frontiers | Frontiers in Education

TYPE Original Research
PUBLISHED 07 June 2024
DOI 10.3389/feduc.2024.1352796

OPEN ACCESS

EDITED BY
Lydiah Nganga,
University of Wyoming, United States

REVIEWED BY
Sapna Thapa,
Metropolitan State University, United States
Heidi Lene Maibom,
University of Cincinnati, United States

*CORRESPONDENCE
Maike Pöhler
✉ maike.poehler@fu-berlin.de

RECEIVED 08 December 2023
ACCEPTED 27 May 2024
PUBLISHED 07 June 2024

CITATION
Pöhler M, Briese FJ and Kinder A (2024) "If I were the mother...": fostering perspective taking in German teacher education. *Front. Educ.* 9:1352796. doi: 10.3389/feduc.2024.1352796

"If I were the mother...": fostering perspective taking in German teacher education

Maike Pöhler*, Fiona J. Briese and Annette Kinder

Psychology of Learning, Department of Education and Psychology, Freie Universität Berlin, Berlin, Germany

Higher perspective taking skills are associated with better social functioning and improved social relationships. Generally, teachers are willing to take the perspective of their students, but it is unclear whether the same is true for the perspective of parents. As communication and conflicts with parents are pervasive, the motivation and willingness to adopt the perspective of parents in counseling situations should be promoted during university teacher training. Therefore, we investigated the promotion of perspective taking among teachers in training and focused mainly on perspective taking toward parents. We developed a case-based learning task in which teachers in training from Freie Universität Berlin ($N = 515$) prepared for a fictitious upcoming consultation with a mother about her son. Because it is unclear if direct instruction for perspective taking is necessary in order to promote it, we also used indirect instruction to investigate whether preparing for the consultation under these instructions fostered the willingness to adopt the perspective of students and parents. In the direct instruction participants were directly told to take the perspective of the fictitious mother when evaluating and developing formulations for the consultation. The indirect instruction did not mention the concept of perspective taking but asked participants to focus on the comprehensibility of the formulations. We obtained three measures: the willingness to take a perspective, the attitude toward another person, and the emotional and empathic language used in written texts. With our main result we demonstrated that the willingness to adopt the perspective of both students and parents could be significantly promoted by both instructions. We further demonstrated that a higher willingness to take another's perspective is associated with a more positive attitude toward the mother, as well as increased positive emotions and empathic concern. Additionally, we replicated results of a previous study showing a generally higher willingness to take the student perspective prior to the intervention. Results are discussed regarding the benefits of promoting perspective taking, especially toward parents, in teacher education.

KEYWORDS

perspective taking, parents counseling, teacher education, social emotional competence, willingness, attitude, emotions, empathy

1 Introduction

In this study, we investigated the promotion of perspective taking among teachers in training. In particular, we focused on perspective taking toward parents, firstly because it is a primary responsibility of teachers to regularly communicate and consult with parents, which is also cited by teachers as a major stress factor (Lawrence-Lightfoot, 2003; Unterbrink et al.,

2008; Mach-Würth, 2021, p. 21), and secondly, because of the lack of studies in international research that examine the promotion of perspective taking toward parents.

While teacher education has traditionally emphasized academic competencies, promotion of social–emotional competencies in teachers is moving to the forefront of international discussions (Aspelin and Jonsson, 2019; Knigge et al., 2019). Perspective taking is an important social–emotional competence (Gehlbach, 2011; Knigge et al., 2019; Gehlbach et al., 2022, p. 2) and can have significant benefits. Stronger perspective taking skills are associated with better social functioning and improved social relationships (Davis, 1983, p. 115; Gehlbach et al., 2022, p. 4). In addition, perspective taking can promote a more positive attitude toward others, foster empathic emotions toward others, and reduce stereotypes (Davis et al., 1996; Batson et al., 1997; Galinsky and Moskowitz, 2000; Todd et al., 2012a,b; Sherman et al., 2020). All of this underscores the relevance of promoting perspective taking in the field of teacher education.

As we are not aware of any intervention that effectively promotes teachers' perspective taking toward parents, we developed a learning task, inspired by a real scenario of a student with learning difficulties and his mother. In this task, teachers in training are instructed to prepare themselves for an upcoming fictitious consultation with the mother. When the task was used in previous experimental studies and perspective taking was explicitly mentioned in the instructions, participants' perspective taking was significantly enhanced (Pöhler et al., 2023). In the current study, we aimed to replicate these findings using a different experimental design. Participants were either directly or indirectly instructed to adopt the perspective of the student's mother. Most existing studies have focused on the effects of directly instructed perspective taking (Davis et al., 1996; Batson et al., 1997; Galinsky and Moskowitz, 2000; Vorauer and Sucharyna, 2013; Eyal et al., 2018; Sherman et al., 2020). To date, there has been no research that has investigated whether it is necessary to directly instruct perspective taking in order to promote it. Using a pre-post intervention design, we investigated whether our learning task is suitable for promoting perspective taking, especially toward parents, under these two instructions. To measure perspective taking, we surveyed the willingness to take the perspective of students and parents. To measure additional variables that are closely related to perspective taking and that are important for successful interpersonal relationships, we also surveyed the attitude toward another person, and the emotional and empathic language used in texts written by the teachers in training. In addition, we investigated whether the willingness to take the students' perspective is generally greater than to take the parents' perspective, as suggested by previous research (Pöhler et al., 2023), by comparing these two variables before the intervention.

2 Theoretical background

2.1 Perspective taking

The social–emotional competence of perspective taking is responsible for satisfactory interpersonal relationships and much of the social performance of the human species (Davis et al., 1996). Perspective taking can be defined as "[…] a cognitive attempt to consider another's viewpoint" (Longmire and Harrison, 2018, p. 894). Research on perspective taking dates back to Piaget (1932) and Mead (1934) and positive effects of perspective taking have been studied extensively in the fields of cognitive psychology, social psychology, and personality psychology. Social psychological studies are particularly relevant for our research, as they show that it is possible to intentionally induce perspective taking in a research context (e.g., Batson et al., 1997; Galinsky and Moskowitz, 2000; Berthold et al., 2013). Many studies have demonstrated that perspective taking promotes a more positive attitude toward out-group members, empathic emotions, altruism, and that it reduces stereotypes and the likelihood of interpersonal aggression (Underwood and Moore, 1982; Davis et al., 1996; Batson et al., 1997; Galinsky and Moskowitz, 2000; Todd et al., 2012a,b; Berthold et al., 2013; Sherman et al., 2020). Perspective taking helps to see past one's own egocentric view and to adjust behavior according to the expectations of others. Consequently, perspective taking can simplify communication and interaction between individuals and can lead to greater concessions in situations where negotiation is required (Schmitt and Altstötter-Gleich, 2010; Gehlbach et al., 2015; Gerich et al., 2015; Gartmeier, 2018). However, it takes mental effort to actively engage in perspective taking. Without perspective taking training, people tend to avoid cognitive load when thinking and therefore rely on stereotypes, first impressions, or simple heuristics (Markman et al., 2009, p. 298).

2.2 Teachers taking the perspective of parents

Counseling expertise is regarded as an important part of teachers' professional competence (Epstein and Sanders, 2006; Gerich et al., 2015) and perspective taking is an important part of counseling expertise (Gerich et al., 2015). However, there are few empirical studies on the specific promotion of perspective taking in teacher education (Goeze et al., 2013, 2014; Gehlbach et al., 2022). Research has focused on perspective taking toward students or teachers, addressing teaching competencies and interactions with students in the classroom (Lane-Garon, 1998; Goeze et al., 2013, 2014; Knigge et al., 2019; Abacioglu et al., 2020; Gehlbach et al., 2022). For example, Knigge et al. (2019) considered perspective taking and empathic concern to be part of teachers' social–emotional competence and were able to successfully promote teachers' empathic concern (but not perspective taking) toward students through a video-based learning program. To the best of our knowledge, there is no research on perspective taking that addresses communication with parents or the parent-teacher relationship. However, successful interpersonal relationships, including effective collaboration with students and parents, are associated with high job satisfaction and may contribute to teacher well-being (Unterbrink et al., 2008; Rothland, 2013, pp. 62, 177). When a teacher is unable or unwilling to consider the parent perspective, it can lead to shortcuts in thinking that save time and cognitive load but with costly mistakes (Gehlbach, 2011, p. 314). Misunderstandings and conflicts between parents and teachers can result from ineffective communication, and in the long run, a negative parent-teacher relationship emerges, which can have a significant impact on students' academic achievement (e.g., Fu et al., 2022). It is conceivable that for children with learning disabilities, the quality of the parent-teacher relationship is particularly important as parents and teachers are required to work together to develop tailored support strategies that address the unique needs of these students and to help

them succeed academically and social–emotionally (Mann et al., 2024). The consequences of not considering the parent perspective and a poor parent-teacher relationship can be particularly detrimental, leading to a negative spiraling school career. Therefore, successful interpersonal relationships can serve as an important resource in the teaching profession, and perspective taking can support the formation of positive relationships (Gehlbach, 2010; Schmitt and Altstötter-Gleich, 2010; Gerich et al., 2015; Gartmeier, 2018). Improving relationships with parents is especially beneficial, as teachers rate communication with parents as a major source of stress (Lawrence-Lightfoot, 2003; Unterbrink et al., 2008; Mach-Würth, 2021). Conversations between parents and teachers are particularly challenging, as parents and teachers often have different goals and negative attributions toward parents are prevalent (Hornby and Lafaele, 2011). Therefore, in the current study with teachers in training, we mainly focus on perspective taking toward parents.

In two previous studies, involving a total of 23 seminar groups, we investigated whether teachers' willingness to take the perspective of parents and students could be promoted by using the same case-based learning task as in the current study. In study 1, we used an intervention control group design and participants were teachers in training in a master's program (as in the current study). In study 2, we used a pre-post intervention design, and participants were novice special education teachers. Taken together, the results of the two studies suggest that working on the learning task significantly increased the willingness to take someone's perspective, both with regard to students (study 2) and parents (study 1 and 2).

In addition, participants in study 1 showed a significantly greater willingness to take the student perspective than the parent perspective. A reason for this finding may be that teachers in training know that they will be interacting with their future students on a daily basis, whereas they expect interactions with parents to occur much less frequently. Therefore, they probably consider the student perspective more important. Moreover, previous research shows that teachers tend to have a more reserved attitude toward parents, anticipating more conflict with parents (Lawrence-Lightfoot, 2003; Unterbrink et al., 2008; Hornby and Lafaele, 2011; Mach-Würth, 2021). This could also apply to teachers in training and could have additionally reduced participants' willingness to take the parent perspective.

It must be noted, though, that this general preference for the student perspective did not occur among the novice special education teachers in study 2 (Pöhler et al., 2023). This difference between the two studies may result from special education teachers working more closely with parents and already having experienced the benefits of taking their perspective.

2.3 Instructing and measuring perspective taking

How can perspective taking be instructed in an experimental setting? Perspective taking can be seen as a combination of two simultaneous cognitive processes (Galinsky and Moskowitz, 2000), an automatic and unconscious process and a controlled and conscious process. The conscious and controlled process can be promoted within an experimental setting through direct instructions to engage in perspective taking. The effectiveness of this direct instructions, for example, before an experimental intervention, has been demonstrated in numerous studies (Davis et al., 1996; Batson et al., 1997; Galinsky and Moskowitz, 2000; Vorauer and Sucharyna, 2013; Eyal et al., 2018; Sherman et al., 2020). It remains to be seen whether using more indirect instructions, that do not mention perspective taking explicitly, will have similar effects. With these kinds of instructions, the possible influence of social desirability on a self-reported measure of perspective taking may be reduced. As far as we know, there are no studies using indirect instructions and investigating whether it has the same effect as directly instructing participants to take the perspectives of others. Previous studies have usually compared "perspective taking" instructions with "stay objective" instructions (McAuliffe et al., 2020). In one of our previous studies we compared a direct perspective taking instruction with a neutral instruction, that did not refer to perspective taking ("Verify which phrase is the best phrase"). We showed that participants in the direct perspective taking group showed a significantly greater willingness to take the parents' perspective, compared to the neutral instruction group and also a wait control group. However, there was no significant difference in the willingness to take the students' perspective (Pöhler et al., 2023). We concluded that it may be necessary to directly instruct perspective taking in order to promote it. At the same time, we cannot rule out the possibility that our results are biased by social desirability. Furthermore, participants reported a reduced learning pleasure when the task was performed under the direct perspective taking instruction (Briese et al., 2022). This may be because the perspective taking instruction is cognitively more demanding than the neutral instruction. This is an impetus to look for alternative instructions that similarly promote perspective taking but are less cognitively demanding.

How can we measure perspective taking itself and variables related to perspective taking in an experimental setting? In the following, we describe three different ways to do so. The willingness to take another person's perspective, the attitude toward a person, and emotional and empathic language are all variables that have been shown to be impacted by perspective taking instructions (e.g., Davis et al., 1996; Batson et al., 1997; Galinsky and Moskowitz, 2000; Gehlbach, 2010; Berthold et al., 2013; Tuller et al., 2015; Sherman et al., 2020; Pöhler et al., 2023).

2.3.1 Willingness to take another person's perspective

Willingness and motivation to adopt the perspective of another person is a necessary stage in the process of perspective taking (Gehlbach, 2017; Gehlbach and Mu, 2022; Gehlbach et al., 2022). Willingness is essential for being open to new ideas or thoughts, being aware that other points of view may be different from one's own, and being able to admit that a personal belief might be wrong (Loughran, 1996; Zeichner and Liston, 1996). In our study we distinguish between the *ability* and the *willingness* to take another perspective. The ability of perspective taking is based on a cognitive process that is necessary to understand what the other person might think or feel. The willingness to take another perspective is a motivational prerequisite for this cognitive process. Competency definitions and models from educational research emphasize motivational prerequisites that enable the application of cognitive abilities (e.g., Weinert, 2014; Blömeke et al., 2015). Accordingly, a cognitive ability can only be used successfully if there is a willingness to do so. The promotion of motivational prerequisites in teacher education has been emphasized, yet there

have been only few studies on this topic (Baumert and Kunter, 2006; Lehmann-Grube et al., 2019; Zaruba et al., 2019). In the current study, we measure the *willingness* to take another person's perspective as an important prerequisite of perspective taking in general.

2.3.2 Perspective taking and attitude

Perspective taking can foster positive attitudes toward individuals and toward the entire group the individual belongs to (Davis et al., 1996; Vescio et al., 2003; Tuller et al., 2015; Manohar and Appiah, 2016). This is also true for persons with opposite opinions to their own and members of a potential out-group, who are typically evaluated negatively, as several studies have shown (Galinsky and Moskowitz, 2000; Berthold et al., 2013; Tuller et al., 2015). Galinsky and Moskowitz (2000) and Berthold et al. (2013) conducted experiments in which out-group members were evaluated based on a number of positive traits. The authors demonstrated that receiving the perspective taking instruction led to a more positive attitude toward out-group members, compared to a control group that did not receive that instruction. For teachers it is important to have a positive attitude toward parents in order to work together in a trusting manner and to achieve the same goal of social and academic success for students (Dor and Rucker-Naidu, 2012; Gartmeier, 2018; Fu et al., 2022). It is therefore worthwhile to measure attitude, firstly because the attitude toward a person can be positively influenced by instructed perspective taking, and secondly because promoting positive attitudes toward parents is an important goal in its own right. Providing interventions and training in perspective taking through induced instruction, and consequently promoting a greater willingness to use perspective taking, may lead to more positive attitudes and reduced conflict in parent-teacher interactions.

2.3.3 Perspective taking, emotions and empathy

Previous research has shown that induced perspective taking leads to more positive emotions and higher empathic concern toward the perspective taking target (Davis, 1980; Batson et al., 1997; Ebert et al., 2020; McAuliffe et al., 2020; Sherman et al., 2020). Perspective taking is often described as a cognitive form of empathy, while empathy is described as an affective form of perspective taking (Underwood and Moore, 1982; Preston and de Waal, 2002; Roth et al., 2016; Longmire and Harrison, 2018, p. 895). A strong correlation between perspective taking and empathy appears to be widely accepted. Sherman et al. (2020) discovered that participants provided with an instruction to adopt the perspective of a Native American used more emotion and empathic language than participants in control and perspective taking suppression groups. Ebert et al. (2020) coded letters written by college students to their grandparents for the presence or absence of empathic emotions. Quantifying positive emotions and empathic concern by analyzing the linguistic expression in written texts seems promising, as it may be less biased by social desirability than self-reported emotions and empathy. In the context of social interactions between teachers and parents, promoting positive emotions and empathic concern toward parents is an important goal (Sheldon and Epstein, 2002; Cook et al., 2018; Gartmeier, 2018; Fu et al., 2022). Because emotions and empathy can be fostered by instructed perspective taking, it seems valuable to use them to evaluate our intervention.

3 The current study

In this study, we used a learning task inspired by a real case of a student with learning difficulties and his mother. The learning task was to prepare a fictitious meeting with the mother. The aim of this meeting was to communicate the results of two intelligence tests and to discuss possible support measures for the student. The learning task focused on the mother, either on taking her perspective or on effectively communicating with her (depending on the instruction group). The same learning task had already been used in a previous study with teachers in training, which showed that their willingness to take the parents' perspective could be enhanced by combining the task with an explicit perspective taking instruction (Pöhler et al., 2023).[1] However, it is possible that the explicit instruction led participants to perceive perspective taking as a social norm. Thus, the finding that perspective taking increased may have been biased by social desirability. Therefore, in the current study, we included a second instruction in our study design, in which perspective taking was not mentioned during the learning task. Instead, this instruction referred to the comprehensibility of the sentences addressed to the mother. Since the comprehensibility of a sentence depends on the person receiving the sentence, the instruction still referred to the mother and solving the task required taking her perspective, at least to some extent. However, as perspective taking was not mentioned in this condition, it is unlikely that the participating teachers in training felt compelled to report a greater willingness to take someone's perspective after working on the learning task. If the effect in the previous study was due to social desirability rather than a genuine increase in the willingness to take the parents' perspective, then indirect instructions should have no effect at all.

The willingness to take the perspective of parents, and also of students are our main dependent variables in the current study, as they were measured both before and after the intervention. Even though only the mother is present in the fictitious meeting and only her perspective is asked to be considered, we decided to measure the willingness to take the student's perspective as well, as the student is a main actor in this learning task as well as in the general work of teachers. Furthermore, we can compare the results of the student and parent scale with our previous results and also with each other to see if there is a general difference between the willingness to take the student's or parent's perspective (see 3.1.3). Because our previous findings were based on a self-reported willingness to take someone else's perspective, we included other variables in the current study that are important in social interaction and are related to perspective taking to some extent: Firstly, the attitude toward the mother of the fictitious student and secondly, the emotional and empathic language used in texts written by the teachers in training (which also referred to the mother). These variables were post-intervention measures. As perspective taking was not mentioned when obtaining these variables,

1 In this previous study, participants were asked to take different perspectives in the fictitious meeting: the perspective of the mother, the student, or the teacher. Only the willingness to take the parents and students perspective was measured. The willingness to take the student's perspective could not be enhanced by combining the task with an explicit perspective taking instruction.

they were unlikely to be biased by social desirability to the same extent as self-reports of perspective taking. If these variables correlate highly with the self-reported willingness, our previous results and the effect of our learning task on fostering perspective taking is strengthened. The variables and the related research questions are described in turn below.

3.1 Self-reported willingness to take the perspective of students and parents

Self-reported willingness was measured before and after the learning task. We had three hypotheses for the self-reported willingness.

3.1.1 Effect of the learning task (pre versus post)

Using a repeated measures design, we hypothesized that participants would, on average, show a significant increase in their willingness to take the parent perspective. It is unclear whether participating in our learning task increases the willingness to take someone else's perspective in general, or just specifically increases the willingness to take the parents' perspective. Therefore, we do not know whether the willingness to take the students' perspective is also affected. Although the perspective of the fictitious student is not addressed (either directly or indirectly), it is important to note that the student is also a main actor in the learning task.

3.1.2 Instruction-effect

Furthermore, we compared two groups that were instructed differently and examined how direct and indirect instructions increased participants' willingness to take students' and parents' perspectives. As the effects of direct versus indirect instruction have not been investigated in previous research, it is unclear whether they differ. The finding that indirect and direct instruction have similar effects on perspective taking would strengthen the result of our previous study as it rules out an interpretation in terms of social desirability (see above).

3.1.3 General difference in willingness to take the student versus parent perspective (pre)

We were interested in the general characteristics of perspective taking among teachers in training. In our previous research, we have demonstrated that there is a general difference, with master's level teachers in training being more willing to take the student perspective than the parent perspective (see Study 1 in Pöhler et al., 2023). For this current study with the same group of participants, we would expect identical results. To our knowledge, there are no further studies that have examined the difference in perspective taking toward students and parents. Therefore, in the current study, we used the pre-intervention data to examine this general difference.

3.2 Attitude toward the mother

How does the learning task affect the evaluation of the student's mother? Since there is no pre-measurement, only the scores themselves can provide cues for interpretation. Studies by Galinsky and Moskowitz (2000) and Berthold et al. (2013) with university students also used a 7-point scale to rate members of an out-group on certain attributes, and the out-groups were rated on average above 4.3 (Berthold et al., 2013) and above 4 (Galinsky and Moskowitz, 2000), with higher scores indicating more positive evaluations. Based on this, we would consider scores above 3.5 on our 7-point scale to be positive. We assumed that the mother would be evaluated positive after completing the learning task, with mean scores in the trait rating greater than 4. We had two hypotheses for the attitude variable.

3.2.1 Instruction-effect

As perspective taking instructions can foster positive attitudes toward individuals (Davis et al., 1996; Galinsky and Moskowitz, 2000; Vescio et al., 2003; Berthold et al., 2013; Tuller et al., 2015; Manohar and Appiah, 2016), participants in our study may show a more positive attitude in the direct instruction group (which clearly and directly asks to take someone's perspective) than in the indirect instruction group. It is also possible, however, that participants who are instructed to prepare for effective communication with a parent spontaneously adopt their perspective. In that case, the indirect instructions may promote a similarly positive attitude.

3.2.2 Relationship between attitude and willingness to take the parent perspective

Previous research has shown that interventions instructing to take a person's perspective also have a positive influence on the attitude toward that person (e.g., Galinsky and Moskowitz, 2000; Berthold et al., 2013; Tuller et al., 2015). Thus, there seems to be a positive relationship between the perspective taking and attitude. Therefore, we hypothesized that there is a positive correlation between participants' attitudes toward the mother and their willingness to take the parent perspective. However, it is unclear whether this variable also correlates with the self-reported willingness to take the *students'* perspective, as this group is not addressed in the trait rating scale.

3.3 Emotional and empathic language

Previous studies by Ebert et al. (2020) and Sherman et al. (2020) have shown that texts written by participants can reflect the degree of perspective taking. In our study we adopted this idea and assessed each text regarding three variables: positive emotions, negative emotions, and empathy. We had two hypotheses regarding these variables.

3.3.1 Instruction-effect

According to previous research, inducing perspective taking leads to more positive emotions and higher empathic concern toward the perspective taking target (Davis, 1980; Batson et al., 1997; Ebert et al., 2020; McAuliffe et al., 2020; Sherman et al., 2020). If the direct instructions foster perspective taking to a greater extent, texts from the direct instruction group may contain more positive emotional and empathic language and less negative emotional language than texts from the indirect instruction group.

3.3.2 Relationship of emotional and empathic language and the willingness to take the parent perspective

Moreover, we were interested in the relationship between emotional and empathic language in texts and the self-reported

willingness to take someone's perspective. Previous research indicated a positive effect of perspective taking on empathic concern for others (see section 2.3.3; e.g., Davis, 1980; Batson et al., 1997; McAuliffe et al., 2020) and an increase in emotional language through perspective taking instructions (Sherman et al., 2020). Therefore, we assumed that all three text variables would correlate with the self-reported willingness to take the parent perspective. While we assumed that positive emotion and empathy positively correlate with the willingness to take the parent perspective, we assumed that negative emotion negatively correlates with this scale. As argued above, with respect to the attitude toward the mother, it is unclear how emotions and empathy toward the mother correlate with the self-reported willingness to take the student perspective, as parents and students belong to different groups. It is possible that the construct of perspective taking is not group specific, and therefore affects not only attitude, emotions, and empathy toward the mother but also the willingness to take the perspective of students. In this case, the patterns of correlation would be the same for perspective taking toward students and parents.

4 Methods

4.1 Material: the learning task

Since 2015, the German federal and state governments have been supporting reforms in teacher education with their joint initiative "Qualitätsoffensive Lehrerbildung (2023)". The development of the learning task was supported by the K2teach project (K2teach, 2023), which is part of this initiative. We started in 2019 and interviewed special education teachers from Berlin regarding cases they considered to be exceptional and complex involving a child with special educational needs. Based on these interviews a case story was developed that seemed particularly stimulating in terms of reflecting on different perspectives. The learning task was designed for a 90-min digital seminar in the master's program for teacher education at the Freie Universität Berlin. It has been used for more than 3 years in teacher training at the Freie Universität Berlin and has also been adapted for prospective teachers in their year of practical training with a focus on special education in Berlin. Since then, the learning task has been revised and reduced in complexity.

4.2 Learning task and instructions

Participants worked on a task sheet about a fictitious upcoming meeting with the student's mother, regarding a renewed recommendation for special education services. The task sheet contained phrases addressed to the mother, followed by one of two different instructions (direct versus indirect). Regardless of the instruction, the main task for the participants was to determine which of the suggested phrases or specific wordings would be appropriate or inappropriate to use in this meeting and to rephrase accordingly. Our goal was to make participants aware of their wording and the effect of their wording on the addressee. The phrases suggested on the task sheet were intentionally controversial and debatable (e.g., "The results have steadily improved over the past few years. However, the results of the last two tests are still not very good. Most of the children are doing better here."). Phrases included the communication of IQ test results and selected supports for the student that required the mother's help (for a detailed description of the learning task see Briese et al., 2022). The suggested phrases were identical for both groups.

4.2.1 Direct instruction

This instruction was designed to directly promote perspective taking. It was inspired by the Six Thinking Hats method (De Bono, 2000) and is also based on the direct instruction for perspective taking established in social psychological research (e.g., Galinsky and Moskowitz, 2000). Participants were instructed to imagine that they are wearing the "hat" of the student's mother (see Table 1). The "hat" was intended to represent a person's mental and emotional perspective. By taking the perspective of the mother and wearing her "hat," the participants should become aware of the possible reactions that the phrase on the task sheet could trigger in the mother. Sentence starters such as "If I were the mother…" were used to help participants to apply this new method. In two previous studies, this instruction was successfully evaluated in promoting perspective taking toward parents compared to a wait control group and a group that completed the same task but received a neutral instruction (see Pöhler et al., 2023).

4.2.2 Indirect instruction

Participants were only instructed to discuss suggested phrases and "make sure that the terms and phrases used are generally understandable" in a meeting with the mother (see Table 1). Perspective taking as a word or similar words indicating that the mother's perspective should be considered were not mentioned. No sentence starters ("If I were the mother…") were offered. Compared to the direct instruction, it is less complex and has only an indirect focus on perspective taking.

TABLE 1 Excerpts from the original instruction on the two task sheets.

Direct instruction	Indirect instruction
While working on the tasks, keep in mind that the communication in the intended conversation should be in a way that is appropriate for the target group. *To do this, always take the perspective of the student's mother by "putting on her hat."* Imagine symbolically putting on the "hat" of the student's mother. Take the perspective of the mother and consider: • How would the phrases be perceived from the point of view of the mother? • What thoughts and feelings could the phrases trigger in the mother? • "If I were the mother…," "From the point of view of the mother…"	While working on the tasks, keep in mind that the communication in the intended conversation should be in a way that is appropriate for the target group. *Therefore, make sure that the terms and phrases used are generally understandable.* Discuss the suggested phrases. Check the extent to which the terms and phrases used are generally understandable.

Differences in the two instructions are shown in italics. Instructions were in German and have been translated.

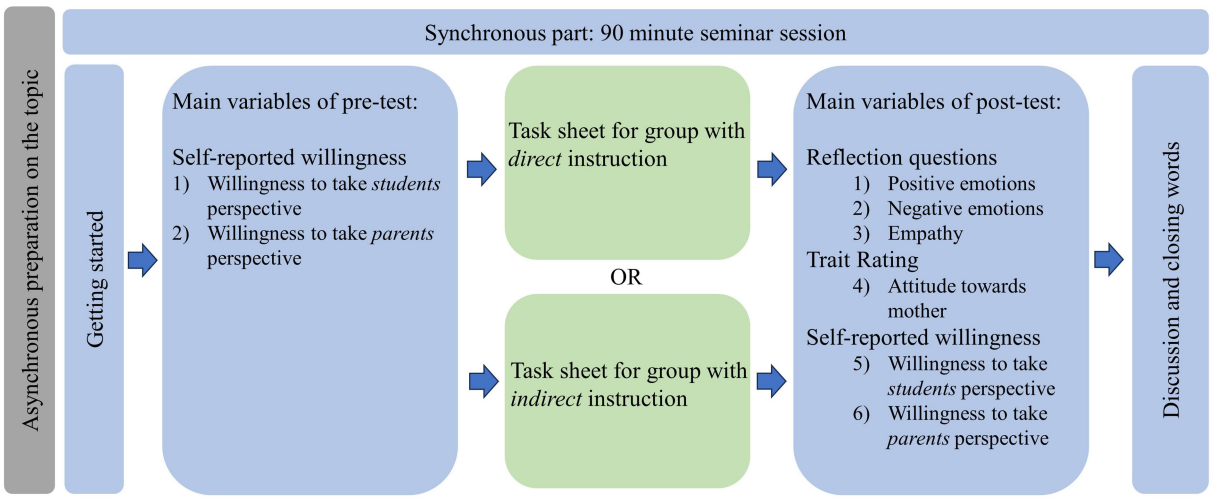

FIGURE 1
Design and procedure of the learning task.

4.3 Design

We used a pre-post intervention group design to examine the effects of the learning task on the willingness to take the perspective of parents and students. Moreover, we compared the effect of the different instructions on our main variable (self-reported willingness) and the additional variables (attitude and emotional and empathic language; see 4.5 Measures). In all seminar groups we collected data at the beginning and at the end of the seminar (see Figure 1). Individual participants could not be randomly assigned to the direct and indirect instructions because a whole seminar had to receive identical instructions to work cooperatively on the learning task. Therefore, randomization was performed at the level of seminar groups. The 26 seminar groups were randomly assigned to the direct and indirect instructions with respect to a balance in terms of "instructor" and "time of day." We checked several variables (school type, pre-test scores for the self-reported willingness to take someone's perspective), but there was no difference between the seminar groups assigned to the two instruction groups on these variables.

4.4 Participants

A total of 515 teachers in training from 26 seminars participated in this study. The seminars were part of the first semester of the Master of Education program at the Freie Universität Berlin. Thirteen seminar groups worked with the direct instruction and 13 with the indirect instruction. A total of 414 participants took part in the pre-test and 370 in the post-test. Data from both tests were successfully matched for 326 participants. These 326 participants constitute the sample for this study. The sample consisted of 116 participants in primary education, 209 participants in secondary education, and one visiting student. Of the 326 participants, 54 reported studying special education (272 without a special education specialization). Furthermore, 232 identified as female, 81 as male, 2 as diverse, and 11 did not report gender. Gender had no effect on the self-reported willingness to take the perspective of students or parents (pre and post), no effect on the attitude toward the mother and no effect on the three text measure variables (positive emotions, negative emotions, and empathy). Therefore, gender was not included as factor in further analyses. Information on school type, special education specialization, and gender was collected both in the pre-test and post-test. Only the post-test data were used to describe the sample.

4.5 Measures

4.5.1 Self-reported willingness (pre and post)

In previous studies, scales from Davis (1983) Interpersonal Reactivity Index have been commonly used to assess perspective taking, including in the field of teacher education (Lane-Garon, 1998; Knutson Miller, 2001; Konrath et al., 2011; Goeze et al., 2013; Abacioglu et al., 2020). Therefore, we used the German version of the Interpersonal Reactivity Index (Maes et al., 1995) and modified the perspective taking scale. The original items describe present behavior (sample item "I sometimes try to understand my friends better by imagining how things look from their perspective," Davis, 1983, p. 117). Since we were interested in the future behavior of teachers in training, we formulated the items in relation to their future role as a teacher and measured their *willingness* to adopt the perspective of students and parents during consultations. The student and the parent scale started with an identical instruction: "When I am a teacher and have a diagnostic consultation, …".[2] Individual items followed, such as "… I will take extra time to try to understand my students better by looking at things from their point of view" or "… I will take extra time to consider the arguments of the parents, even if I am sure of my own

2 All verbal quotes regarding the measures (such as instructions, items, verbal anchors) were in German in the original study and have been translated into English for the purposes of this article.

point of view." Except for the person addressed (students or parents), the seven items of each scale were identical. The main instruction for both scales asked participants to imagine themselves as a teacher, with many different tasks to be fulfilled simultaneously and not always enough time to meet all requirements. Participants were asked to provide a realistic self-assessment against this backdrop. The scales were presented in the pre- and post-test with the same items within a 90-min time frame (see Figure 1). Therefore, we used a continuous response scale to reduce the influence of the reported pre-score. A slider displayed verbal anchors at the endpoints ranging from "strongly disagree" to "strongly agree" and five additional unlabeled marks in between, but did not display the underlying numerical labels ranging from 1 to 97. The internal consistency was excellent (Cronbach's α for student scale pre/post = 0.90/0.95; parent scale pre/post = 0.94/0.96). In previous studies, the German version of the perspective taking scale of the Interpersonal Reactivity Index also showed good reliability, with Cronbach's α ranging from 0.71 to 0.84 (Paulus, 2009; Schmitt et al., 2010).

4.5.2 Trait ratings (post)

To measure the attitude toward the mother, we adopted the trait rating from Galinsky and Moskowitz (2000, p. 718) with the same 10 traits, which are desirable traits of a person (considerate, cooperative, friendly, generous, honest, kind, loyal, sincere, trustworthy, and understanding). For our study, two researchers translated the traits into German and the introduction was modified to specifically measure participants' attitudes toward the student's mother. Participants were instructed that we are interested in their intuitive assessment of the mother. For each of the 10 characteristics, participants were asked to indicate how much it applied to the mother (ranging from 1 = does not apply at all, to 7 = fully applies). Participants were encouraged to "follow their gut feeling" without thinking too much. The internal consistency was excellent with Cronbach's $\alpha = 0.89$.

4.5.3 Reflection questions (post)

To measure emotions and empathy toward the mother, we examined texts written by the participants. Participants were asked to answer questions designed to stimulate reflective thinking. The idea of using written text as a source to detect emotions and empathy was adapted from Ebert et al. (2020) and Sherman et al. (2020). Two trained raters coded the texts for emotional and empathic language using three response scales: positive emotions, negative emotions, and empathy. The texts were answers of participants to the following three questions: (1) "You may have noticed certain feelings toward the mother during the exercise. Please describe your feelings in a few sentences," (2) "The description of the student indicates that his parents should have taken him to a Social Pediatric Center (SPZ) years ago. Until today, this has not happened. Now, focus on the mother. What could have been the reasons for not presenting her son to the SPZ?," and (3) "If you could ask the mother questions, what would they be?." For the first question, participants had the opportunity to tick a box saying "I did not notice any particular feelings toward the mother" and for the third question they could tick a box saying "I have no questions for the mother." The two raters rated all texts on question (1), then (2), then (3) in that order. The written texts were randomly intermixed and rated by the two raters, who were blind to condition (based on Galinsky and Moskowitz, 2000; Skorinko and Sinclair, 2013). First, a trial run with a subset of 50 texts was selected to ensure that the two raters used the same rating criteria. After the trial run, the raters independently assessed each individual text on the three variables. The three text variables, along with instructions and criteria for raters, were identical for all three reflection questions. The first variable, positive emotions, was defined for raters as "Evaluate whether the participant's response reflects positive emotions toward the student's mother." They were asked to respond on a 7-point scale, ranging from 1 = "Text does not reflect any positive emotions toward the mother" to 7 = "Text reflects very positive emotions toward the mother." The second variable was identical to the first one, but focused on negative emotions. Following Kron et al. (2013), we used unipolar scales to evaluate the emotions toward the mother expressed in a text. For this reason, positive emotions and negative emotions were rated separately to avoid loss of information when participants chose a score of 4, as this could indicate no emotion or a text with both negative and positive emotions, canceling each other out. The third variable, empathy, was defined for raters as "Evaluate whether the participant's response reflects explicitly or implicitly expressed empathy toward the student's mother." They were asked to respond on a 7-point scale, ranging from 1 = "No empathy toward the mother" to 7 = "Very high level of empathy toward the mother" with 4 = "Neutral." All participants that had written at least one text were included in the analysis. If participants had written two or three texts, the ratings were averaged across these texts, separately for the three variables and the two raters. Thus, for each participant, we obtained a measure of positive emotion, negative emotion and empathy, for each of the two raters. To assess inter-rater agreement, we calculated Pearson correlations for each text variable. The correlations between the two raters were strong for all text variables (positive emotions $r = 0.629$; negative emotions $r = 0.708$; empathy $r = 0.737$ with $p < 0.001$ and $n = 320$; for interpretation of correlations, see Cohen, 1988). The inter-rater correlation can be interpreted as a very good agreement. Therefore, the scores of the two raters were averaged for further analyses (based on Bortz and Döring, 2006, p. 185; Skorinko and Sinclair, 2013). In one case, no mean could be calculated because one rater coded a one-word response as "missing" while the other rater generated values. This case was excluded from further analyses.

4.6 Procedure

The main part of the learning task and the entire data collection took place during a 90-min seminar. The seminar was held digitally due to the COVID-19 pandemic. SoSci Survey (Leiner, 2019) was used to create the online surveys. Participation in the online surveys was voluntary and required consent. The data sets from the two surveys (pre- and post-test) could be matched using an anonymous code and demographic information. The pre-test took about 5 min and the post-test about 15 min to complete. The learning task consisted of an asynchronous part and a synchronous part (see Figure 1).

In the asynchronous part participants were asked to read a digital document containing the case description, which was sent to them in preparation for the upcoming seminar. The synchronous part took place during the 90-min seminar, where participants met with their instructor via the Webex video conferencing platform (Webex by cisco, 2020). After a brief introduction into diagnostic consultations in the context of teacher responsibilities, participants completed the pre-test including the self-reported willingness. The pre-test was

followed by a brief introduction to the upcoming task. A maximum of five participants then worked in digital rooms to complete the task sheet. The main task was to discuss the suggested phrases using either the direct or indirect instruction, depending on which seminar participants attended, and to formulate appropriate sentences on their own. The post-test followed immediately including the reflection questions, the trait ratings, and the self-reported willingness, in that order. The seminar ended with a discussion of the insights gained from the group work. All 26 seminars took place within 1 week.

4.7 Data analysis

All analyses included only data from participants who could be matched by their codes and by their instruction group in both surveys. As additional matching control variables, we used information on gender, school type, and special education specialization, which were collected both on the pre-test and post-test. There were nine participants with matching instruction group and matching code but discrepancies in these control variables. All analyses were conducted with and without these nine participants and results were not affected. Therefore, we decided not to exclude these participants as in each case discrepancies were only in a single variable and the rest of the matching variables were identical. Statistical software SPSS 28 (IBM Corp., 2021) was used for all analyses. Two-tailed tests were always used. The significance level was set at $\alpha = 5\%$.

4.7.1 Self-reported willingness

Only data from participants who completed the full scale in both the pre-test and post-test were included in the analysis ($N = 322$). The seven items each were averaged to form two scales (student scale and parent scale). To address the question of whether the learning task and the two instructions promoted the willingness to take another perspective, we conducted two mixed-model ANOVAs, one for the student scale and one for the parent scale. Variables were submitted to a 2 (groups: direct instruction vs. indirect instruction) × 2 (self-reported willingness: pre vs. post) mixed-model ANOVA with repeated measures on the second factor. To examine whether teachers in training are generally more willing to adopt the student perspective than the parent perspective, only the pre-scores were considered and a paired-samples *t*-test was calculated. To rule out the possibility that participants within the same seminar were more similar in their willingness to take another perspective than participants across different seminars, we conducted further ANOVAs with seminar affiliation and scale pre-scores. We found no significant differences, for either the student or parent perspective taking scales. Thus, seminar affiliation did not appear to influence the willingness to take another perspective and was not included in further analyses.

4.7.2 Trait ratings

Only data from participants who completed the full scale were included in the analysis ($N = 323$). The 10 items were averaged into a single value. To check whether there were differences in trait ratings between the two instruction groups, an independent samples *t*-test was performed. Pearson correlations were calculated to assess the relationship between trait ratings and the self-reported willingness to take the perspective of parents and students.

4.7.3 Reflection questions

Out of the entire sample of 326 participants, 200 responded to the first question (1), 320 responded to the second question (2) and 227 responded to the third question (3). Both raters assessed responses on the 7-point scale separately for the three text variables (positive emotions, negative emotions, and empathy). The text variable scores of both raters were averaged for further analyses. We used an independent samples *t*-test to analyze instruction group differences on the text variables. We also computed correlations between positive emotions, negative emotions, and empathy on the one hand and the self-reported willingness on the other, using Pearson correlation.

5 Results

The results focus on the effectiveness of the learning task using the two different instructions with respect to perspective taking, especially perspective taking toward parents. The main variable was the self-reported willingness to take the perspective of students and parents. We obtained further variables, which, according to the literature, can be affected by instructed perspective taking and are also important with regard to interpersonal relationships and social interactions: the attitude toward the mother, and the emotional and empathic language toward the mother used in written texts. For all these variables, we compared the effect of the two different instructions used in the learning task.

5.1 Self-reported willingness to take the perspective of parents and students

Table 2 shows the descriptive statistics of the scale. For both instructions and at both time points of measurement (pre and post), the willingness to take another person's perspective was high, with means ≥69.54 out of 97.00.

For the *student* scale the results of the mixed-model ANOVA indicated a significant small main effect of the learning task (pre versus post), $F(1, 320) = 5.61$, $p = 0.018$, partial $\eta^2 = 0.02$ (according to Cohen, 1988, the size of the effect is: partial $\eta^2 > 0.01$ = small effect, >0.06 = medium effect, and >0.14 = large effect). Willingness to take the perspective of students was greater after completing the learning task. There was no significant main effect of instruction, indicating no difference between the direct and indirect instruction, $F(1, 320) = 2.08$,

TABLE 2 Descriptive statistics of self-reported willingness.

	direct instruction $n = 150$		indirect instruction $n = 172$		Total $n = 322$	
	Pre	Post	Pre	Post	Pre	Post
	M (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)
Students	78.3 (11.9)	79.4 (12.4)	76.3 (13.4)	77.3 (14.6)	77.2 (12.7)	78.3 (13.6)
Parents	70.6 (15.1)	76.5 (15.4)	69.5 (16.5)	74.6 (15.8)	70.1 (15.9)	75.5 (15.6)

Scale ranged from 1 = "strongly disagree" to 97 = "strongly agree".

TABLE 3 Correlations for trait ratings and reflection questions with self-reported willingness (post).

	Self-reported willingness	
	Students	Parents
Trait ratings ($n = 320$)	0.209**	0.286**
Reflection questions ($n = 317$)		
Positive emotions	0.09	0.13*
Negative emotions	−0.05	−0.19**
Empathy	0.08	0.21**

*$p < 0.05$, **$p < 0.01$. Cohen (1988) classified correlations of $r > 0.1$ as small, $r > 0.3$ as moderate, and $r > 0.5$ as strong. Positive emotions, negative emotions, and empathy scores are averaged ratings across all texts.

$p = 0.150$, partial $\eta^2 = 0.01$. Consequently, no statistically significant interaction between point in time (pre versus post completion of the learning task) and instruction occurred, $F(1, 320) = 0.03$, $p = 0.857$, partial $\eta^2 < 0.001$.

For the *parent* scale the results of the mixed-model ANOVA indicated a significant large main effect of the learning task (pre versus post), $F(1, 320) = 90.47$, $p < 0.001$, partial $\eta^2 = 0.22$. Willingness to take the perspective of parents was greater after completing the learning task, regardless of participants' group affiliation. As with the student scale, there was no significant main effect of instruction for the parent scale, $F(1, 320) = 0.77$, $p = 0.381$, partial $\eta^2 = 0.002$. Willingness to take the perspective of parents increased in both groups by participating in the learning task. Consequently, no statistically significant interaction between point in time (pre versus post completion of the learning task) and the two groups occurred, $F(1,320) = 0.42$, $p = 0.519$, partial $\eta^2 = 0.001$.

An examination of the *general difference* using pre-intervention scores revealed a significantly greater willingness to take the perspective of students than of parents, $t(321) = 12.06$, $p < 0.001$, $d = 0.67$ (medium effect size according to Cohen, 1988).

5.2 Trait ratings

As expected, the mean trait rating was >4.0 (see section 3.2; Galinsky and Moskowitz, 2000; Berthold et al., 2013), with $M = 4.62$ ($SD = 0.90$; $N = 323$), indicating a positive attitude toward the mother (scale ranged from 1 = "does not apply at all" to 7 = "applies fully"). The trait ratings were lower in the direct instruction group ($M = 4.58$, $SD = 0.88$, $n = 151$) than in the indirect instruction group ($M = 4.65$, $SD = 0.91$, $n = 172$) but an independent samples t-test yielded non-significant group differences, $t(321) = -0.77$, $p = 0.440$, $d = -0.09$. The direct and indirect instructions did not yield to differences in participants' attitude toward the mother. Furthermore, in line with our expectations, we found a positive correlation between trait ratings and the willingness to take the parent perspective measured after the intervention (see Table 3; small to moderate correlation according to Cohen, 1988). In addition, although students were not even addressed in the trait rating scale, we found a small positive correlation for trait ratings and the willingness to take the student perspective measured after the intervention (see Table 3).

5.3 Reflection questions

An independent samples t-test showed no significant difference between the direct and indirect instruction and ratings for positive emotions [$t(318) = 0.78$, $p = 0.437$, $d = 0.09$], negative emotions [$t(318) = -0.70$, $p = 0.482$, $d = -0.08$] and empathy [$t(318) = 1.12$, $p = 0.263$, $d = 0.13$]. Ratings in the direct instruction group ($n = 150$) were as follows[3]: Positive emotions, $M = 3.80$, $SD = 1.06$; negative emotions, $M = 2.31$, $SD = 1.21$; empathy, $M = 4.81$, $SD = 0.84$. Ratings for the indirect instruction group ($n = 170$) were: Positive emotions, $M = 3.71$, $SD = 1.05$; negative emotions, $M = 2.41$, $SD = 1.16$; empathy, $M = 4.70$, $SD = 0.84$. Consistent with our expectations, there were significant positive correlations between positive emotions and the willingness to take the parent perspective measured after the intervention ($p = 0.02$) as well as between empathy and willingness to take the parent perspective measured after the intervention ($p < 0.001$). There was a significant negative correlation between negative emotions and willingness to take the parent perspective measured after the intervention ($p < 0.001$). The same directions of correlations appeared for the willingness to take the perspective of students measured after the intervention, but correlations were not significant (see Table 3).

In other words, if a participant's written texts reflected positive emotions about the mother, that participant was more willing to consider the parent's perspective. If a participant's texts reflected negative emotions about the mother, that participant was less willing to consider the parent's perspective. And if a participants' written texts reflected empathy regarding the mother, that person was more willing to consider the parent's perspective.

6 Discussion

In this study, we have provided positive evidence that our case-based learning task is effective in terms of perspective taking and has a specific effect on taking the parent perspective. In the following, we discuss the results of the different variables we used in this study: Self-reported willingness to take the perspective of students and parents, the attitude toward the mother in the case story, and the emotional and empathic language in written texts concerning the mother.

With the scale measuring self-reported *willingness to take someone's perspective*, the effectiveness of our learning task could be seen through a significant increase in perspective taking toward parents (*effect of the learning task pre* versus *post*). It was unclear whether participation would increase the willingness in general, or only specifically increase willingness to take the parent perspective, as the instructions focused on the mother. Therefore, we did not have a hypothesis for the student scale. The post-scores for both the student and parent scale were significantly higher than the pre-scores, with a

3 Note that higher values indicate a greater amount of either positive emotions, negative emotions, or empathy in the texts; see section 4.5.3. A value of 1 represents the absence of positive emotions, negative emotions, or empathy and a value of 7 represents a very high degree of positive emotions, negative emotions, or empathy.

large main effect in the pre-post comparison for the parent scale and a small main effect for the student scale.

Furthermore, we compared the effect of direct and indirect instructions (*instruction effect*) on outcomes of self-reported willingness to take another perspective. We conceived two instructions, a direct one, which asked participants explicitly to take the perspective of the mother and an indirect one, which did not mention the concept of perspective taking at all. With direct instructions, participants may perceive perspective taking as an injunctive social norm (which concerns what most others approve or disapprove of, as opposed to a descriptive norm which concerns what most others do, see Cialdini et al., 1990). This perception could bias their reported willingness to adopt the parents' perspective in general. In contrast, with indirect instructions, there was no focus on perspective taking as an injunctive social norm. Kallgren et al. (2000) demonstrated that injunctive norms must be directly focused upon in order to influence behavior. Therefore, it is unlikely that indirect instructions increase self-reported willingness to adopt the parents' perspective merely because participants perceive perspective taking as a social norm.

Both instructions were successful in terms of a significant increase in the willingness to take both the students' and the parents' perspective after completing the learning task. Although it seemed likely that a direct instruction that explicitly refers to perspective tasking would be more effective in promoting perspective taking, our results indicated that the indirect instruction was sufficient. Participants presumably adopted the perspective of the mother spontaneously to achieve effective communication. If the increase in perspective taking willingness had only occurred in the direct instruction group but not in the indirect instruction group, this could have been due to the greater effectiveness of explicit instructions but also due to a tendency of participants to respond in terms of social expectations which were clearer under direct instructions. The finding that perspective taking willingness also increased under indirect instructions, in which social norms regarding perspective taking were not as transparent, strengthens the interpretation that the intervention truly promotes perspective taking willingness.

To examine a possible *general difference in the willingness to take the student* versus *parent perspective* we analyzed the pre-test data. Our previous research showed a significantly greater willingness to take the student perspective than the parent perspective among teachers in training (medium effect size; see Study 1 in Pöhler et al., 2023). Consistent results were found in the current study, with a medium effect size. This finding may reflect that teachers strive for positive relationships with students and have a more reserved attitude toward parents, anticipating more conflict with parents (Lawrence-Lightfoot, 2003; Unterbrink et al., 2008; Hornby and Lafaele, 2011; Mach-Würth, 2021). We conclude that it may be more worthwhile to promote perspective taking toward parents and to focus on parents in the learning task. It would be interesting to use the same scale with more experienced teachers in order to examine whether the willingness to take the student perspective decreases the more experienced teachers are. For the group of more experienced teachers, it may be worthwhile to focus on the student perspective in a similar learning task.

Our pre-test results (see Table 2) showed that the willingness to take the student perspective is already very high without the intervention, which makes it difficult to obtain a significant intervention effect. A different measure that encourages participants to provide a more nuanced response, may be able to more accurately capture the effects of the intervention and thus avoid a potential ceiling effect. Items in the current study were intentionally framed with the addition "I will take extra time…" (followed by the different items, e.g., "…to try to understand my students better by looking at things from their point of view") to elicit a more realistic and less socially desirable response from participants and to avoid extremes and thus a ceiling effect. In future studies, items could be framed in a way, that emphasizes the many obligations of teachers, so that there is even less temptation to choose extremes (e.g., "I will take the time, even though I have other things to do…").

Given the high pre-test results, the changes in willingness from pre- to post-intervention appear minor. On a 1–97 scale, there was an increase in willingness of a maximum of 6 points. Participants were already willing to adopt the parent and student perspectives, so the learning task contributed minimally. Nevertheless, the intervention remains valuable. It is important to note that the training was not solely focused on improving perspective taking but was part of a broader curriculum addressing assessment and counseling skills, particularly in the context of parent-teacher consultations. Although the effect on perspective taking was numerically modest, it demonstrates that it is possible to further increase the willingness to adopt different perspectives through a brief and relatively simple intervention. If similar interventions are implemented at multiple points during teacher training, these small numerical effects may accumulate, potentially leading to less conflictual relationships with parents in the long term.

Our pre-post design allowed us to conclude that there were no differences between seminar groups in their *a priori* willingness to adopt perspectives. Furthermore, in a previous study with teachers in training using a wait control group design and another study with special education teachers in training and a pre-post design, we already demonstrated the positive influence of the learning task on perspective taking: Self-reported willingness to take the perspective of students (see Study 2 in Pöhler et al., 2023) and parents (see Study 1 and 2 in Pöhler et al., 2023) was significantly increased. Taken together with the results of the current study, the learning task seems to be suitable for promoting perspective taking in teacher education. In addition, the instruction does not seem to affect the increase in self-reported willingness to take parents' or students' perspective.

The type of instruction also had no effect on the other variables (attitude toward the mother and emotional and empathic language in texts that referred to the mother). The trait ratings used to measure the *attitude toward the mother* did not differ between the two instruction groups (*instruction effect*). The three text variables (positive emotion, negative emotion, and empathy), which were obtained by rating the texts which participants wrote in response to three different reflection questions, also did not differ between the instruction groups (*emotional and empathic language: instruction effect*). In summary, for none of the different variables did it matter whether instructions were direct or indirect. Thus, we did not find any evidence that the learning task had a stronger effect when performed under direct instructions than when performed under indirect instructions.

We tested a number of hypotheses regarding the relationship between the different variables. All of them seem to be related to the same construct (perspective taking) and positively (or in the case of negative emotions, negatively) correlated with each other (see

Supplementary Material for full correlation matrix). Regarding our hypothesis, there was a significant positive *correlation between the attitude toward the mother and the willingness to take the parent perspective* measured after the intervention. We had no hypothesis for the student scale and students were not addressed in the trait rating scale. Nevertheless, we also found a significant positive correlation between attitude toward the mother and the willingness to take the student perspective measured after the intervention. Thus, participants with a more positive attitude toward the mother also showed a greater willingness to take the perspective of students. This may be due to the fact that the two scales measuring self-reported willingness were highly correlated (see Supplementary Material for full correlation matrix).

Perspective taking has been shown to foster positive emotions and empathy in written texts (e.g., Ebert et al., 2020; Sherman et al., 2020). Consistent with these findings and our hypothesis, the data showed that when a person's written texts reflected positive emotions or empathy regarding the mother, that person was more willing to take the mother's perspective (post). Conversely, if a person's written texts reflected negative emotions regarding the mother, that person was less willing to take the mother's perspective (*emotions and empathy correlating with willingness to take parent perspective*). No significant correlations appeared for willingness to take the student perspective (post). This is interesting, because for the attitude toward the mother we found a significant correlation also with the student scale, even though the learning task with both instructions specifically addressed parents. This difference may be due to methodological differences between the scales rather than being related to the underlying processes. The text ratings were done by two external raters, whereas the trait ratings were done by the participants themselves. The text ratings reflect a (spontaneous) verbal behavior of the participants, in contrast to the ratings of predefined traits on a numerical scale. The reflection questions, unlike the trait ratings, did not explicitly ask about the person's traits. These fundamental methodological differences may explain the different results for the different measures.

Regarding our three text measures, only empathy scored above 4 on the 1–7 Likert scale, whereas the averages for positive and negative emotions were below 4. One explanation might be that the construct of empathy is closely related to perspective taking and is often described as an affective form of perspective taking (Underwood and Moore, 1982; Preston and de Waal, 2002; Roth et al., 2016; Longmire and Harrison, 2018). Additionally, the learning task and reflection questions may have influenced the expression of empathic language more than the expression of positive or negative emotions. Another explanation is more methodological. Our raters scored empathy on a bipolar scale, where a 4 indicated neutral empathy toward the mother. In contrast, we used unipolar scales to evaluate the emotions expressed toward the mother in the text, without defining 4 as neutral. Positive and negative emotions were rated separately to avoid losing information when participants chose a score of 4, as this could indicate no emotion, neutral emotion, or a combination of both negative and positive emotions (see Chapter 4.5.3 Reflection Questions).

The correlations between the attitude ratings and text variables on the one hand, and the willingness to take the parent perspective on the other hand, are consistent with previous research showing a general positive effect of perspective taking instructions on attitude, empathic emotions, and stereotype reduction (Batson et al., 1997; Galinsky and Moskowitz, 2000; Todd et al., 2012a,b; Sherman et al., 2020).

6.1 Relevance for school practice

We tested two different instructions that accompanied our learning task. Although our results show that both instructions positively influence the willingness to take someone's perspective, in real life it may be advantageous to address perspective taking directly. In order to establish perspective taking as a practical tool for teachers in the long run, the direct instruction, with its symbolic and more emotional character, may have an advantage and be better anchored in memory. On the other hand, the metaphorical "hat" in the direct instruction seems to be more complex and cognitively demanding than the indirect instruction. This would argue in favor of using an instruction with a lower cognitive load but the same effectiveness in order to establish a practical tool for teachers in the long run. Which of the two instructions is more practical or beneficial may depend on the specific circumstances in which the learning task is used.

The importance of specifically promoting willingness to take the parent perspective early in teacher education is underscored by our repeated finding of a *general difference* with greater willingness to take a student's perspective than the parent's perspective (see Study 1 in Pöhler et al., 2023). In their later professional practice, teachers in training will benefit from a high willingness to take the parent perspective when in contact with parents. Willingness is a necessary prerequisite in the perspective taking process that enables teachers in training to use the cognitive ability to take a different perspective later in their professional practice (Weinert, 2014; Blömeke et al., 2015). Furthermore, perspective taking is an important part of the counseling competence that teachers are expected to have (Gerich et al., 2015; KMK, 2019). A well-developed counseling competence involves that teachers actually take someone else's perspective into account and can better anticipate what to expect (Gerich et al., 2015). With a low willingness to take someone else's perspective, especially a parent's perspective, teachers may experience conversations that remain on an objective level, such as sharing student performance, without respecting the necessary social–emotional level and interpersonal relationship.

Although our learning task was originally designed for use in teacher training, we assume and recommend that it is also applicable to other fields and to all those who deal with counseling, with parents or other clients, and with communicative situations that may be conflicting. Since we were able to promote the willingness to take the parent perspective, but also the willingness to take the student perspective, even though they were not the focus of our perspective taking instruction, it is possible that a positive spillover effect will lead to a greater willingness to take the perspective of people who are involved in the same (e.g., counseling) situation or learning task setting. We are planning to establish the learning task for the multi-professional school staff at the schools in Berlin. Furthermore, we assume and recommend that our learning task is also applicable at different stages of teachers' professional career. In a previous study with novice special education teachers, who are already working in schools, we demonstrated the positive influence of the learning task on perspective taking (self-reported willingness to take the perspective of students and parents could be increased; see Study 2 in Pöhler et al., 2023).

6.2 Limitations and perspectives for future research

The finding that self-reported willingness increased even under indirect instructions, in which social norms regarding perspective taking were less transparent, strengthens the interpretation that the intervention genuinely promotes perspective taking willingness and that an indirect instruction is sufficient. However, the current study has one limitation which potentially challenges this conclusion: we cannot rule out the possibility that the administration of the perspective taking survey may itself have served as an explicit intervention. Hence, it is possible that completing the pre-survey, which was administered prior to the intervention, increased the reported willingness in the post-survey. As both groups received the pre-survey, it may have induced the same pre-post difference in perspective taking in both groups. This line of reasoning, however, rests upon the assumption that the pre-survey rather than the training task is the reason for the pre-post difference in perspective taking. This is unlikely to be true as suggested by a previous study (Study 1 in Pöhler et al., 2023), in which there was no pre-survey. Thus, although it is possible that the pre-survey has an effect in both groups, the learning task probably has an additional effect that adds up to the effect of the pre-survey. Therefore, if the different instructions had been differentially effective, it would have shown in the post-survey. Future studies could investigate the effect of the pre-survey by implementing a control group that only completes the scales in the post-measurement or a control group that completes the scales in the pre- and post-measurement but works on something completely different than the learning task.

Regarding the different instructions, a second limitation needs to be acknowledged. One of our primary assumptions was that direct perspective taking instruction would result in a greater willingness to adopt another's perspective after the learning task. This assumption proved to be incorrect; the outcome did not depend on whether participants were explicitly instructed to take the parent's perspective or simply asked to use formulations that can be readily understood by the mother. It is likely that participants naturally adopted the mother's perspective when asked to make formulations generally understandable. This may be due to methodological reasons and the fact that our phrasing for the indirect perspective taking instructions did not sufficiently differ from the direct instructions, leading participants to perceive them as directives to adopt the mother's perspective. It is possible that phrases like "What would you say to the mother in this situation?" might be sufficient to facilitate indirect perspective taking, given that the context and case describe a situation requiring cooperative and purposeful communication. Until other contrasting instructions are tested, we cannot state that the findings of our study are generalizable.

Another limitation of our study is that it was not possible to randomly assign individual participants to conditions. Instead, entire seminar groups had to be assigned to a condition to give students the opportunity to work together. However, we checked several seminar level variables (instructor, time of day, school type, pre-test scores for self-reported willingness to take someone's perspective), but there was no difference between the seminar groups in the two conditions. Despite the design limitation, we believe that it was worthwhile to evaluate the effect of the learning task in a realistic educational setting. Moreover, to our knowledge, our study is the first to investigate the promotion of perspective taking toward parents in teacher education. Further studies could be run to replicate our findings under better controlled laboratory conditions.

By using reflection questions and rating the responses regarding emotion and empathic language, we tested a method to detect variables that correlate with perspective taking in written texts. As the time in the seminar was limited, we were not able to obtain these additional text variables also before the intervention. Therefore, we could use these variables only to compare the two different instructions and to assess their correlation with the self-reported willingness to consider the students' and parents' perspective. Follow-up studies, e.g., a study in which participants write texts before and after the intervention, could complement our findings. Although writing texts is time-consuming, it seems plausible that socially desirable or random response behavior is less likely in written texts than in self-reports because the variable being measured is less obvious. Furthermore, asking teachers in training to write texts in response to reflection questions does not only produce an interesting database but could be considered as a part of the learning task that could foster elaborative processing. Thus, collecting and analyzing texts seems to be worthwhile not only for answering research questions but also for practical purposes.

It is a legitimate question why we focused on the mother's perspective and neglected the father's role, both as an actor in the case scenario and in terms of his perspective. As we have already mentioned, our case scenario was inspired by a real case in which only the mother was in contact with the school, and we decided to preserve this fact. However, it would be interesting to investigate in a future study whether our results, particularly the self-reported willingness to take someone's perspective when given the two instructions, also apply to a case scenario in which the father's perspective must be taken. As long as the learning task focuses on only one parent, there will always be individuals in the intended target group who are more similar to the parent (in terms of gender or the parenting role) than others. It is possible that similarity or identification with the person whose perspective is being taken could influence the outcome measures (Tarrant et al., 2012). In this study, however, the results for willingness to take another perspective did not differ by gender. Thus, it seems unlikely that male participants found it difficult to take the mother's perspective.

An aim for future studies could be to develop methodological ideas on how to measure the promotion of perspective taking in real conversations with parents. Possible indicators could be the satisfaction of the parent after the conversation, the language used by the teacher, or stress levels during and after the conversation. Even more difficult to measure, but also particularly important, is whether promoting perspective taking has a significant impact on teachers' health. If perspective taking is promoted not just once in teacher education, but as a part of comprehensive promotion of social–emotional competence, a positive impact on teachers' well-being seems possible.

Although teachers in training are more willing after training with the learning task, it remains to be seen whether they will continue to show greater willingness in their later practice or whether their willingness is just greater in theory. Generally, we cannot assume that once the willingness has been successfully promoted, it will be stable and present in later practice. The intervention presented in this paper is only a first step toward promoting perspective taking in counseling

situations involving parents. We attempted to sustain the positive effects of the intervention by providing additional materials: As a follow-up, the participants received a reference list on the topics of perspective taking and diagnostic counseling. Moreover, they were provided with a list of institutions offering support and the names of local contact persons (relevant to the case). Finally, a podcast was recorded that answered participants' questions and gave further information on the local school support system. For the sake of sustainability, however, (future) teachers likely need an even more comprehensive exploration of the topic and further practice in perspective taking. Therefore, recurring exercises should be established in the university context as well as in the subsequent teacher preparation service. With further learning tasks as booster sessions, the recognition effect can help to approach the exercise and the request for perspective taking with less cognitive effort which may positively influence the motivational willingness to take perspectives in the long term. In the realm of such long-term efforts to promote perspective taking, it would be interesting to explore the learning curve of perspective taking by measuring it repeatedly. Currently, there are no data illustrating a learning curve specific to perspective taking interventions. However, research has documented developmental changes in perspective taking skills. Eisenberg et al. (2005) examined perspective taking as a measure of prosocial behavior and reasoning and demonstrated a linear increase in perspective taking from age 15/16 to age 25/26. These age-related changes are potentially beneficial for promoting perspective taking in early teacher education over the long term.

7 Conclusion

Teacher education is undergoing major changes internationally. The focus is shifting from the mere teaching of cognitive skills to the early training of important social–emotional skills, such as the ability and willingness to take the perspective of important interlocutors. Our learning task is a case-based, practical tool that reliably and easily promotes perspective taking, especially toward this important group of stakeholders: parents. As the willingness to take the parent's perspective was already high before the intervention, the change was relatively small. Further studies will show whether using different types of items or repeatedly applying similar interventions could increase the effect. In addition to self-report measures, we obtained further variables that are associated with perspective taking and that are important for interpersonal relations. We have shown that these variables (attitude and emotional and empathic language) correlate with the self-reported willingness to take someone's perspective. In particular, we have used a promising method by measuring emotional and empathic language in written texts. Our goal is to conduct further studies to investigate the promotion of perspective taking in teacher training and to engage key multipliers who can effectively disseminate the learning task presented in this paper within schools over the long term. This learning task has the potential to provide teachers with valuable support and resources for navigating difficult conversations.

Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Ethics statement

Ethical approval was not required for the studies involving humans because a member of the ethics committee (AK, co-author of this manuscript) of the Department of Education and Psychology was consulted in advance. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

Author contributions

MP: Conceptualization, Data curation, Investigation, Methodology, Project administration, Writing – original draft. FB: Investigation, Methodology, Project administration, Writing – review & editing. AK: Conceptualization, Methodology, Supervision, Writing – review & editing.

Funding

The author(s) declare that financial support was received for the research, authorship, and/or publication of this article. The authors acknowledge support by the Open Access Publication Fund of the Freie Universität Berlin and the supporting project K2teach, which is part of the "Qualitätsoffensive Lehrerbildung," a joint initiative of the German Federal Government and the Länder. K2teach was funded by the German Federal Ministry of Education and Research. The authors are responsible for the content of this publication. K2teach was funded by the German Federal Ministry of Education and Research (Grant number K2teach:01JA1802).

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's note

Supplementary material

The Supplementary material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/feduc.2024.1352796/full#supplementary-material

References

Abacioglu, C. S., Volman, M., and Fischer, A. H. (2020). Teachers' multicultural attitudes and perspective taking abilities as factors in culturally responsive teaching. *Br. J. Educ. Psychol.* 90, 736–752. doi: 10.1111/bjep.12328

Aspelin, J., and Jonsson, A. (2019). Relational competence in teacher education. Concept analysis and report from a pilot study. *Teacher Development* 23, 264–283. doi: 10.1080/13664530.2019.1570323

Batson, C. D., Early, S., and Salvarani, G. (1997). Perspective taking: imagining how another feels versus imaging how you would feel. *Personal. Soc. Psychol. Bull.* 23, 751–758. doi: 10.1177/0146167297237008

Baumert, J., and Kunter, M. (2006). Stichwort: Professionelle Kompetenz von Lehrkräften. *Z. Erzieh.* 9, 469–520. doi: 10.1007/s11618-006-0165-2

Berthold, A., Leicht, C., Methner, N., and Gaum, P. (2013). Seeing the world with the eyes of the outgroup – the impact of perspective taking on the prototypicality of the ingroup relative to the outgroup. *J. Exp. Soc. Psychol.* 49, 1034–1041. doi: 10.1016/j.jesp.2013.07.007

Blömeke, S., Gustafsson, J. E., and Shavelson, R. J. (2015). Beyond dichotomies. Competence viewed as a continuum. *Z. Psychol.* 223, 3–13. doi: 10.1027/2151-2604/a000194

Bortz, J., and Döring, N. (2006). *Forschungsmethoden und evaluation für human- und Sozialwissenschaftler [research methods and Evaluation for Human and social scientists]*. Heidelberg: Springer.

Briese, F., Lackenbauer, C., Pöhler, M., Sontag, C., Wißmann, J., and Kinder, A. (2022). Eltern adressatengerecht informieren und beraten. Eine fallbasierte Lerngelegenheit für Lehramtsstudierende zur Vorbereitung diagnostisch-beratender Gespräche [informing and counselling parents appropriately. A case-based learning task for teachers in training as preparation for diagnostic counselling interviews]. *PraxisForschungLehrer*innenBildung (PFLB) Zeitschrift für Schul- und Professionsentwicklung* 4, 169–184. doi: 10.11576/pflb-5224

Cialdini, R. B., Reno, R. R., and Kallgren, C. A. (1990). A focus theory of normative conduct: recycling the concept of norms to reduce littering in public places. *J. Pers. Soc. Psychol.* 58, 1015–1026. doi: 10.1037/0022-3514.58.6.1015

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Hillsdale, NJ: Erlbaum.

Cook, K. D., Dearing, E., and Zachrisson, H. D. (2018). Is parent–teacher cooperation in the first year of school associated with Children's academic skills and Behavioral functioning? *Int. J. Early Child.* 50, 211–226. doi: 10.1007/s13158-018-0222-z

Davis, M. H. (1980). A multidimensional approach to individual differences in empathy. *J. Pers. Soc. Psychol.* 1980:85.

Davis, M. H. (1983). Measuring individual differences in empathy: evidence for a multidimensional approach. *J. Pers. Soc. Psychol.* 44, 113–126. doi: 10.1037/0022-3514.44.1.113

Davis, M. H., Conklin, L., Smith, A., and Luce, C. (1996). Effect of perspective taking on the cognitive representation of persons: a merging of self and other. *J. Pers. Soc. Psychol.* 70, 713–726. doi: 10.1037/0022-3514.70.4.713

De Bono, E. (2000). *Six thinking hats*. London: Penguin Books.

Dor, A., and Rucker-Naidu, T. B. (2012). Teachers' attitudes toward parents' involvement in school: comparing teachers in the USA and Israel. *Iss. Educ. Res.* 22, 246–262.

Ebert, A. R., Miron, A. M., Hodel, A. E., Rowley, S. K., Davis, R., and Melotik, E. (2020). Perspective taking and empathic emotions in letters written by grandchildren to their grandparent with dementia versus grandparent without dementia. *J. Fam. Issues.* 41, 62–84. doi: 10.1177/0192513X19868830

Eisenberg, N., Cumberland, A., Guthrie, I. K., Murphy, B. C., and Shepard, S. A. (2005). Age changes in prosocial responding and moral reasoning in adolescence and Early adulthood. *J. Res. Adolesc.* 15, 235–260. doi: 10.1111/j.1532-7795.2005.00095.x

Epstein, J. L., and Sanders, M. G. (2006). Prospects for change: preparing educators for school, family, and community partnerships. *Peabody J. Educ.* 81, 81–120. doi: 10.1207/S15327930pje8102_5

Eyal, T., Steffel, M., and Epley, N. (2018). Perspective mistaking: accurately understanding the mind of another requires getting perspective, not taking perspective *J. Pers. Soc. Psychol.* 114, 547–571. doi: 10.1037/pspa0000115

Fu, W., Pan, Q., Yuan, Y., and Chen, G. (2022). Longitudinal impact of parent-teacher relationship on middle school students' academic achievements in China. *Front. Psychol.* 13:872301. doi: 10.3389/fpsyg.2022.872301

Galinsky, A. D., and Moskowitz, G. B. (2000). Perspective-taking: decreasing stereotype expression, stereotype accessibility, and in-group favoritism. *J. Pers. Soc. Psychol.* 78, 708–724. doi: 10.1037/0022-3514.78.4.708

Gartmeier, M. (2018). *Gespräche zwischen Lehrpersonen und Eltern: Herausforderungen und Strategien der Förderung kommunikativer Kompetenz [conversations between teachers and parents: challenges and strategies for promoting communicative competence]*. Wiesbaden: Springer VS.

Gehlbach, H. (2010). The social side of school: why teachers need social psychology. *Educ. Psychol. Rev.* 22, 349–362. doi: 10.1007/s10648-010-9138-3

Gehlbach, H., Marietta, G. E., King, A., Karutz, C., Bailenson, J., and Dede, C. J. (2015). Many ways to walk a mile in another's moccasins: type of social perspective taking and its effect on negotiation outcomes. *Comput. Hum. Behav. Rep.* 52, 523–532. doi: 10.1016/j.chb.2014.12.035

Gehlbach, H. (2011). Making social studies social: engaging students through different forms of social perspective taking. *Theory Pract.* 50, 311–318. doi: 10.1080/00405841.2011.607394

Gehlbach, H. (2017). Learning to walk in another's shoes. *Phi Delta Kappan* 98, 8–12. doi: 10.1177/0031721717696471

Gehlbach, H., Mascio, B., and McIntyre, J. (2022). Social perspective taking: a professional development induction to improve teacher–student relationships and student learning. *J. Educ. Psychol.* 115, 330–348. doi: 10.1037/edu0000762

Gehlbach, H., and Mu, N. (2022). How we understand others: a theory of how social perspective taking unfolds. *Rev. Gen. Psychol.* 27, 282–302. doi: 10.1177/10892680231152595

Gerich, M., Bruder, S., Hertel, S., Trittel, M., and Schmitz, B. (2015). What skills and abilities are essential for counseling on learning difficulties and learning strategies? Modeling teachers' counseling competence in parent-teacher talks measured by means of a scenario test. *Zeitschrift Entwicklungspsychol. Pädagogische Psychol.* 47, 62–71. doi: 10.1026/0049-8637/a000127

Goeze, A., Hetfleisch, P., and Schrader, J. (2013). Wirkungen des Lernens mit Videofällen bei Lehrkräften: Welche Rolle spielen instruktionale Unterstützung, Personen- und Prozessmerkmale? [effects of learning with video cases on teachers: what role do instructional support, person and process characteristics play?]. *Z. Erzieh.* 16, 79–113. doi: 10.1007/s11618-013-0352-x

Goeze, A., Zottmann, J. M., Vogel, F., Fischer, F., and Schrader, J. (2014). Getting immersed in teacher and student perspectives? Facilitating analytical competence using video cases in teacher education. *Instr. Sci.* 42, 91–114. doi: 10.1007/s11251-013-9304-3

Hornby, G., and Lafaele, R. (2011). Barriers to parental involvement in education: an explanatory model. *Educ. Rev.* 63, 37–52. doi: 10.1080/00131911.2010.488049

IBM Corp (2021). *IBM SPSS statistics for windows (version 28.0) [computer software]*. Armonk, NY: IBM Corp.

K2teach (2023). Know how to teach. Available at: https://www.fu-berlin.de/sites/k2teach/index.html

Kallgren, C. A., Reno, R. R., and Cialdini, R. B. (2000). A focus theory of normative conduct: when norms do and do not affect behavior. *Personal. Soc. Psychol. Bull.* 26, 1002–1012. doi: 10.1177/01461672002610009

KMK. (2019). Standards für die Lehrerbildung: Bildungswissenschaften [Standards for teacher training: Educational Sciences.]. Beschluss der Kultusministerkonferenz vom 16.12.2004 i.d.F. vom 16.05.2019. Berlin/Bonn. Available at: https://www.kmk.org/fileadmin/Dateien/veroeffentlichungen_beschluesse/2004/2004_12_16-Standards-Lehrerbildung-Bildungswissenschaften.pdf

Knigge, M., Krauskopf, K., and Wagner, S. (2019). Improving socio-emotional competencies using a staged video-based learning program? Results of two experimental studies. *Front. Educ.* 4:142. doi: 10.3389/feduc.2019.00142

Knutson Miller, K. (2001). Teacher perspective-taking: developmental and individual differences. *Educ. Res. Q.* 25, 22–33.

Konrath, S. H., O'Brien, E. H., and Hsing, C. (2011). Changes in dispositional empathy in American college students over time: a meta-analysis. *Personal. Soc. Psychol. Rev.* 15, 180–198. doi: 10.1177/1088868310377395

Kron, A., Goldstein, A., Lee, D. H.-J., Gardhouse, K., and Anderson, A. K. (2013). How are you feeling? Revisiting the quantification of emotional qualia. *Psychol. Sci.* 24, 1503–1511. doi: 10.1177/0956797613475456

Lane-Garon, P. S. (1998). Developmental considerations: encouraging perspective taking in student mediators. *Mediat. Quart.* 16, 201–217. doi: 10.1002/crq.3890160208

Lawrence-Lightfoot, S. (2003). *The essential conversation: what parents and teachers can learn from each other*. New York, NY: Ballantine Books.

Lehmann-Grube, S. K., Hartinger, A., and Dresel, M. (2019). "Entwicklung der Einstellungen Lehramtsstudierender zu Leistungsheterogenität. Der Einfluss von Lehrveranstaltungen [development of future teachers' attitudes towards heterogeneous performance. The influence of courses and lectures]" in *Lehrer. Bildung. Gestalten: Beiträge zur empirischen Forschung in der Lehrerbildung*. eds. T. Ehmke, P. Kuhl and M. Pietsch (Weinheim: Beltz Juventa), 33–43.

Leiner, D. J. (2019). SoSci survey (version 3.4.00) [computer software]. Available at: https://www.soscisurvey.de

Longmire, N. H., and Harrison, D. A. (2018). Seeing their side versus feeling their pain: differential consequences of perspective-taking and empathy at work. *J. Appl. Psychol.* 103, 894–915. doi: 10.1037/apl0000307

Loughran, J. J. (1996). *Developing reflective practice. Learning about teaching and learning through modelling*. London: Routledge.

Mach-Würth, J. (2021). *Gesund bleiben im Lehrerberuf: Eine empirische Studie zu subjektiven Gesundheitstheorien von Lehrkräften [staying healthy in the teaching profession: An empirical study on subjective health theories of teachers]*. Wiesbaden: Springer VS.

Maes, J., Schmitt, M., and Schmal, A. (1995). "Fragebogen für Empathie und Perspektivenübernahme [questionnaire for empathy and perspective taking]" in *Differentielle Psychologie und Persönlichkeitspsychologie kompakt*. eds. M. Schmitt and C. Altstötter-Gleich (Beltz: Weinheim).

Mann, G., Gilmore, L., Robertson, A., Kennedy-Wood, L., and Maia-Pike, L. (2024). Little things mean a lot: parent perspectives on positive teacher-parent communication when students have disability. *Teach. Teach.* 30, 1–14. doi: 10.1080/13540602.2023.2241020

Manohar, U., and Appiah, O. (2016). Perspective taking to improve attitudes towards international teaching assistants: the role of National Identification and prior attitudes. *Commun. Educ.* 65, 149–163. doi: 10.1080/03634523.2015.1081956

Markman, K. D., Klein, W. M., and Suhr, J. A. (2009). *Handbook of imagination and mental simulation*. New York: Psychology Press.

McAuliffe, W. H. B., Carter, E. C., Berhane, J., Snihur, A. C., and McCullough, M. E. (2020). Is empathy the default response to suffering? A meta-analytic evaluation of perspective taking's effect on empathic concern. *Personal. Soc. Psychol. Rev.* 24, 141–162. doi: 10.1177/1088868319887599

Mead, G. H. (1934). *Mind, self, and society*. Chicago: University of Chicago Press.

Paulus, C. (2009). *Der Saarbrücker Persönlichkeitsfragebogen SPF (IRI) zur Messung von Empathie. Psychometrische evaluation der deutschen version des interpersonal reactivity index [the Saarbrücken personality questionnaire SPF (IRI) for measuring empathy. Psychometric Evaluation of the German Version of the Interpersonal Reactivity Index]*. doi: 10.23668/psycharchives.9249

Piaget, J. (1932). *The moral judgment of the child*. London: Kegan, Paul, Trench, Trübner, & Co.

Pöhler, M., Briese, F., Wißmann, J., and Kinder, A. (2023). *Wenn ich die Mutter wäre… - Perspektivenübernahme bei angehenden Lehrkräften durch fallbasiertes Lernen fördern*. Refubium Freie Universität Berlin. doi: 10.17169/refubium-43434

Preston, S. D., and de Waal, F. B. M. (2002). Empathy: its ultimate and proximate bases. *Behav. Brain Sci.* 25, 1–20. doi: 10.1017/S0140525X02000018

Qualitätsoffensive Lehrerbildung (2023). Available at: https://www.qualitaetsoffensive-lehrerbildung.de/lehrerbildung/de/home/home_node.html

Roth, M., Schönefeld, V., and Altmann, T. (2016). *Trainings- und Interventionsprogramme zur Förderung von Empathie: Ein praxisorientiertes Kompendium [training and intervention programmes to promote empathy: a practice-oriented compendium]*. Berlin & Heidelberg: Springer.

Rothland, M. (2013). *Belastung und Beanspruchung im Lehrerberuf: Modelle, Befunde, Interventionen [stress and strain in the teaching profession: models, findings, interventions]. 2. vollständig überarb.* Edn. Wiesbaden: Springer VS.

Schmitt, M., and Altstötter-Gleich, C. (2010). *Differentielle Psychologie und Persönlichkeitspsychologie kompakt [differential psychology and personality psychology]*. Beltz: Weinheim.

Schmitt, M., Hübner, A., and Maes, J. (2010). Validierung des vereinfachten Beck-depressions-Inventars (BDI-V) an Fremdeinschätzungen [validation of the simplified Beck Depression inventory (BDI-V) on external assessments]. *Diagnostica* 56, 125–132. doi: 10.1026/0012-1924/a000019

Sheldon, S. B., and Epstein, J. L. (2002). Improving student behavior and school discipline with family and community involvement. *Educ. Urban Soc.* 35, 4–26. doi: 10.1177/001312402237212

Sherman, A., Cupo, L., and Mithlo, N. M. (2020). Perspective-taking increases emotionality and empathy but does not reduce harmful biases against American Indians: converging evidence from the museum and lab. *PLoS One* 15:e0228784. doi: 10.1371/journal.pone.0228784

Skorinko, J. L., and Sinclair, S. A. (2013). Perspective taking can increase stereotyping: the role of apparent stereotype confirmation. *J. Exp. Soc. Psychol.* 49, 10–18. doi: 10.1016/j.jesp.2012.07.009

Tarrant, M., Calitri, R., and Weston, D. (2012). Social identification structures the effects of perspective taking. *Psychol. Sci.* 23, 973–978. doi: 10.1177/0956797612441221

Todd, A. R., Bodenhausen, G. V., and Galinsky, A. D. (2012a). Perspective taking combats the denial of intergroup discrimination. *J. Exp. Soc. Psychol.* 48, 738–745. doi: 10.1016/j.jesp.2011.12.011

Todd, A. R., Galinsky, A. D., and Bodenhausen, G. V. (2012b). Perspective taking undermines stereotype maintenance processes: evidence from social memory, behavior explanation, and information solicitation. *Soc. Cogn.* 30, 94–108. doi: 10.1521/soco.2012.30.1.94

Tuller, H., Bryan, C., Heyman, G., and Christenfeld, N. (2015). Seeing the other side: perspective taking and the moderation of extremity. *J. Exp. Soc. Psychol.* 59, 18–23. doi: 10.1016/j.jesp.2015.02.003

Underwood, B., and Moore, B. (1982). Perspective-taking and altruism. *Psychol. Bull.* 91, 143–173. doi: 10.1037/0033-2909.91.1.143

Unterbrink, T., Zimmermann, L., Pfeifer, R., Wirsching, M., Brähler, E., and Bauer, J. (2008). Parameters influencing health variables in a sample of 949 German teachers. *Int. Arch. Occup. Environ. Health* 82, 117–123. doi: 10.1007/s00420-008-0336-y

Vescio, T. K., Sechrist, G. B., and Paolucci, M. P. (2003). Perspective taking and prejudice reduction: the mediational role of empathy arousal and situational attributions. *Eur. J. Soc. Psychol.* 33, 455–472. doi: 10.1002/ejsp.163

Vorauer, J. D., and Sucharyna, T. A. (2013). Potential negative effects of perspective-taking efforts in the context of close relationships: increased bias and reduced satisfaction. *J. Pers. Soc. Psychol.* 104, 70–86. doi: 10.1037/a0030184

Webex by cisco (2020). *Webex Konferenzsystem (version 2020) [Computer Software]*. San Jose, CA: Cisco Systems, Inc.

Weinert, F. E. (2014). *Leistungsmessung in Schulen [measuring performance in schools]*. Weinheim & Basel: Beltz.

Zaruba, N., Gronostaj, A., Ahlgrimm, F., and Vock, M. (2019). "Unter welchen Bedingungen entwickeln sich Überzeugungen im Praxissemester? Eine Interviewstudie [under what conditions do convictions develop during the practical semester? An interview study]" in *Lehrer. Bildung. Gestalten: Beiträge zur empirischen Forschung in der Lehrerbildung*. eds. T. Ehmke, P. Kuhl and M. Pietsch (Weinheim: Beltz Juventa), 20–32.

Zeichner, K. M., and Liston, D. P. (1996). *Reflective teaching: an introduction*. Mahwah, New Jersey. Erlbaum.