and (2) the contact should extend over a prolonged period of time (Chisholm, 1994; McAllister & Irvine, 2000).

Therefore, our research question is: What is the role of the opportunities of interethnic contact in (1) the neighbourhood(s) they grew up in, (2) the secondary school they attended and (3) in the internship classroom in the development of multicultural teaching competencies among preservice teachers?

## Methodology

In this study, we collected data using a repeated measures design in which second year pre-service teachers from the Netherlands reported multicultural competence and opportunities of different types of interethnic contact.

### *Research sites and participants*

In 2022, 26% of those who live in the Netherlands were born outside the Netherlands or had at least one parent who was born outside the Netherlands (StatLine, 2024). The largest groups with a migrant background in the Netherlands are from Turkey, Morocco, Indonesia, Surinam, the Dutch Antilles or other European countries (StatLine, 2024; Veerman & Platt, 2021). Most of these people migrated to the Netherlands in the 60s and 70s as migrant-workers from Morocco and Turkey (Bruquetas-Callejo et al., 2007). The Netherlands is known for its extensive colonial history, leading to the influx of people from Indonesia in the late '40s and '50s, and the Caribbean region in the 70s (Bruquetas-Callejo et al., 2007; Veerman et al., 2022). Therefore, a part of these people have grandchildren in the Netherlands, which makes these grandchildren third-generation students (Veerman & Platt, 2021). The majority of immigrants entering the Netherlands in the last decennia were labour migrants, family migrants or refugees (Bruquetas-Callejo et al., 2007; Statistics Netherlands, 2023). The Netherlands scores relatively low on the Multicultural Policy Index compared with other European countries such as Sweden and the United Kingdom (Veerman et al., 2022). Dutch schools are highly segregated when compared to the United States (Ladd et al., 2009). Ethnicity plays a role for first-generation students, and students of which at least one of the parents or grandparents were born outside the Netherlands. 56.3% of this group of students in the third grade of secondary education also identify with another ethnic identity than the Dutch ethnic identity (Veerman & Platt, 2021). To the best of our knowledge, multicultural teaching competencies of preservice teachers in the Netherlands are not structurally measured or compared to such findings in other countries. Teacher education programs in the Netherlands rarely address ethnic differences (Gaikhorst et al., 2020), and recently graduated Dutch primary school teachers who lacked this preparation find dealing with children from different cultures challenging (Gaikhorst et al., 2017).

Given our aim to distinguish the potential role of prior interethnic contact and inter-ethnic contact during internships for multicultural teaching competencies, the university was selected on two essential inclusion criteria: (1) variation of students with different prior interethnic opportunities, (2) opportunities for internships in urban areas at primary schools with a large proportion of pupils with a migration background for students who grew up in neighbourhoods consisting primarily of a population without a migration background. Regarding the first criterium: the university is located in a small city (< 100.000 inhabitants) with few opportunities for interethnic contact set in a largely rural and ethnically uniform area. Regarding the second inclusion criterium: students who grew up in neighbourhoods consisting primarily of a population without a migration background are also provided the opportunity to choose for internships in urban areas at schools with a large proportion of pupils with a migration background. Preservice teachers are appointed to an internship school within a range of less than an hour of travel time from their weekend home, or the home in which they live during the working week. The exception to this appointment is that preservice teachers are given the opportunity to apply for an internship at a school consisting mainly of pupils with a migration background in another city more than an hour travelling from the university. They are encouraged to apply for these internships through an instruction by a teacher



from such a school at the end of their first year. Preservice teachers who apply for these internships receive free housing in that city during their internship.

The university population consists of mostly non-migrant, female preservice teachers and does not offer a stimulating interethnic peer group programme. During the first and second years, the curriculum is focused on enabling preservice teachers to adapt to the varying educational needs in primary school pupils. Multicultural teaching is therefore only mentioned sporadically, based on the personal interest of the lecturers. The teacher education curriculum at the university where this study was conducted, provides multicultural teaching as formal topic during the third year, across two courses in which two credits (out of the yearly 60) can be obtained. The first course focuses primarily on multicultural awareness and includes an internationalization trip. The second course combines a focus on multicultural awareness and multicultural teaching skills based on the theme 'celebrations'. Additionally, students with interest in multicultural teaching have the opportunity to complete their elective minor of 30 credits in the fourth year at another university that is more specialized in multicultural teaching.

Given the research aim to focus on the role of interethnic contact, second year participants were chosen to deliberately avoid the impact of multicultural teaching training at the university. Data for the two waves were obtained from 72 fulltime preservice teachers who followed both semesters in the 2021/2022 school year at a teacher training university in a central region in the Netherlands. For the first wave (W1), 102 out of the 122 preservice teachers filled in the questionnaire. Ninety-eight of the 122 preservice teachers entered the second semester of the second year.

Figure 1 shows the location of the 61 primary schools where preservice teachers followed their internship. The preservice teachers were placed in 71 different classes across these 61 primary schools. Although preservice teachers receive at the end of their study a qualification to teach at all 8 years of primary education, the preservice teachers have to choose at the beginning of their second year for a specialization for the younger or older children at primary education. Based on the preservice teachers' selected specialization, they had their internship in a first- to fourth-grade class or in a fourth- to eighth-grade class.

## Procedure

Ethical approval was provided by the Ethical Committee of Social Sciences of the Radboud University in the Netherlands under number ECSW-LT-2022-1-26-94024. Participants received information about the study and provided consent prior to participating. They actively agreed to take part in the study and had the option to withdraw their consent at any time without facing any consequences. The preservice teachers filled in the same questionnaire twice: the first after a month of education in their second year in October 2021. The second wave was a month before the end of their second year in June 2022. Preservice teachers were asked to fill in the questionnaire in October and June at the end of a lecture through an email with a link to the questionnaire. In addition, the preservice teachers' mentors provided information about the ethnic composition of the internship class in June 2022. The mentors received a link to an online questionnaire from their preservice teacher.





**Figure 1.** Location of preservice teacher internship schools.

## **Measurement instruments**

### **Independent variables**

We distinguish two types of previous interethnic contact with peers: opportunities of contact with migrant-origin students in (1) the neighbourhood(s) they grew up in, and (2) in secondary school. The proportion of persons is a widely used measurement to measure the opportunity for interethnic contact instrument (Veerman et al., 2013). Given that the proportion of persons from another ethnic group was unavailable for the preservice teachers, a retrospective self-assessment instrument on the opportunity of interethnic contact was needed. One of the items of the ‘Contact with Black Persons Scale’ of Plant and Devine (2003) provides a question that meets the criteria of being both retrospective and a self-

assessment that focusses on interethnic contact. Therefore, questionnaire items were based on the 'Contact with Black Persons Scale' (Plant & Devine, 2003). Given our focus on multicultural competences, we changed 'black persons' into 'students with a migration background' to include a range of backgrounds. For the neighbourhood question items, preservice teachers responded on a 7-point likert scale. Responses ranged from 1 (Strongly Disagree) to 7 (Strongly Agree). Preservice teachers were asked to rate their agreement with the following statement: 'The neighbourhood(s) in which I grew up consisted mainly of students without a migration background.' For the secondary school ethnic composition question items, preservice teachers responded to the following statement: 'The secondary school I attended consisted mainly of students without a migration background.' Questions regarding previous contact were answered by 71 of the 72 preservice teachers. Given that the statements were negatively formulated, a higher score means less contact opportunities. For easier interpretation, we inverted the scores, which means that a higher score means more opportunities for contact. Due to the Dutch educational system, most students start their teacher training when they are 17 or 18 years old. Some students leave their family homes to live on campus or near to university. The duration of secondary school prior to being admitted to a Dutch teacher training universities varies from 4 to 6 years depending on the route that students followed prior to entering university.

Thirdly, current interethnic contact was also identified with the (3) opportunities for contact with migrant-origin students in the internship classroom. To measure this opportunity, we calculated the proportion of students with a migration background by dividing the number of students with a migration background by the total number of students in the internship class. Following the definition of Statistics Netherlands, students with a migration background were defined as students 'of whom at least one parent was born abroad'.

### *Dependent variables*

The measurement of multicultural teaching competences was based on a translation of the Multicultural Teaching Competency Scale (MTCS) (Spanierman et al., 2011). We used a translate-retranslate procedure to use the MTCS-scale in a Dutch context. The scale consists of 16 items, with eight items on MTS and eight items on multicultural knowledge. Multicultural awareness is not available in this instrument. Based on the literature on multicultural competence, a scale that includes besides skills and knowledge awareness might be expected. Items that measure awareness were included during the development of the instrument. However, the researchers found no evidence for a third factor assessing multicultural self-awareness as a viable factor of the MTCS (Spanierman et al. 2011). Preservice teachers rated their agreement to statements about their skills and knowledge on a six-point Likert scale. Responses ranged from 1 (Strongly Disagree) to 6 (Strongly Agree). An example of an item relating to skills is: 'I integrate the cultural values and lifestyles of racial and ethnic minority groups into my teaching.' Alpha reliabilities for the Dutch context were .82 for skills and .82 for knowledge, which is slightly higher than the alpha scores of .80 and .78 in the American context (Spanierman et al., 2011).

## Data analysis

Analyses were carried out on the answers of 71 out of 72 preservice teachers who provided answers on all questions regarding the dependent and independent variables. We will first show the absolute numbers and correlations between MTS and the different types of interethnic contact. Given that former contact in the neighbourhood, high school and internship are interrelated, we used a two-step analysis strategy: First using a regression model, we combined the three types of relations in a single model. In our second model, we tested how interethnic contact was associated with MTS, controlling for MTS at the start of the second year of study. This additional variable provided the opportunity to control for potential selection bias to specific types of contact based on prior MTS. For instance, preservice teachers with lower MTS might choose to avoid internships with a higher proportion of migrant origin students based on their perceived lack of MTS. Given that MTK may facilitate MTS, we controlled for the role of prior knowledge for the development of MTS in our third model.

A visual check of the histograms of standardized residuals and scatterplots of the standardized predicted values with standardized residuals indicate that the assumptions of normality, homoscedasticity and linearity are met. The VIF's below 1.22 indicate no problems of multicollinearity.

Although preservice teachers receive a qualification to teach all 8 years of primary education upon graduation, they do specialize in teaching either younger children (grades 1 to 4) or older children (grades 5 to 8) at the start of their second year. We performed robustness checks for the different specializations. Results are provided in [Appendix A](#).

## Results

[Table 1](#) shows a mean of 2.96 for contact opportunities in neighbourhoods and a mean of 3.20 for contact opportunities during high schools, which – based on a 7-point likert scale – indicates that most of the second-year preservice teachers had few opportunities for interethnic contact in the neighbourhoods they grew up in, and the schools they attended. Standard deviations show that some of the preservice teachers had opportunities for interethnic contact in the neighbourhood in which they grew up or during high school. The mean proportion of migrant background students in the class internship is

**Table 1.** Descriptive statistics.

|  | Total |      | Contact<br>neighbourhoods < 4 |      | Contact<br>neighbourhoods > 3 |      |
|--|-------|------|-------------------------------|------|-------------------------------|------|
|  | M     | SD   | M                             | SD   | M                             | SD   |
| Contact neighbourhoods                                     | 2.96  | 1.83 | 1.98                          | .73  | 5.63                          | 1.12 |
| Contact high school  | 3.20  | 1.81 | 2.87                          | 1.50 | 4.11                          | 2.82 |
| Proportion migrant background students in class internship | 0.16  | 0.22 | 0.16                          | 0.21 | 0.16                          | 0.25 |
| MTS W1   | 3.41  | 0.78 | 3.45                          | 0.74 | 3.28                          | 0.90 |
| MTS W2   | 3.50  | 0.74 | 3.38                          | 0.73 | 3.84                          | 0.70 |
| MTK W1   | 3.67  | 0.71 | 3.70                          | 0.75 | 3.57                          | 0.58 |
| MTK W2   | 3.72  | 0.79 | 3.64                          | 0.79 | 3.93                          | 0.77 |
| N  | 71    |      | 52                            |      | 19                            |      |

**Table 2.** Correlations at W1 and W2.

|                           | 1     | 2     | 3    | 4      | 5     | 6      | 7      |
|---------------------------|-------|-------|------|--------|-------|--------|--------|
| 1. Contact neighbourhoods | 1     | .41** | .07  | .02    | .32** | -.07   | .24**  |
| 2. Contact high school    | .41** | 1     | .06  | .00    | .22   | -.07   | .07    |
| 3. Class internship       | .07   | .06   | 1    | .13    | .24*  | .13    | .13    |
| 4. MTS W1                 | -.02  | .00   | .13  | 1      | .38** | .41*** | .19    |
| 5. MTS W2                 | .32** | .22   | .24* | .38**  | 1     | .48*** | .66*** |
| 6. MTK W1                 | -.07  | -.07  | .13  | .41*** | .48** | 1      | .52*** |
| 7. MTK W2                 | .24** | 0.7   | .13  | .19    | .66** | .52*** | 1      |

Note: \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

0.16. Therefore, here is a left skewed distribution of the proportion of students with a migration background in the internship classrooms. The preservice teachers estimate their MTS to be slightly higher (mean difference = 0.09) at the end of their second year compared to the start of their second year.

Table 1 shows that 73% of the preservice teachers grew up in neighbourhoods where they did not have the opportunity to meet people with different ethnic backgrounds. Remarkably, these preservice teachers indicate at W1 that they have higher MTS and knowledge than the 19 preservice teachers who grew up in neighbourhoods with inter-ethnic contact opportunities. Moreover, a growth in skills and knowledge only appeared for the preservice teachers who grew up in more diverse neighbourhoods.

Table 2 shows a correlation of 0.41 between the opportunities of contact in the neighbourhood and during high school. Given that the correlation lies between 0.3 and 0.5, we interpret the strength as moderate (Cohen, 1992). To illustrate, preservice teachers who grew up in a neighbourhood with a higher opportunity of contact also had higher opportunities of contact during high school. However, given this moderate correlation, a number of preservice teachers will have also attended a high school with a different ethnic makeup compared to the neighbourhood in which they grew up. Moreover, the non-significant correlation (0.07) between ethnic makeup of the internship class and the neighbourhood in which the preservice teacher grew up, indicates that preservice teachers who grew up in a neighbourhood without opportunities for interethnic contact did internships at schools with a lot of opportunities for interethnic contact but were also placed at internship schools where they had few opportunities for interethnic contact.

Both interethnic contact in the neighbourhoods and interethnic contact during the internship correlate significantly with MTS at W2 but not with teaching skills at W1. Moreover, interethnic contact in the neighbourhoods also correlates with MTK at W2 ( $r = 0.32$ ), but not with this knowledge at W1. Table 2 shows no significant correlation between contact at the high school and MTS or knowledge.

For a more accurate test of the role of contact, we need to simultaneously test effects of the independent variables, and control for the context variables and the MTS at time 1. We conducted a regression analysis to this end. The results are presented in Table 3.

Model 1 in Table 3 shows that interethnic contact in the neighbourhood relates significantly to MTS ( $\beta = 0.26$ ;  $p < .05$ ) but not to MTK. The different types of contact explain 16% of the total variance of MTS. Model 2 shows that MTS at the beginning of the second year explains an additional 12% of the variation. The relation between contact in the neighbourhood and MTS remains significant and becomes significant for MTK ( $\beta = 0.27$ ;  $p < .05$ ).

**Table 3.** Standardized estimates from regression models of interethnic contact opportunities on MTS and MTK at W2.

|                        | MTS     |         |         | MTK     |         |
|------------------------|---------|---------|---------|---------|---------|
|                        | Model 1 | Model 2 | Model 3 | Model 1 | Model 2 |
|                        | $\beta$ | $\beta$ | $\beta$ | $\beta$ | $\beta$ |
| Contact neighbourhoods | 0.26*   | 0.25**  | 0.28*   | 0.24    | 0.27*   |
| Contact high school    | 0.10    | 0.11    | 0.13    | −0.04   | −0.00   |
| Class internship       | 0.22    | 0.17    | 0.14    | .11     | 0.04    |
| MTS W1                 |         | 0.35*** | 0.19    |         |         |
| MTK W1                 |         |         | 0.41*** |         | 0.53*** |
| R <sup>2</sup>         | 0.16    | 0.28    | 0.42    | 0.07    | 0.34    |

Note: \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

Model 3 shows that MTK at the beginning of the second year significantly relates to the MTS at the end of the second year ( $\beta = 0.41$ ;  $p < .001$ ). By contrast, the significant relation between MTS at the beginning of the second year becomes non-significant by the end of the second year. The R2 increases to 0.42.

Table A2 in Appendix A shows that the results of the role of contact are robust for the preservice teachers who followed the specialization of an internship in the fourth to eighth grade. Table A1 in Appendix A shows that the results were not found for the relative small amount of preservice teachers who followed the specialization of an internship in the first till fourth grade.

Discussion

In this study, we tested the role of different types of interethnic contact for MTK and skills of second-year preservice teachers in the Netherlands. We distinguished between inter-ethnic contact within and beyond school settings (Chisholm, 1994; Matsko & Hammerness, 2014), and for a prolonged period of time (McAllister & Irvine, 2000; Spanierman et al., 2011). The findings of a positive relation between contact in the neighbourhood and both MTS and knowledge for preservice teachers are in line with the notion based on process-oriented models (McAllister & Irvine, 2000). These state that previous contact with migrant-origin pupils in the neighbourhood in which they grew up plays a crucial role in the multicultural competencies of preservice teachers. Moreover, these findings provide empirical evidence for the importance of daily interethnic encounters beyond the school setting (Gay, 2010; Wiest, 1998). It is, therefore, important for preservice teachers to have experience with cultural and physical settings of ethnically diverse neighbourhoods (Matsko & Hammerness, 2014; Matsko et al., 2022).

Preservice teachers who grew up with interethnic contact experience report lower multicultural teaching competence at W1 compared to preservice teachers who had no opportunities for interethnic contact in the neighbourhood. The results show the awareness of a lack of multicultural teaching competence preservice teachers who grew up in more diverse neighbourhoods at W1 and an increase of MTS and knowledge during their second year. For the preservice teachers without interethnic contact experience, the story goes the opposite: they think that they have higher skills and

end up at the end of the second year with lower skill levels. A possible explanation is that the preservice teachers who grew up without interethnic contact experience become later aware of a lack of multicultural teaching competence. The preservice teachers with contact experiences who were more aware of their lack of multicultural teaching competence at W1, know better what they should develop and show a growth of competences during their second year. The growth of the multicultural teaching competence of this group during the second year is interesting, given that multicultural teaching was not a formal topic of the curriculum at the university during the second year.

Consistent with these findings, our study reveals a positive association between the neighbourhood and MTS specifically at the end of the second year, rather than at the beginning. This discrepancy could be attributed to the self-assessment instrument employed in our research. Consequently, the convergence of two factors – preservice teachers with limited interethnic contact higher teaching skills at the beginning of the second year and the observed relationship occurring solely at the end of the second year – suggests that individuals who were raised in neighbourhoods with minimal interethnic interactions may tend to overestimate their multicultural teaching abilities early in the second year.

This study shows no relationship between the proportion of migrant background students in the internship classrooms with MTK and skills. Conclusions regarding the non-significant role of classroom ethnic composition during preservice teachers' internships need to be made with caution. Firstly, the results might be biased by the left skewed distribution of the proportion of students with a migration background in the internship classrooms. That is, partly due to the location of the university, a relatively low number of students experienced classrooms with a high opportunity of interethnic contact during the internship. A second possible explanation for the non-significant relations between interethnic contact experiences and MTS and knowledge is that these experiences were not explicitly combined with reflections by preservice teachers on the consequences of these experiences for their MTS. Deep level self-reflection on interethnic experiences is regarded as important for reframing ideas about multicultural teaching (Leeman & Ledoux, 2003; Wiest, 1998).

Finally, this study shows a positive relationship between MTK at the beginning of the second year and MTS at the end of the second year. These results are in line with the integrated teaching competences model which states that teaching skills and knowledge partly overlap (Spanierman et al., 2011). The results suggest the importance of a focus on MTK at an early stage of the study. However, more measurement points and a larger research population are needed to provide more insight into the direction of this overlap between MTS and knowledge over time.

## Conclusion

This study examined the role of different types of interethnic contact for preservice teachers' multicultural teaching competences. Results show the importance of previous interethnic contact in the neighbourhood for perceived multicultural teaching competences for preservice teachers.



### *Limitations*

The MTS were measured with a self-report instrument. A number of studies (Debnam et al., 2015; C. E. Sleeter, 1992) show a mismatch between self-assessed multicultural competences and the observed multicultural competences. Therefore, it is important to recognize that self-reported MTS may be overestimated due to social desirability bias (Debnam et al., 2015), or underestimated due to awareness of the complexity of the skills based on own experiences. Another point to consider is that no measures of short interethnic contact beyond school were included – though this study does combine measures on within and beyond school interethnic contact with different durations. Results regarding the role of interethnic contact in the neighbourhood were found for the whole sample but were only robust for the group of preservice teachers who followed the specialization for the fourth to eighth grade. No conclusions could be drawn for the preservice teacher group with the first- to fourth-grade specialization due to the small number of preservice teachers partaking in this specialization.

### *Implications*

In the past decades, universities have been advised to stimulate interethnic contact to strengthen multicultural teaching competences of preservice teachers. Preservice teachers differ in their former interethnic contact experiences and MTS. Therefore, uniform cultural immersion projects are likely to have different effects on preservice teachers with different previous interethnic contact experiences in their neighbourhoods. This calls for differentiation in multicultural teaching programs for preservice teachers with different previous interethnic contact experiences.

Given the role of prior interethnic contact on multicultural teaching competency of preservice teachers, it is suggested that the multicultural teaching competency of the entire Dutch teacher population be strengthened by developing policies and campaigns to encourage students with prior interethnic contact to enrol in teacher training universities.

Although most interethnic contact interventions aimed at strengthening multicultural teaching competences of preservice teachers are focused on interethnic contact at the university or during an internship, it is important to acknowledge that teachers spend a relatively short time of their lives as preservice teacher.

Future research should focus also on observed instead of only self-reported MTS of preservice teachers. Moreover, the MTK of preservice teachers could besides self-reports be measured by multicultural knowledge tests (Dursun et al., 2021). In addition to examining the role of long-term interethnic contacts within educational settings, research on short-term interethnic contact programs outside of school could provide valuable insights for universities. Specifically, understanding the potential role and conditions, including the importance of deep self-reflection, can enhance the development of multicultural teaching competence among preservice teachers.



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## Disclosure statement

No potential conflict of interest was reported by the author(s).

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Appendix A

**Table A1.** Standardized estimates from regression models of interethnic contact opportunities on MTS and MTK at W2 for specialization first grade till fourth grade.

|                        | MTS     |         |         | MTK     |         |
|------------------------|---------|---------|---------|---------|---------|
|                        | Model 1 | Model 2 | Model 3 | Model 1 | Model 2 |
|                        | $\beta$ | $\beta$ | $\beta$ | $\beta$ | $\beta$ |
| Contact neighbourhoods | 0.06    | −0.03   | 0.21    | −0.05   | 0.07    |
| Contact high school    | −0.09   | 0.14    | −0.07   | 0.05    | 0.05    |
| Class internship       | 0.34    | 0.34    | 0.27    | 0.16    | 0.11    |
| MTS W1                 |         | 0.41    | 0.04    |         |         |
| MTK W1                 |         |         | 0.68*   |         | 0.52**  |
| R <sup>2</sup>         | 0.13    | 0.25    | 0.58    | 0.03    | 0.28    |

Note: \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$   $N = 18$ .

**Table A2.** Standardized estimates from regression models of interethnic contact opportunities on MTS and MTK at W2 for specialization fourth grade up and till eighth grade.

|                        | MTS     |         |         | MTK     |         |
|------------------------|---------|---------|---------|---------|---------|
|                        | Model 1 | Model 2 | Model 3 | Model 1 | Model 2 |
|                        | $\beta$ | $\beta$ | $\beta$ | $\beta$ | $\beta$ |
| Contact neighbourhoods | 0.30*   | 0.30**  | 0.31*   | 0.33*   | 0.33*   |
| Contact high school    | 0.08    | 0.07    | 0.12    | 0.09    | 0.05    |
| Class internship       | 0.10    | 0.10    | 0.08    | 0.07    | 0.00    |
| MTS W1                 |         | 0.40*** | 0.26**  |         |         |
| MTK W1                 |         |         | 0.32**  |         | 0.53*** |
| R <sup>2</sup>         | 0.18    | 0.33    | 0.41    | 0.10    | 0.38    |

Note: \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .;  $N = 53$ .