EXPLORING THE DYNAMICS OF INCLUSIVE EDUCATION: A COMPARATIVE STUDY OF IN-SERVICE AND PRE-SERVICE PRESCHOOL TEACHERS USING INDEX OF INCLUSION

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ABSTRACT

During the 1980s, China's National Education Commission's Education Department initiated the "Learning in Regular Classroom" program, aimed at promoting inclusive education by integrating children with special educational needs into mainstream classrooms. This program laid the groundwork for inclusive education in China. Despite the gradual implementation of inclusive education across the country, its advancement in preschool settings has been relatively slow. This study focuses on preschool teachers, exploring the indicators of inclusive preschool education through data analysis from both in-service and pre-service teachers. We conducted a survey involving 30 in-service and 30 pre-service preschool teachers, utilizing a questionnaire to evaluate inclusive education indicators. The findings revealed that both groups had comparatively low scores in the aspects of inclusive culture and policy in preschool environments. Notable differences were observed among the groups regarding inclusive culture, policies, and practices. The study's results offer insights into the existing state and potential future of inclusive education in Chinese preschools, highlighting areas for improvement and further research.

Keywords: Index of inclusion, preschool inclusive education, China, in-service teachers, pre-service teachers

INTRODUCTION

The evolution of inclusive education signifies a monumental shift, transcending from the segregation of children with special needs towards the prioritization of their integration into mainstream classrooms (Ainscow et al., 2006). This transformative change, propelled by global initiatives like the Salamanca Statement of 1994 advocating for inclusive education on a worldwide scale (UNESCO, 1994), underscores the pivotal role of inclusivity in countering discrimination, fostering community inclusiveness, and achieving universal education (Ainscow et al., 2019). Recognizing that the success of inclusive education hinges on the perceptions and practices of teachers, this study delves into the perceptions of both pre-service and in-service teachers concerning inclusive cultures, policies and practices.

The worldwide implementation of inclusive education manifests considerable diversity influenced by cultural, political, and social factors. Notably, the Individuals with Disabilities Education Act (IDEA) in the United States champions the least restrictive environment for students with disabilities, often emphasizing participation in general education classrooms (Yell et al., 2004). Conversely, nations like China have embraced inclusive education more recently, initiating the integration of students with special needs in the 1980s through the "Learning in Regular Classroom" policy (Deng & Poon-McBrayer, 2012). This policy marked a pivotal shift towards incorporating children with special educational needs into mainstream classrooms, accompanied by subsequent reforms emphasizing the enhancement of education quality for disabled students (Peng, 2017). However, persistent challenges in promoting inclusive education at the preschool level in China necessitate comprehensive transformations in ideas, policies, evaluation methodologies, resources, and curricula (Zhu, 2011).

The central role of teachers in the inclusive education landscape cannot be overstated, as their perceptions significantly shape the success of its implementation (Feng, 2016). The perceptions of teachers, influenced by factors such as governmental structure, economic stage, cultural context, and individual understanding, play a pivotal role in shaping inclusive education practices (Feng, 2016). The intricate link between pre-service teachers' perceptions and their classroom effectiveness underscores the profound impact of teachers' perceptions on the actualization of inclusive educational practices (Warnock et al., 2010). Despite commendable progress, there persists a critical need for ongoing development and refinement of inclusive education practices, policies, and teacher training programs to fully harness the potential benefits in the unique context of China (Booth et al., 2006; Feng, 2016; Huang, 2004; Lindsay, 2003; Peng, 2017; Zhu, 2011).

Understanding the perceptions of both pre-service and in-service teachers concerning inclusive cultures, policies and practices is paramount in creating an educational environment that caters to the diverse needs of all students (Florian, 2014; Ainscow et al., 2006). Inclusive education, which aims to provide equal opportunities for learning and participation, requires a comprehensive examination of teachers' perspectives at different stages of their careers (Ainscow, 2016). Pre-service teachers, being in the early stages of their training, bring theoretical knowledge and fresh perspectives to the discourse on inclusive education (Smith et al., 2019). Research indicates that understanding their perceptions is critical in identifying potential gaps in their comprehension of inclusive practices (Artiles & Kozleski, 2016). By uncovering these gaps, teachers and policymakers can refine pre-service training programs to address specific challenges, preparing future teachers to navigate the complexities of inclusive classrooms confidently (Booth & Ainscow, 2002).

On the other hand, In-service teachers, actively engaged in teaching, offer practical insights into the day-to-day challenges and successes of inclusive education (Hornby et al., 2017). Their perspectives provide a nuanced understanding of how inclusive policies translate into classroom practices. Studies suggest that in-service teachers' experiences significantly influence the effectiveness of inclusive education (Jones & Brown, 2020). Exploring their views helps to illuminate the real-world implications of inclusivity and guides the development of targeted interventions to enhance teaching practices (Ainscow et al., 2020). Hence, understanding how both pre-service and in-service teachers perceive inclusive cultures directly influences their readiness to create inclusive classrooms. A study by Johnson and Smith (2021) highlights that addressing misconceptions early in a teacher's career positively impacts their confidence and preparedness to handle diverse student needs. This readiness is crucial for adapting teaching strategies and providing individualized support to create an inclusive and supportive learning environment.

To measure the implementation of inclusive education in Chinese preschools, the 'Index of Inclusion' is utilized (Booth et al., 2006). Developed by The Centre for Studies on Inclusive Education, this index assesses the quality of play, learning, and engagement within inclusive contexts, comprising three dimensions: creating inclusive cultures, producing inclusive policies, and evolving inclusive practices (Booth et al., 2006). This study aimed to investigate the index of inclusion for Chinese preschools based on pre-service and in-service teachers' reports. The research questions are designed to address the following:

Are there significant differences between pre-service and in-service teachers in terms of their perceived indexes of inclusion?

1. What is the representation of inclusive culture in Chinese preschools?
2. What is the representation of inclusive policies in Chinese preschools?
3. What is the representation of inclusive practices in Chinese preschools?
4. What is the relationship between inclusive culture, policies, and practices in Chinese preschools?

METHODOLOGY

Using the questionnaire of inclusive education indicators created by Booth et al. (2006), this study examines the inclusive education indicators of preschool instructors in Sichuan Province, China. The original questionnaire was translated into Mandarin by the first author and the translation validity was checked by two bilingual researchers. The research questionnaire was converted into online questionnaire format, distributed to 30 in-service teachers across six preschools in Sichuan Province, China and 30 pre-service teachers in a teacher training program in a local university in Sichuan Province, China using the online survey platform in China - *wenquanxin*. a total of 60 questionnaires were distributed and collected.

Participant

This study will consist of two distinct cohorts of teacher volunteers. The initial cohort of teacher participants consists of 30 in-service teachers. The participants in this study consisted of a class teacher, living skills teacher, tutor, and intern teacher in schools. The second group of teachers comprised 30

university students who were enrolled in the teacher training program and referred to as pre-service teachers. Additionally, they were chosen by the utilization of a convenient sampling technique.

Design of Instruments

In this study, the questionnaire is designed using distinct criteria for these three parameters. The inclusive indicators are evaluated through quantitative research, and the implementation of inclusive education is determined based on the findings of the study of these inclusive indicators (Booth et al., 2006). The system consists of three components: Dimension A, which involves the creation of inclusive cultures (13 things), Dimension B, which focuses on the development of inclusive policies (15 items), and Dimension C, which pertains to the advancement of inclusive practices (18 items). Dimension A pertains to fostering a sense of community and promoting inclusive values within a school environment. Dimension B focuses on engaging with all children in the local area and reducing factors that may lead to exclusion. Dimension C encompasses inclusive practices that support play, learning, and participation. The collected data indicate a high level of internal consistency among these three dimensions.

Table 1: Cronbach's Alpha Values (N = 60)

	Cronbach's Alpha	N of Items
Dimension A: Creating inclusive cultures	.878	13
Dimension B: Producing inclusive policies	.881	15
Dimension C: Evolving inclusive practices	.952	18

Data Analysis

Statistical analysis was done by using descriptive and inferential statistics with the help of independent-sample t-test for the difference between two means. The software used in the analysis was SPSS 27.0.

RESULTS AND FINDINGS

Participants in the study included 30 in-service teachers and 30 pre-service teachers. Among service teachers, there were 5 male teachers (17%) and 25 female teachers (83%). Their ages ranged from 20-25 years old (17%), 25-30 years old (50%), and over 30 years old (33%). 73% of teachers have received training in inclusive education and 17% have not received inclusive education. Among them, 53% have experience teaching students with special needs.

Among the pre-service teachers, there were 6 male teachers (20%) and 24 female teachers (80%); ages ranged around 20-25 years old (100%). Among them, 20% have received inclusive education and 80% have not received inclusive education. Only 10% of them reportedly having had experience teaching students with special needs.

Table 2：Basic information of participants

Item		In-service Teachers (n=30)	Percent	Pre-service teachers ((n=30)	Percent
Gender	Female	25	83%	24	80%
	Male	5	17%	6	20%
Age	20-25	5	17%	30	100%
	25-30	15	50%	0	0%
	≧30	10	33%	0	0%
Teaching experience	Yes	30	100%	3	10%
	No	0	0%	27	90%
Received inclusive education and training	Yes	22	73%	6	20%
	No	8	17%	24	80%
Having had experience in teaching children with special needs	Yes	16	53%	3	10%
	No	14	47%	27	90%

Score differences between in-service teachers and pre-service teachers

Table 3 displays the findings from the independent sample t-tests. According to the findings, there is no significant difference between in-service teachers and pre-service teachers in terms of inclusive indicators, $t = -.712$, $p = .480$. For both groups of teachers, their indicators of inclusive practice are the highest ($M = 3.90$ and 3.85). However, they showed differences in the indicators of inclusive culture and policy. For inclusive culture, the in-service teachers reported a higher mean ($M = 3.78$) compared to pre-service teachers ($M = 3.74$). For inclusive policy, the pre-service teachers ($M = 3.76$) reported a higher score than in-service teachers ($M = 3.73$).

Table 3: Mean Comparison

Item	In-Service teachers (n=30)	Pre-service teachers (n=30)	Independent t-test results
Inclusive Culture	3.78	3.74	$t = .024, p = .981$
Inclusive Policy	3.73	3.76	$t = -.640, p = .525$
Inclusive Practice	3.90	3.85	$t = -.974, p = .336$
Inclusive Index	3.81	3.79	$t = -.712, p = .480$

Inclusive culture in China preschools

Figure 1 shows the means for the inclusive culture items. For both groups of teachers, the highest scores were reported to items that reflected family-centered approach in teaching, namely Items 13 (The setting helps parents/careers to feel good about themselves, $M_{pre-service} = 3.97$, $M_{in-service} = 3.87$), 12 (The setting helps children to feel good about themselves, $M_{pre-service} = 3.97$, $M_{in-service} = 3.93$) and 10 (Expectations are high for all children, $M_{pre-service} = 3.90$, $M_{in-service} = 3.90$). The findings revealed consensus in terms of the educational culture in China, in which the benefits of children and their families are being prioritised. In comparison, items which recorded the lowest means are items related to collaboration and community involved, namely Item 8 (all local communities are involved in the setting, $M_{pre-service} = 3.33$, $M_{in-service} = 3.40$) and Item 9 (everyone involved in the setting shares a commitment to inclusion, $M_{pre-service} = 3.57$, $M_{in-service} = 3.67$). This second findings revealed that stakeholders are still working in silo in terms of the promotion of inclusive culture in China preschools.

Figure 1: Inclusive culture items
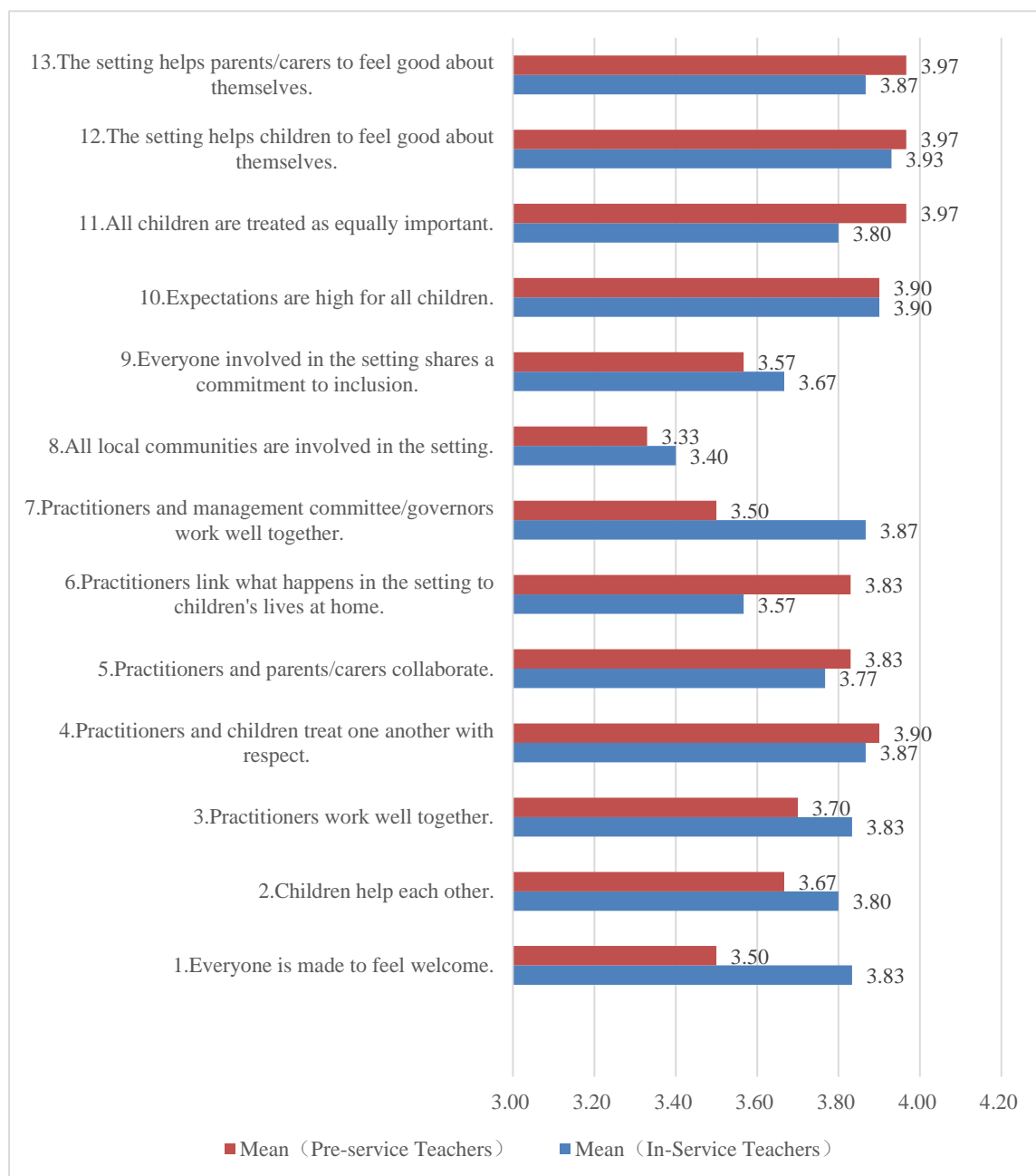
Inclusive policies in China preschools

The findings for the policy items revealed the prioritisation of children-focused approach. Items with the highest means included Item 5 (All new children are helped to settle, $M_{pre-service}$ = 3.90, $M_{in-service}$ = 3.93) and Item 3 (All children in the area are encouraged to join the setting, $M_{pre-service}$ = 3.87, $M_{in-service}$ = 3.93). On the other hand. Items with the lowest means revealed that the focus on ethnic-minority and children from diverse-backgrounds and abilities are still inadequate. Items with the lowest means are Item 11 (Support for those who have a home language other than mandarin benefits all children, $M_{pre-service}$ = 3.67, $M_{in-service}$ = 3.50), signaling a potential gap in catering to the diverse linguistic and cultural needs of the student population.

Figure 2: Inclusive policies items
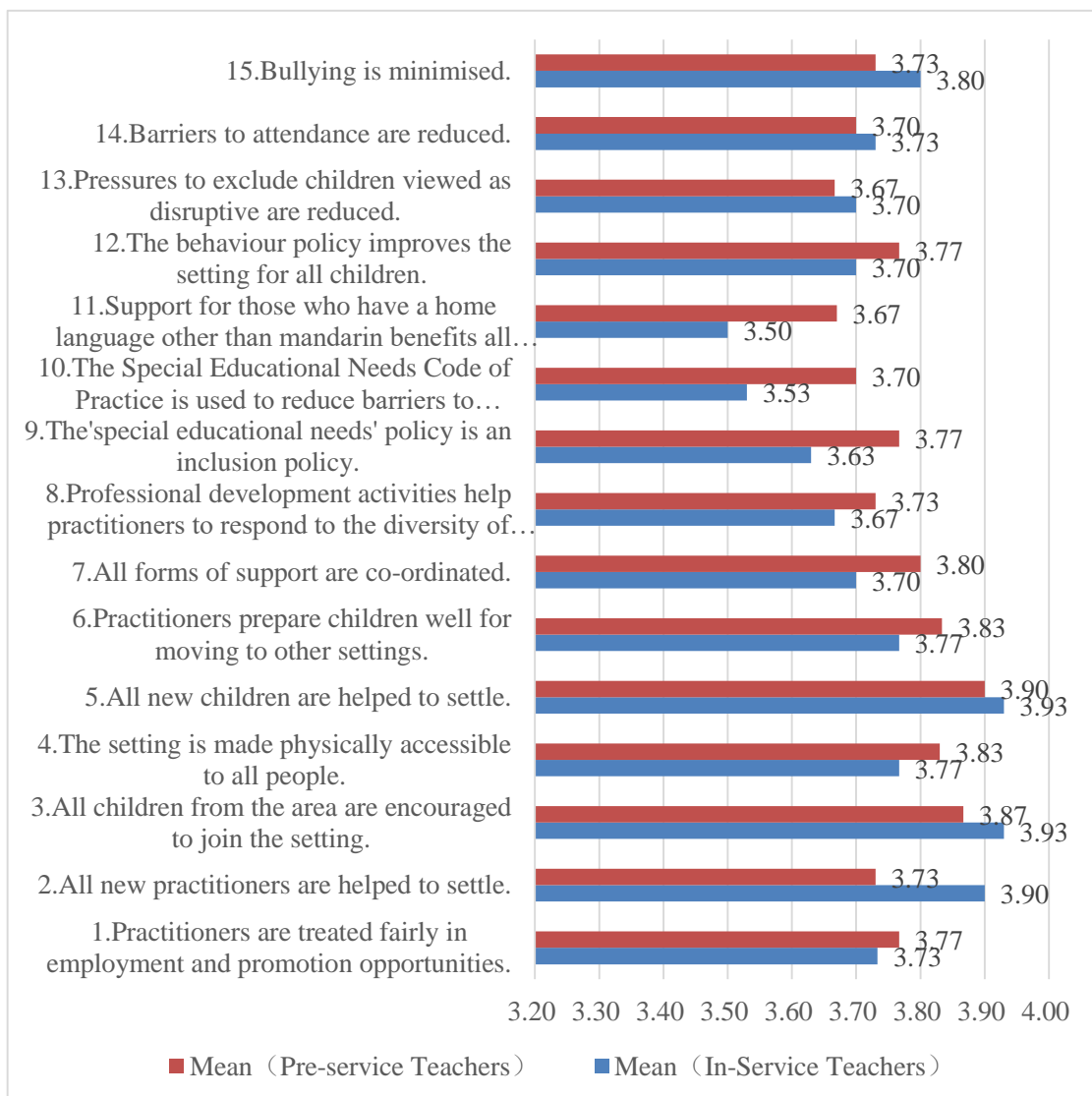
Inclusive practices in China preschools

Figure 3 shows the means for the inclusive practices items. For both groups of teachers, the highest scores were reported to items that reflected Activities-centered approach in teaching, namely Items 2 (Activities encourage all children to communicate, $M_{pre-service} = 3.93$, $M_{in-service} = 4.00$) and Items 3 (Activities encourage the participation of all children, $M_{pre-service} = 3.93$, $M_{in-service} = 4.00$).The research results show that the teaching methods that encourage children's participation and communication in activities have attracted high attention from two groups of teachers, both in-service and intern teachers, who attach great importance to encouraging and supporting children's participation and communication in activities.In comparison, items which recorded the lowest means are items related to special activities involved, namely Item 12 (All children take part when there are special activities, $M_{pre-service} = 3.67$, $M_{in-service} = 3.73$), suggesting that further efforts are needed in the practice of special activities.

Figure 3: Inclusive practices items
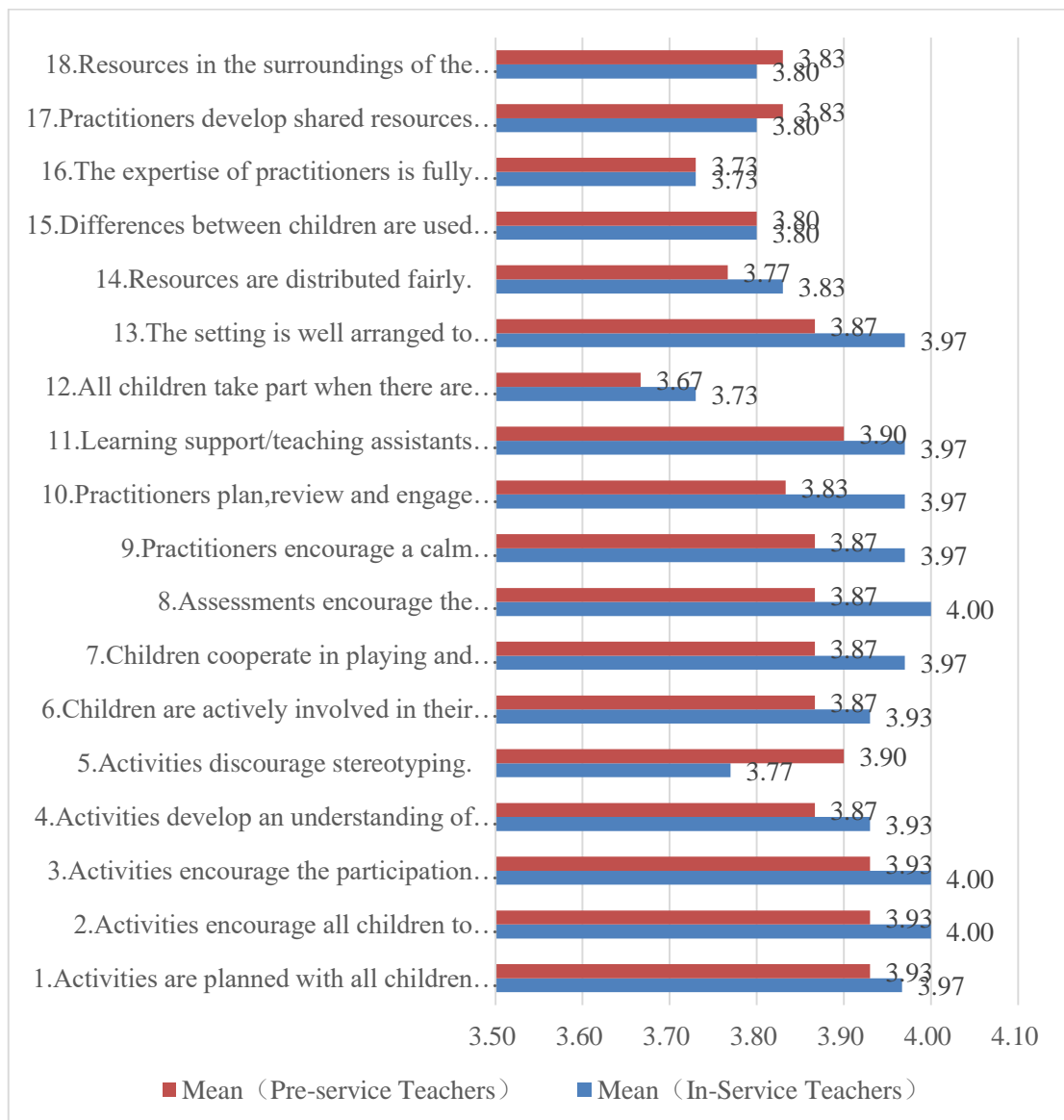
Correlation of inclusive culture, policies and practices

There are significant relationship between the three variables measured. Among them, inclusive culture and inclusive policy show weak correlation ($r = 0.483$), inclusive culture and inclusive practice show weak correlation ($r = 0.492$), while inclusive policy and inclusive practice show a moderate correlation ($r = 0.691$).

Table 4: Correlation of c in China preschools

	Inclusive Culture	Inclusive Policies	Inclusive Practices
Inclusive Culture	1	.483**	.492**
Inclusive Policies	.483**	1	.691**
Inclusive Practices	.492**	.691**	1

*p < .05, **p < .01

** Correlation is significant at the 0.01 level (2-tailed).

DISCUSSION

The central aim of this study was to evaluate the extent of inclusive education in Chinese preschools by employing the Index of Inclusion (Booth et al., 2006). This evaluation centered on assessing the mean scores across three key dimensions: inclusive cultures, policies and practices, and exploring the interrelationships among these dimensions. Moreover, the study sought to ascertain any significant disparities in the scores of two distinct teacher groups: in-service and pre-service teachers.

The findings revealed no marked differences between in-service and pre-service teachers in terms of inclusive indicators. The analysis reveals no significant differences between the two groups in terms of inclusive indicators, signifying a shared commitment to inclusive practices. While both groups demonstrated high indicators of inclusive practice, distinctions emerged in the domains of inclusive culture and policy. Inclusive culture was reported higher by in-service teachers, emphasizing their strength in fostering inclusive atmospheres, aligning with existing literature highlighting the significance of real-world experience and self-assurance in shaping teachers' proficiency in inclusive environments (Fu, 2022; Li et al., 2016). Conversely, pre-service teachers excelled in inclusive policy, signaling their proactive approach to policy development but also suggesting potential gaps in their understanding of both policies and inclusive culture (Deng & Guo, 2007; Deng & Holdsworth, 2007). These findings underscore the need for tailored interventions in pre-service teacher training programs, fostering a more comprehensive understanding of inclusive policies and cultures to better equip future educators for the complexities of inclusive education.

The study highlights a shared challenge among both in-service and pre-service teachers in fostering inclusive cultures within preschools. The observed low proficiency underscores the pressing need to enhance efforts in this aspect. Notably, the lower scores in community participation further emphasize a potential vulnerability in nurturing an inclusive culture (Yang & Wang, 1994; Ye & Piao, 1995). These findings align with the ongoing shift in China from segregated special education to more inclusive models, a transformation documented in existing research (Deng & Poon-McBrayer, 2012). The study brings attention to the necessity of prioritizing and strengthening inclusive cultural practices within preschool settings to align with evolving educational paradigms.

Turning to the domain of inclusive policy, a notable trend emerged wherein pre-service teachers showcased proficiency surpassing their in-service counterparts, signaling their proactive stance towards policy development. However, this success also brought to light a potential gap in their comprehension of both inclusive policies and cultures (Deng & Guo, 2007; Deng & Holdsworth, 2007). These studies shed light on the varied perceptions and levels of preparedness among pre-service teachers during their professional development journey. The findings emphasize the need for targeted interventions in pre-

service teacher training programs, aiming to enhance understanding and bridge identified gaps in both inclusive policies and cultures, ensuring a more comprehensive preparation for future educators.

In examining teaching practices, in-service teachers displayed a significant commitment to fostering the growth of young children. However, constraints in experience might impede their ability to uniformly extend this encouragement. This underscores the importance of factors such as popularity, assistance, and encouragement in amplifying the effectiveness of inclusive education (Tan & Perren, 2021; Messiou, 2008). The study calls attention to the intricate interplay of experience and supportive elements in shaping the inclusive practices of in-service teachers. It highlights the need for a comprehensive understanding of these dynamics to further enhance the effectiveness of inclusive education initiatives.

Lastly, this study also provides valuable insights into the intricate relationships among inclusive cultures, policies and practices within preschool settings. The observed connections, while highlighting certain areas for potential improvement, also unveil opportunities to strengthen the alignment between cultural values, policies, and classroom practices. The moderate correlation between inclusive policy and practice underscores the pivotal role policies play in shaping inclusive educational approaches. These findings carry significant implications for educators, policy-makers, and stakeholders. Addressing the identified areas of improvement in inclusive culture and policy alignment can guide the development of targeted interventions, enhancing the overall effectiveness of inclusive education in preschool settings. By fostering a more cohesive relationship between cultural values, policies, and on-the-ground practices, stakeholders can collectively contribute to creating truly inclusive and supportive learning environments for all students.

CONCLUSION

In conclusion, this study aimed to assess the landscape of inclusive education in Chinese preschools, utilizing the Index of Inclusion (Booth et al., 2006) and focusing on the dimensions of inclusive cultures, policies, and practices. The exploration of these dimensions and the comparison of in-service and pre-service teachers' scores yielded insightful findings. While both teacher groups demonstrated a strong commitment to inclusive practices, disparities emerged in inclusive culture and policy. In-service teachers excelled in fostering inclusive atmospheres, aligning with the significance of real-world experience in shaping teachers' proficiency in inclusive environments. Conversely, pre-service teachers showcased proficiency in policy development but revealed potential gaps in understanding both policies and inclusive culture. These nuanced insights underscore the need for tailored interventions in pre-service teacher training programs. The study also highlights the shared challenge of fostering inclusive cultures, emphasizing the necessity of prioritizing and strengthening these practices within preschool settings. The observed correlations between inclusive policy and practice carry implications for educators, policy-makers, and stakeholders, guiding efforts to enhance the overall effectiveness of inclusive education. Addressing identified areas for improvement in culture-policy alignment can contribute to the creation of truly inclusive and supportive learning environments for all students.

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