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## Preschool teachers' attitudes towards inclusion: a comparison study between China and Germany

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### ABSTRACT

Using a comparative approach is a widespread method in educational research. Previous cross-cultural comparison studies on teachers' attitudes towards inclusive education show a strong lack of focus on preschool teachers' attitudes towards inclusion. Thus, this study examined 65 Chinese and 59 German preschool teachers' attitudes towards inclusion by applying the Multidimensional Attitudes towards Preschool Inclusive Education Scale (MATPIES). A comparative analysis showed Chinese and German teachers' overall attitudes towards inclusive education as positive, with German teachers' attitudes being more positive. While teachers in both countries showed the highest behavioural attitude dimension scores, Chinese teachers' affective attitude dimension scored the lowest. Guided by the 'cultural-historical framework', we discussed how individualistic and collectivistic values influence teachers' overall attitudes in the two countries, especially their different scores in affective dimension of attitude. Implications for future research examining preschool teachers' attitudes in China and Germany as well as in the international context are discussed, with an emphasis on exploring how various factors both within and beyond teacher attributes to generate a more comprehensive understanding of the critical issue of teachers' attitude. Meanwhile, further indications for conducting international comparison studies on teachers' attitudes are also presented, including some methodological considerations for such studies.

### ARTICLE HISTORY

Received 04 March 2021  
Accepted 15 October 2021

### KEYWORDS

Inclusive education;  
attitudes; comparison study;  
preschool teachers

## Introduction

The development of inclusive education is taking roots in different countries in the international context. Both Education for All (EFA) and Sustainable Development Goal 4 (SDG 4) advocate for ensuring inclusive education for all children (Slee 2018). Numerous studies have shown teachers as key players in the successful implementation of inclusive education (Lee et al. 2015; Miesera and Gebhardt 2018), and their attitudes as successful predictors of their inclusion efforts and teaching strategies for both children with and without special educational needs (SEN) (Ruberg and Porsch 2017; Sharma and Nuttal 2016). Nevertheless, those studies predominantly explored teachers on primary and

Konstanzer Online-Publikations-System (KOPS)  
URL: <http://nbn-resolving.de/urn:nbn:de:bsz:352-2-rr2tptoxlrp43>

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secondary school levels, and little is known about preschool<sup>1</sup> teachers' attitudes (Dias and Cadime 2016; Lee et al. 2015). More research is thus needed to explore preschool teachers' attitudes towards inclusion (Dias and Cadime 2016).

Using a comparative approach in educational research is a widespread method (Powell 2015). Many previous studies have shown the key value of conducting cross-cultural comparison studies on teachers' attitudes towards inclusive education (Engelbrecht et al. 2013; Hein, Grumm, and Fingerle 2011; Miesera and Gebhardt 2018; Sharma et al. 2006). Specifically, such research may shed light on the role of factors that are context specific, which may generate valuable implications for inclusive teacher training and policy making (Sharma et al. 2006). Since no studies have compared Chinese and German preschool teachers' attitudes towards inclusion, this line of inquiry would potentially contribute to the further development of early childhood inclusion in both countries.

### *Preschool teachers' attitudes towards inclusion in the international context*

Attitudes are defined as 'a psychological tendency that is expressed by evaluating a particular entity with some degree of favour or disfavour' (Eagly and Chaiken 1993, 1). Professional attitudes are oriented towards social discourses, whereby specific patterns of interpretation, expectations and role perceptions become part of it (Feyzioglu 2012). They are usually seen as relatively stable constructs containing cognitive, affective and behavioural elements (Bizer, Barden, and Petty Bizer, et al., 2003). A cognitive component refers to ideas, thoughts, perceptions, beliefs, opinions or mental conceptualisation about the attitude object (Antonak and Livneh 1988). An affective component is based on emotions and feelings stimulated by the attitude object (Eagly and Chaiken 1993). The behavioural component is based on behavioural intentions towards the attitude object and on behaviours that are and have been actually exhibited towards the attitude object (Eagly and Chaiken 1993).

A thorough examination of preschool teachers' attitudes towards inclusion in the international context could be best described as principally positive (Dias and Cadime 2016; Štemberger and Kiswarday 2018; Engstrand and Roll-Pettersson 2014), though Dias and Cadime (2016) suggested that those positive attitudes need to be strengthened if successful inclusion is to be sustained in the daily practices. Moreover, compared to primary and secondary school teachers, preschool teachers appear to either hold the same or slightly more positive attitudes towards inclusion (Emam and Mohamed 2011; Lee et al. 2015; Kiswarday 2014; Štemberger and Kiswarday 2018). Kiswarday (2014) discussed the reason could be that compared to preschool teachers, primary and secondary school teachers are more performance-oriented, overlooking children's diverseness.

### *Preschool teachers' attitudes towards inclusion in China and Germany*

Similar to other countries, empirical studies on preschool teachers' attitudes towards inclusion are scarce in China and Germany (Hu and Roberts 2011; Wiedebusch and Albers 2016). According to the few existing studies, Chinese teachers' attitudes can be best summarised as inconsistent, while German teachers' attitudes as predominantly positive with slight concern.

Sun (2019) examined 816 preschool teachers' attitude towards inclusion from four districts in Shanghai by applying the 'Attitudes towards Teaching All Students (ATTAS)' scale and identified teachers' somewhat positive attitudes. Specifically, 49% of all the teachers showed supportive attitudes, while 51% showed either neutral (45%) or negative attitudes (6%). This conservatively positive attitude has also been identified in two other early studies by Gu (2009) focusing on seven preschools and in Sun (2007) exploring five preschools in Shanghai. Nevertheless, considering the dominating sympathetic and charitable attitudes towards children with disabilities in Chinese society and schools (Xu, Cooper, and Sin 2018; Tan 2020), the co-existing inclusive and special education systems for children with disabilities (Qu 2021), and the contradictory feelings of both supporting inclusion and special (segregated) schools among Chinese primary school teachers (Chen et al. 2006), it is thus possible that those conservatively positive attitudes may shift to a negative direction (Sun 2019). In another three most recent studies exploring preschool teachers' attitudes (Liu et al. 2016; Su, Guo, and Wang 2020) and perceptions of inclusive education (Hu et al. 2017), the least positive attitude, or even opposing attitudes towards inclusion were identified.

In Germany, Lohmann, Hensen, and Wiedebusch (2016) surveyed 141 special educators and 736 preschool teachers' attitudes towards inclusion and a fundamentally positive attitude was identified, agreeing with some other studies (e.g. Grönke and Sarimski 2018; Lohmann, Hensen, and Wiedebusch 2016). Nevertheless, Werding and Schinnenburg (2016) reported preschool teachers' insecurity towards inclusion in a survey of more than 1000 teachers. They rated their competencies in this regard as the worst in comparison to other areas of their profession.

Considering that so few studies in China and Germany examined preschool teachers' attitudes towards inclusion, let alone the three dimensions of their attitudes, our study would serve as one of the first endeavours to explore in this direction. More importantly, it would be of great value to examine whether there are group differences in the three attitude dimensions between Chinese and German teachers.

### *Early childhood inclusion in China and Germany*

In developing an understanding of a global phenomenon like inclusive education, one should take into account the specific cultural and historical contexts in which inclusive education developments take place (Artiles and Dyson 2005.). Thus, a short description of the historical background and the current status of early childhood inclusion in both countries are necessary.

#### *Policies and definitions of early childhood inclusion*

In line with the Salamanca Statement (United Nations Educational, Scientific and Cultural Organization (UNESCO) 1994), the Convention on the Rights of Persons with Disabilities (United Nations 2006), and the 2030 Agenda for Sustainable Development (Lockwood and Tardi, 2014), Chinese and German governments have been promoting inclusive education for the past years. Both countries have implemented key national policies to support the development of early childhood inclusion. In China, only until the 1990s, early childhood inclusion has been advocated by 'The People's Republic of China on Protection of Disabled Persons Act' (National People's Congress 1990) and 'Educational Guidelines for

People with Disabilities' (National Education Committee of the People's Republic of China 1994). While ratifying the UNCRPD in 2008, early childhood inclusion was not specifically addressed. It was only until 2017, the 'revised 1994 Regulations for Educating Students with Disabilities' made inclusion mandate (Zhao and Zhang 2018). Moreover, with the appeal of constructing a harmonious society, the Chinese government has gathered professionals to explore the concept of early childhood inclusion and methods for assessment (Hu and Kejian 2012) and initiated 'the Second Special Education Promotion Plan (2017–2020)' to advocate early childhood inclusion. In Germany, joint education of children with and without disabilities in preschools began in the 1970s (Werning 2019), almost two decades earlier compared to China. The Eighth Book of the German Social Code (Sozialgesetzbuch (SGB VIII), n.d.) enables inclusion to be implemented at the preschool level. The German Commission for UNESCO (2009) also described early childhood inclusion as a target perspective. The implementation of inclusion is also addressed in most of the educational plans of the German federal states (Albers and Lichtblau 2014). Nevertheless, the legal situation of some state is different and recently the state of Lower Saxony passed a law on for children at the preschool level that does not address the issue of inclusion (Nifbe 2020).

Despite the national laws, there are drastic differences in how inclusion is implemented in both countries. Firstly, the legislations initiated by the Chinese government failed to provide clear guidelines for preschools and teachers to implement inclusion (Hu, Lim, and Boyd 2016; Hu and Szente 2010). Due to a dominant medical understanding of disability and other contextual grounds (e.g. lack of resources and qualified teachers), only children who can prove to be capable of sitting quietly and learning effectively in general settings can be accepted (Su, Guo, and Wang 2020). Very few public preschools are willing to consider enrolling children with disabilities (Hu and Szente 2010). Moreover, Chinese teachers are not so optimistic about the feasibility of inclusive education (Hu et al. 2017) and are only required mandatorily 'to work with children with disabilities' by the revised 1994 Regulations for Educating Students with Disabilities in 2017 (Zhao and Zhang 2018). In Germany, it can be seen that there is a clear orientation from 'separation' towards 'inclusion' in preschools (Werning 2019). The proportion of those attending inclusive rather than segregated preschools is increasing. In 2019, almost half (48%) children with SEN went to more inclusive preschool settings (Autorengruppe Bildungsberichterstattung 2020). Nevertheless, the situation in the individual federal states varies and the inclusion rates differ significantly between the federal states. In contrast to the situation in the school system (Werning and Lichtblau 2020), however, a comparatively large number of children with SEN at the preschool level are accommodated in integrative or rather inclusion-oriented settings (Lichtblau 2019). Since 2011, inclusive education has been anchored as a task for preschool teachers in their qualification profile (Brunner 2018; Werding, Schinnenburg, and Walk 2014).

Meanwhile, both countries share some similarities while developing inclusion. Firstly, the definition of inclusive education is inconsistent and unclear (Tan 2020; Werning 2019), which is also widely shared in the international context (Florian and Black-Hawkins 2011; Krischler, Powell, and Pit-Ten Cate 2019). To start with, there is no uniform translation of the term 'inclusion' in Chinese: both 'Quanna' (meaning 'to include all') and 'Ronghe' (meaning 'to merge and fuse') are used interchangeably. In Germany, sometimes 'inclusion' and 'integration' are used synonymously without clarifying the differences (Grosche

2015). Secondly, the existing inclusion research unanimously focuses on the inclusion of children with identified disabilities or special needs (Hollenbach-Biele and Klemm 2020; Hu, Lim, and Boyd 2016; Hu and Szente 2010; Tan and Perren 2021; Tan 2021; Werning 2019.), even though the concept has a tendency to encompass various difference lines like children's gender, social and cultural backgrounds in Germany (Werning 2019.). Thirdly, both countries have a dependence on special education while developing inclusive education historically. Specifically, in China, while children with three disabilities (intellectual disability, visual disability and hearing impairments) learning in the regular classrooms (LRC) serving as the main educational setting of inclusion (Yan and Deng 2019), the special educational system is maintained as the leading educational setting for children with other types of disabilities (e.g. attention deficit and hyperactivity disorder (ADHD), autism spectrum disorder (ASD) and multiple disabilities). Thus, special education co-exists with inclusive education in China, as is often referred to as 'special education schools serving as the backbone, learning in regular classroom (LRC) as the main body' in other study (Qu 2021). Meanwhile, Germany's special education system has been developing for more than 150 years and it has been one of the most developed special education systems (Werning and Birgit 2016). The development of inclusive education in Germany has been characterised by contradictions from the start, which result from the structural selectivity of the secondary school system and the maintenance of special schools (Sturm 2016). Last but not the least, though both countries advocating for inclusive education to be emphasised in teachers' qualifications, it is not a focus for preschool teachers' further training (Werding, Schinnenburg, and Walk 2014; Tan 2020).

### *In-service further training system*

Though many researchers (Heimlich 2015; Tan and Perren 2021; Werding, Schinnenburg, and Walk 2014) have been strongly emphasising the key value of in-service training for preschool teachers to develop inclusive education in Germany and in China, further training on inclusive and special education is not anchored in teachers' in-service training system. There is no centrally controlled structure nor time scope of the training on national or provincial/state level in both countries. In Germany, it is mainly offered in various external formats such as team-based training, lecture series and supervised by public or private/commercial providers. In China, those trainings focus on children's disability features instead of concrete strategies to include them, strictly and limitedly provided by public organisations (e.g. special education training centres or universities) (Tan 2020).

Moreover, most German teachers take part in in-service training that is less longer than 3 days (Beher and Walter 2012) while their Chinese counterparts take around one or two semester(s) to finish the in-service training in China. Nevertheless, those trainings are arranged on weekends in China, which discourage teachers' motivation and engagement, especially considering that they are already overworking (Tan 2020). While exploring the reasons for such arrangements, difficult framework conditions such as lack of personnel and financial resources potentially lead to short-term trainings in Germany. In China, teachers rely on longer in-service training to gain a basic understanding of inclusion since their pre-service trainings do not include any special or inclusive educational contents (Hu and Szente 2010).

## *Cross-cultural research: comparing China and Germany*

Savolainen et al. (2012) emphasised the importance of conducting cross-cultural comparison studies within the cultural–historical framework to prevent the reproduction of inequalities for certain groups of children and to develop successful inclusive education practice. A comparative analysis that takes cultural–historical factors into account will enable the researchers to develop an understanding of variations and identify patterns in the ways in which inclusive education, such as teachers' attitudes towards inclusion, is shaped by societal, political, economic and cultural forces (Artiles and Dyson 2005).

### *Research questions*

Considering so few studies being conducted in both Chinese and German preschool context to explore teachers' attitudes towards inclusion, let alone a comparison study between the two countries guided by the cultural–historical framework (Artiles and Dyson 2005), our current paper will pursue this line of work by addressing mainly the following two research questions:

What do preschool teachers' attitudes towards inclusive education look like in China and Germany?

Are there differences or similarities between Chinese and German teachers' three different dimensions of attitudes towards inclusive education?

## *Methodology*

### *Instrument*

The Multidimensional Attitudes towards Preschool Inclusive Education Scale (Lohmann, Hensen, and Wiedebusch 2016) was used to collect the data. MATPIES was adapted from Mahat's (2008) English version 'MATIES' for surveying preschool teachers' attitudes towards inclusion in German-speaking countries. As one element of socio-cultural divergence, linguistic differences may affect participants' responses (Jahnukainen 2015). Thus, the following procedures have been adapted to ensure that the translated version of the survey adequately expresses the same meaning as the German one before applying to the Chinese sample. Firstly, the first author (Chinese as mother tongue and fluent in German) made the first translation, during which constant consultations and discussions with the third and fourth authors (with German as their mother tongue) taking place. Secondly, a master student majors in Chinese–German translation then did the proofreading, and any changes were carefully discussed with the first author, until full agreement was achieved in the end.

MATPIES breaks down attitudes into cognitive, affective and behavioural components (Lohmann, Hensen, and Wiedebusch 2016; Lohmann et al. 2016), which form a scale of the instrument with six items each (see Table 1 for example item). MATPIES comprises a total of 18 items, which are to be assessed on a six-level rating scale (1: fully disagree to 6: fully agree, see Lohmann et al. 2016). Lohmann et al. (2016) examined the reliability and validity of the instrument based on a sample of  $N = 1030$  to be adequate (between 0.73 and 0.83).

**Table 1.** Cronbach's alpha values of MATIES (Mahat 2008) and MATPIES (Lohmann et al., 2016).

Scale	Example of an Item	MATIES Cronbach's $\alpha$	MATPIES Cronbach's $\alpha$
<i>Cognitive attitudes</i>	I believe that inclusion facilitates socially appropriate behaviour amongst all students.	$\alpha = .77$	$\alpha = .74$
<i>Affective attitudes</i>	I am uncomfortable including students with a disability in a regular classroom with other students without a disability.	$\alpha = .78$	$\alpha = .73$
<i>Behavioural attitudes</i>	I am willing to adapt the curriculum to meet the individual needs of all students regardless of their ability.	$\alpha = .91$	$\alpha = .83$

The results of the Cronbach's alpha values indicate a satisfactory to good reliability of the three scales. Moreover, these values largely correspond to the values of the original version by Mahat (2008). Table one lists the scale-related Cronbach's alpha values of the studies by Mahat (2008) and Lohman et al. (2016).

### Sample

The sample is made up of a total of 124 teachers. The subsample of German (G) teachers consists of 59 teachers and the Chinese (CH) of 65 teachers. The gender distribution shows a low proportion of male teachers at only 10.5%. This is common for the elementary sector in both countries and thus the sample adequately represents the conditions in the field in this respect. The average age of the German subsample is 33 years. For the Chinese subsample, no exact age data are available for culture-specific reasons. However, age groups were queried for the entire sample, and 60% of respondents were 26–30 years old (CH = 71%; G = 48%), 15% 31–40 years old (CH = 15%; G = 37%), and 9% 41–50 (CH = 14%; G = 15%) years old. Furthermore, values are available for the duration of professional activity in early childhood institutions. In the total sample, the average duration of employment is 6 years (SD = 6.3) (CH = 3.5/SD = 4.1; G = 9/SD = 7.1) with a wide range of 0–30 years. The values of the quartiles are 2 years for the first quartile (CH = 0; G = 3.5), 4.1 years for the second (CH = 2.5; G = 6.8), and 8 years (CH = 5; G = 13.4) for the third quartile. Based on the data, it is evident that the Chinese sub-sample is increasingly composed of teachers at the beginning of their professional careers, while the German sub-sample is relatively balanced from this perspective and increasingly composed of teachers who have been working professionally in preschools for a longer period of time. Ultimately, only teachers working full time were included in the evaluation. The average weekly working time in the sample was therefore 38 hours (SD = 6.5; median = 37.5; range = 33.5–44).

### Results

The results show that there is a highly significant difference ( $t(122) = 8.50, p < .001$ ) in attitudes towards the implementation of inclusive education in preschools between German and Chinese teachers. The German subsample is characterised by a more positive attitude with reference to the total score of MATPIES (see Table 2). The calculation of the effect size also underlines this strong difference, and with  $r = 0.61$  a correlation coefficient is obtained that can be interpreted as a strong effect.

**Table 2.** Mean differences of MATPIES total values of the German and Chinese subsamples.

Country of origin	N	M	SD	SEM
Germany	59	5,1598	54,772	07131
China	65	4,2650	61,800	07665

If the values of the subscales are further compared with each other, the t-test for independent samples also leads to highly significant differences on all three scales. The mean differences are particularly high for the “affective attitudes” scale (see Table 3). However, both German and Chinese teachers show a tendency towards a more positive assessment of inclusive education, as the mean values for cognitive, affective and behavioural scales of attitudes are above the theoretical mean (see Table 3).

The test values  $r$  of the effect size indicate a strong effect in relation to the subscales ‘cognitive attitudes’ and ‘affective attitudes’, while the subscale ‘behavioural attitudes’ can be classified in the medium effect size range (see Table 4).

## Discussion

Our study shows both Chinese and German preschool teachers’ positive attitudes towards inclusion, with German teachers’ attitudes being more positive. The application of the MATPIES scale further strengthens its validity to examine German preschool teachers’ attitudes (e.g. Lohmann et al. 2016), and provides the very first evidence to show its application in an eastern cultural context: the Chinese context, after careful adaptations to the Chinese cultural context. However, due to the small sample size of both German and Chinese teachers, future studies with more representative samples are needed to strengthen the scale’s cross-cultural validity.

**Table 3.** Results of significance testing using t-test for independent samples on subscale level.

Subscale <sup>a</sup>	Country of origin	N	M	SD	SEM
Cognitive Attitudes	Germany	59	4,9938	68,342	08897
	China	65	4,0795	75,410	09353
Affective Attitudes	Germany	59	5,1237	80,692	10,505
	China	65	3,9692	86,897	10,778
Behavioural Attitudes	Germany	59	5,3528	60,593	07888
	China	65	4,7462	74,658	09260

<sup>a</sup>Each scale contains six items that are rated on a six-level scale (1: disagree to 6: fully agree).

**Table 4.** Results of significance testing using t-test for independent samples on subscale level.

Subscale	Leven-test of variance equality		t-test for equivalence of means				Effect strength	
	F	Sig.	T	df	Sig.	MD	SED	R
Cognitive Attitudes	701	404	7,049	122	000	91,430	12,971	0.54
Affective Attitudes	687	409	7,643	122	000	1,15,450	15,105	0.57
Behavioural Attitudes	1,226	270	4,937	122	000	60,667	12,287	0.41



### *Preschool teachers' attitudes towards inclusion*

Aligning with the findings of previous literature (Dias and Cadime 2016; Engstrand and Roll-Pettersson 2014; Grönke and Sarimski 2018; Lee et al. 2015; Lohmann et al. 2016), our study shows preschool teachers' positive attitudes towards inclusion. The insecurity German teachers felt about inclusion (Werding and Schinnenburg 2016) was not identified in our study. Nevertheless, this finding needs to be critically examined due to the small German sample size. Meanwhile, Lohmann et al. (2013) critically identified that, though teachers valuing inclusion positively, they prefer special services for some groups of children with special needs, and emphasised they could only imagine implementing inclusion when it is first realised in the whole society, showing the tokenism understanding and attitudes towards inclusive education.

Meanwhile, unlike previous studies that identified Chinese teachers' inconsistent and relatively negative attitudes towards inclusion (Liu 2011; Sun 2019; Su, Guo, and Wang 2020; Hu et al. 2017), a more general positive attitude was identified in our study. This may show that teachers' attitudes, though still viewed as critical, are not the most challenging issues to develop inclusive education in Chinese context as past research indicated (Deng et al. 2017). Nevertheless, due to our very small Chinese sample, this finding is not generalisable to all Chinese preschool teachers and should be critically perceived, especially considering the widely existing sympathetic and charitable attitudes towards children with disabilities in Chinese society and school system (Xu, Cooper, and Sin 2018; Tan and Perren 2021). Future studies should examine teachers with more representative samples and from other regions, particularly those in rural China, to achieve a more comprehensive picture of Chinese preschool teachers' attitudes towards inclusion.

While both holding positive attitudes towards inclusion, German teachers' attitudes are significantly more positive compared to their Chinese counterparts. Two potential reasons could explain this difference while referring to previous comparison studies. Firstly, in line with Miesera and Gebhardt (2018) who discussed how the developmental status of inclusive education influences teachers' attitudes, German teachers' more positive attitudes may relate to the more established inclusive school system and the more important role of inclusive education in their teacher-education. Specifically, though each German federal state differs in implementing inclusive education at the preschool level, Germany started to include children with disabilities to preschools almost two decades earlier compared to China. Meanwhile, while inclusive education has been anchored as a task for German preschool teachers in their qualification profile since 2011 (Brunner 2018; Werding, Schinnenburg, and Walk 2014), Chinese teachers are required to teach children with disabilities mandatorily until 2017 (Zhao and Zhang 2018). Secondly, agreeing with Sharma et al. (2006), cultural differences like individualism and collectivism may influence teachers' responses style. Specifically, as one example of the potential cultural contingency of teachers' response style, 'modesty bias' is predominant in the collectivist culture of China, where to present oneself as average within a group is preferable, which likely resulting in Chinese teachers' lower scores on the three dimensions of attitude measures.

Moreover, agreeing with Thomsen (2006), our study identified the ambivalence within the three dimensions of teachers' attitudes. While teachers in both countries showed the highest behavioural dimension scores that indicate their particular inclination to adapt the classroom setting and adjust their teaching methods to successfully include all

children in the activities (Dias and Cadime 2016), Chinese teachers' affective dimension scored the lowest. This may suggest that Chinese teachers do not have a very positive effect regarding the inclusion of students with special educational needs in the general settings (Dias and Cadime 2016). Meanwhile, the different scores in affective attitude could be also explained by the different socio-cultural values that regulate how Chinese and German teachers express their emotions (Matsumoto, Yoo, and Nakagawa 2008). Specifically, like many Asian cultures, Chinese social cultural values cherish the interdependence and maintenance of social order, which may lead to teachers' suppression strategy of their emotion (Yin 2016), thus scoring the lowest in affective dimension. Meanwhile, within German culture, like many western cultures, individuals' independence and self-assertion is valued (Yin 2016), which may encourage German teachers' open expression of emotions, thus contributing to their higher affective scores.

### Limitations

There are some limitations of our study. Firstly, we should be careful in generalising the findings since both samples are relatively small and are recruited through a convenience sampling. Secondly, the data collection was accomplished through a quantitative questionnaire, which can be affected by social desirability. In the future, an in-depth and representative study based on a larger sample should be conducted.

### Implications for future research

Our study shows that German teachers' more positive attitudes towards inclusion compared to their Chinese counterparts and tried to discuss how cultural collectivistic and individualistic values could account for the differences. Future research needs to collect variables that can scientifically explain and clarify those attitudinal differences, especially in the three different dimensions (Kullmann et al. 2014). To be more specific, based on the previous research studies that explore how teachers' various personal and professional factors influence their attitudes, future research should examine how teachers' experience with or knowing someone with special educational needs (Tsakiridou and Polyzopoulou 2014; Dias and Cadime 2016); experiences (especially successful ones) in teaching in classrooms that included students with special educational need (Ahmmed, Sharma, and Deppeler 2012; Dias and Cadime 2016); continuous training on inclusion and special educational needs (Lee et al. 2015; Štemberger and Kiswarday 2018) influence preschool teachers' attitudes. Meanwhile, future research also needs to examine other potential factors beyond teacher attributes, factors such as school culture, parent expectations, school resources, which potentially will yield a deeper understanding of the critical issue of teachers' attitude (Lee et al. 2015).

Meanwhile, our study also provides some valuable implications for conducting international comparison studies on teachers' attitudes. Firstly, our study and the previous study (Yin 2016) tend to show that teachers from an individualistic culture are likely to have more positive attitudes compared to their counterparts from a collectivistic culture due to how the values influence teachers' response styles and how they regulate their emotions. Future comparison studies on teachers' attitudes should focus more on observing teachers in daily teaching practice to see how those attitudes translate into the daily

inclusion practice. Secondly, while conducting international comparison studies applying existing surveys from one culture to another, it is fundamentally important to ensure cross-cultural validity and usually a pilot study needs to be first conducted.

## Conclusions

Our study serves as the first to compare Chinese and German preschool teachers' attitudes towards inclusion. It also represents one of the first endeavours to explore preschool teachers' attitudes towards inclusion in both countries (Tan 2020; Wiedebusch and Albers 2016). Guided by the cultural–historical framework, we examined how individualistic or collectivistic values influence Chinese and German preschool teachers' attitudes differently. Future international comparison research needs to examine potential factors both within and beyond teacher attributes to generate a more comprehensive understanding of the critical issue of teachers' attitude (Lee et al. 2015) by applying more constructivism approaches and longitudinal study designs. Moreover, to diminish the gap between theory and practice and prepare innovative and more effective inclusive preschool teacher education programmes, more studies will be conducted to further explore early childhood inclusion in China and Germany in the coming years, including addressing the questions raised in the current study (Štemberger and Kiswarday 2018).

## Note

1. The setting in Germany that enroll children from 3 to 6 are called kindergartens while in China, they are called preschools. In our article, for the consistent reference, we use 'preschools' to refer to the two different settings that have children from 3 to 6 (before entering primary schools) in both countries.

## Disclosure statement

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

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