

Listening to students' voices on inclusive teaching strategies in Chinese primary schools

International Journal of Chinese Education

May-August 2022, 1–16

© The Author(s) 2022

Article reuse guidelines:

sagepub.com/journals-permissions

DOI: 10.1177/2212585X221120971

journals.sagepub.com/home/cne

Dandan Li , Josep Maria Sanahuja Gavalda, and Mar Badia Martín

Abstract

Inclusive education has become a new global agenda in educational reform since *Salamanca Statement* in 1994. However, inclusion in education cannot be realized unless inclusive education teachers enable them to implement inclusive teaching strategies to meet all students' diverse needs. This study aims to analyze the pupil perspectives of inclusive teaching strategies in Chinese regular primary schools by designing a questionnaire. The questionnaire is developed and validated with satisfactory reliability and validity to collect quantitative data from the 730 students of three regular primary schools in Shenzhen City, one of the largest cities in China. The literature has summarized three dimensions regarding inclusive teaching strategies: 'values and attitudes,' 'management and environment,' and 'teaching and instruction'. The results show that these regular primary schools have inclusive values, and students have positive attitudes toward inclusive teaching strategies. Students think that sample schools have inclusive school management and environment concerning inclusive teaching strategies, and some inclusive teaching strategies are used, but others are not so often used in their classrooms. The findings are discussed, and implications for policy and research are presented.

Keywords

Inclusive education, inclusive teaching strategies, students' voices, China, primary schools

Received 17 May 2022; accepted 7 August 2022

Department of Applied Pedagogy, Faculty of Education, Universitat Autònoma de Barcelona, Barcelona, Spain

Corresponding Author:

Dandan Li, Departament de Pedagogia Aplicada, Facultat de Ciències de l'Educació, Universitat Autònoma de Barcelona, Pl. del Coneixement, s/n. Edifici G6 (despatx 268) Campus de Bellaterra, Barcelona 08193, Spain.

Email: ldd1203768749@163.com



Creative Commons Non Commercial CC BY-NC: This article is distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 License (<https://creativecommons.org/licenses/by-nc/4.0/>) which permits non-commercial use, reproduction and distribution of the work without

further permission provided the original work is attributed as specified on the SAGE and Open Access pages (<https://us.sagepub.com/en-us/nam/open-access-at-sage>).

Introduction

Salamanca Statement and Framework for Action on Special Needs Education in 1994 endorsed the idea of inclusive education. It has gradually become a global agenda in educational reform in subsequent years (Ainscow et al., 2019; Hernández-Torrano et al., 2020). To call for more countries to implement inclusive education, international organizations issued numerous official statements and documents to promote equitable quality education for every child. For instance, the *Universal Declaration of Human Rights* (United Nations, 1948, Article 26) stated that ‘everyone has the right to education.’ Furthermore, the United Nations *Convention on the Rights of Persons with Disabilities* (CRPD) (UN, 2006, Article 24) indicated that ‘State Parties recognize the right of persons with disabilities to education.’ As one of the state parties, China’s National People’s Congress ratified the CRPD in 2008, with an essential commitment to inclusion for all.

However, there is still a gap between the acceptance of inclusive education by signing the signature of state parties and active inclusive practices in classrooms (Boyle et al., 2020; Qu, 2019). Researchers have great problems in developing more functional studies and successful cases of inclusive education in specific contexts (UNESCO, 2020). One of the biggest challenges is how to implement inclusive education in a specific context as the result of the different understanding of inclusive education (Florian, 2005; Slee, 2006). It specifically includes how to understand, implement and apply inclusive education (Kurniawati, 2021), especially concerning teaching methods or strategies (Farrell, 2000). Similarly, Rouse (2009) argued that the key to implementing inclusive education is to provide teachers opportunities to develop knowledge (*knowing*), attitudes (*believing*), and teaching strategies (*doing*). In order to embrace differences and meet diverse students’ needs, teachers have to develop and use various teaching strategies in inclusive settings. Certain teaching strategies have been identified that are helpful for students with special educational needs in inclusive classrooms: curriculum differentiation, universal design for learning, differentiated instruction, co-teaching, collaborative learning, peer-tutoring, individualized education plans, structured teaching, assessment strategies (Davis et al., 2004; Deng et al., 2016; Mitchell, 2014; National Council for Special Education [NCSE], 2010; Tichá et al., 2018). On the one hand, it is crucial to support teachers in implementing effective inclusive practices for all students learning in the classrooms. On the other hand, research is seldom focused on how teachers apply inclusive teaching strategies in the context of China. Therefore, this study focuses on the use of inclusive teaching strategies in the Chinese regular primary schools.

Background

Inclusive education in China

China has been dedicated to inclusive education development for several decades through national government policies and local practices. To ensure effectively equitable education for disabled children, China has implemented a practical model of inclusive education—LRC (Learning in the Regular Classrooms) initiative since the 1980s. Subsequently, more children and teenagers with disabilities have received compulsory education. In 2018, 666,000 students with disabilities studied on campus, an increase of 298, 000 people or 81% over 2013 (State Council Information Office of the People’s Republic of China, 2019). Poor students with disabilities can receive a 12-year free education covering elementary and secondary schools since the fall semester of 2016 (State Council Information Office of the People’s Republic of China, 2019). In addition, there are substantial local inclusive practices, such as the 1 + 5 + N project: using a three-level resource room system to promote inclusive education, which was initially proposed by the director of the Special Education Center of the Shuangliu district in Sichuan province in the southwest of China

(European Agency for Special Needs and Inclusive Education, 2020). This project ultimately gained positive local and national government feedback.

According to Chinese national policies, the main body of the implementation of inclusive education in China is regular schools (State Council of the People's Republic of China, 2021b). All school-aged children and teenagers who are able to receive regular education must go to local schools to learn (State Council of the People's Republic of China, 2021a). In order to build a high-quality special and inclusive education system, the main support measures are taken: a. to improve teacher competencies in special and inclusive education through teacher professional development; b. to equip resource classrooms in regular schools that receive students with disabilities; c. to select model schools in inclusive education to lead the development of other schools (State Council of the People's Republic of China, 2021a). Thus, offering educational opportunities to students with disabilities is the responsibility of regular teachers. However, regular teachers have lower self-efficacy in inclusive education than special education teachers and no confidence in how to meet different students' needs by using teaching strategies (China Disabled Persons' Federation, 2019; Zan et al., 2011).

Inclusive teaching strategies

The premise of realizing inclusion is that all teachers are empowered to teach all students (UNESCO, 2020). As Ashman stressed, 'provision of the most beneficial teaching and learning experiences' is the basis of inclusive education (Boyle et al., 2020, p. X). Inclusive teaching requires teachers to believe that 'all children should learn together, wherever possible, regardless of any difficulties or differences they may have' (UNESCO, 1994, Article 7) and recognize the differences of every student and embrace their diversity (UNESCO, 2020). A qualified inclusive teacher should value learner diversity, support all learners, work with others, and engage in professional development (European Agency for Special Needs and Inclusive Education, 2012). Teacher Education for Inclusion (TE4I) project—a 3-year project at the European level—identified four essential core values and areas of competencies for all teachers to work in inclusive settings. One of the areas of competence is 'effective teaching approaches in heterogeneous classes' (European Agency for Special Needs and Inclusive Education, 2012). Inclusive education challenges teachers to develop a large number of teaching strategies. According to the latest statistics, even though 95% of school-aged children (Ministry of Education the People's Republic of China, 2020) can go to local schools to receive education in China, their needs are well accommodated in inclusive settings remains questionable (Deng & Poon-McBrayer, 2012; Pang, 2017; Yang & Zhang, 2018; Yu, 2016). Inclusive teaching strategies play a critical role in inclusive practices by helping teachers cater to all students in an inclusive school. Certain teaching strategies have been identified as effective in meeting diverse students' needs. Davis et al. (2004) listed a series of teaching strategies and approaches for pupils with special educational needs. National Council for Special Education (NCSE) (2010) summarized seven inclusive teaching strategies to enhance and support inclusive education: differentiated instruction, scaffolded instruction, cooperative learning, peer tutoring, direct instruction, co-teaching, and employment of various teaching styles. This study examines nine inclusive teaching strategies in classrooms to promote student learning in Chinese primary schools.

Students' voices

In the new era, the educational system must radically change by listening to students' voices from the policy and practice levels (Bourke & Loveridge, 2018). Pupils are schooling participants whose views should be paid more attention to and valued (Wang, 2016), particularly as critical

factors in promoting inclusive education (Messiou, 2019). More researchers justify that listening to students' voices is crucial to transforming schools. Listening to the pupils' voices did demonstrate a kind of inclusion (Messiou, 2012). Noyes (2005) concluded that listening to pupil voices may gain positive attainment by emphasizing teaching and learning. Ainscow and Messiou (2018) perceived that considering the student perspectives can facilitate inclusive education in schools. Allowing students to become co-creators can enhance inclusive learning environments in schools (Miranda et al., 2021). Mangiaracina et al. (2021) reviewed the European and international guiding principles documents to emphasize the importance and effect of students' voices and participation in inclusive education. Messiou (2019) argued that as 'missing voices', students' voices still are largely absent from significant international policies, practices, and research in inclusive education. Listening to students' views is so critical to implementing inclusive education. Therefore, this study collected students' perspectives on inclusive teaching strategies in the Chinese context.

The key research question is: What is the current situation on inclusive teaching strategies in primary schools from students' perspectives? The specific questions are as follows:

- (1) How are the school values and attitudes toward inclusive teaching strategies from students' perspectives?
- (2) How are the school management and environment in relation to inclusive teaching strategies from students' perspectives?
- (3) What inclusive teaching strategies do teachers use to support student learning in regular classrooms from students' perspectives?

To answer research questions, we designed a valid student questionnaire to collect quantitative data on inclusive teaching strategies from three Chinese primary schools.

Methods

Participants

To ensure that each individual has an equal probability of being selected and that the sample can represent the larger population, random sampling was recommended by Creswell (2009). So, in this study, simple random sampling was used. We randomly selected three primary schools (marked T, W, and H schools, respectively) in one district of Shenzhen City, located in the south of China. Shenzhen has been regarded as one of the biggest cities with the fastest economic growth during the last three decades in China. There are 11 primary schools in total in this district. The W school is the most popular primary school in this district. The H school is the only primary school where there is a special class. All school-aged children with moderate to severe disabilities can receive education in this class. Compared to the other two schools, the T school is at the medium level in education quality. Every school has students with special educational needs. Given that the sample schools were randomly selected and have various types of schools, they are likely to represent the current status of inclusive teaching strategies in regular primary schools in this district or this city. A total of 730 students aged 9–12 from sample schools responded to the questionnaire. This investigation yielded 730 valid student questionnaires from the sampled population. The demographic information of the participants is shown in Table 1.

Table 1. Demographic information of the participants.

		School name: Frequency (%)			Total
	Items	T school (n = 227)	W school (n = 373)	H school (n = 130)	
Gender	Boy	133 (58.59%)	184 (49.33%)	67 (51.54%)	384 (52.60%)
	Girl	94 (41.41%)	189 (50.67%)	63 (48.46%)	346 (47.40%)
Grade	Grade 4	3 (1.32%)	132 (35.39%)	22 (16.92%)	157 (21.51%)
	Grade 5	140 (61.67%)	171 (45.84%)	71 (54.62%)	382 (52.33%)
	Grade 6	84 (37.00%)	70 (18.77%)	37 (28.46%)	191 (26.16%)

Instrument

Wiersma and Jurs (2009) have suggested that survey research is a method that applies to and is appropriate for many educational research situations. Three steps were followed to develop the questionnaire with solid content validity before the validation process. First, the researchers searched relevant literature (such as academic papers, articles and reports) with the keywords ‘inclusive education,’ ‘teacher education,’ ‘teacher training,’ and ‘teaching methods or approaches or strategies’ through electronic databases (e.g., ERIC, Springer), and limited the year of publication from 2011 to 2021. After reviewing the literature, the three dimensions – values and attitudes, management and environment, and teaching and instruction—were concluded to be related to inclusive teaching strategies. The questionnaire items in dimensions ‘values and attitudes’ and ‘management and environment’ were created from the literature review. Mainly, we referred to two scales: *Index for Inclusion* (Booth & Ainscow, 2002) and *Indicators of Inclusive Schools* (Education, 2013). The *Index for Inclusion* is well known to be a set of materials to guide schools to develop inclusive education in line with their local setting through a dynamic process. The student questionnaire of the *Index for Inclusion* has been verified as a robust and adequate psychometric instrument to evaluate the school’s inclusive process from students’ views (Fernández-Archilla et al., 2020). The scale of *Indicators of Inclusive Schools* combines research on inclusion, school improvement, and effective instruction.

Second, the researchers refined or used these items directly for research purposes. For example, in the dimension ‘values and attitudes’, the item in the student questionnaire of the *Index for Inclusion* is: ‘*Staff and students treat one another with respect*’. And we revised it for easy understanding to the pupils: ‘*My teachers treat everyone friendly in my class*’. The item in the student questionnaire of the *Indicators of Inclusive Schools* is: ‘*Everybody works together so that all students feel like they belong*’. We refined it to ‘*I like to go to school*’. The item ‘*My teachers expect me to always try my best*’ is not changed. In the dimension ‘management and environment’, ‘*My teachers like to listen to my ideas*’ is from the *Index for Inclusion*. The item ‘*My teachers try to help students who have problems*’ comes from *Indicators of Inclusive Schools* without revision. Yet, we created the items in the dimension ‘teaching and instruction’ following our focus on nine inclusive teaching strategies according to the contextual features.

Finally, a drafted questionnaire was developed for expert revisions. Taking for the context of this study, 10 professors in special and inclusive education from Spanish and Chinese universities were invited to revise the items according to the criteria-adequate and important. As a result of the expert validation, some items were changed, and others were eliminated. The final version is a 29-item questionnaire with good content validity. To ensure good reliability of the questionnaire, the internal consistency coefficient Cronbach’s Alpha was calculated. As shown in Table 2, the questionnaire analysis gave satisfactory internal consistency. The internal consistencies of the

Table 2. Reliability of the student questionnaire.

Dimensions	Values and attitudes	Management and environment	Teaching and instruction	Total scale
Cronbach's alpha	0.76	0.74	0.89	0.92

different subscales ranged from 0.74 to 0.89. The total scale was also satisfactory (0.92). They are all acceptable.

As mentioned previously, the development of questionnaire items followed the strict three steps after the literature review. In doing so, content validity was ensured. Furthermore, Table 3 shows the range of value for the correlation matrix of three dimensions, ranging from 0.578 to 0.642. It revealed a moderately significant correlation within each dimension (Cohen et al., 2007). A significant correlation between each dimension and the total scale can be easily found, because the range is from 0.792 to 0.917. Therefore, this student questionnaire has good reliability and validity.

The questionnaire is composed of three sections. The first section had an instruction describing the study's purpose, significance, and assurance of confidentiality. The second section questioned the school, gender, and grade of students. The third section was a Likert scale with a four-point scale from 1 (definitely disagree), 2 (slightly disagree), 3 (slightly agree), and 4 (definitely agree).

Procedure

The investigation included three phases. The first one was to develop and validate the student questionnaire after the researchers reviewed the relevant literature, and special and inclusive education professors revised the items, respectively. The second phase was to upload the questionnaire to the Wenjuanxing platform, a free online Chinese questionnaire platform. A link was automatically generated. Using this tool, researchers can quickly and efficiently collect data. The questionnaire was distributed through it. The third phase was that the investigators contacted the local district's coordinator of the special education center and asked for permission from school principals to carry out the investigation. Then the researchers asked the coordinator to send the questionnaires link to school leaders and tutors of the students. The tutors sent the questionnaire link to the parents of the students. Students can click on the link and fill out the questionnaire over the phone or on the computer after class. Once the students submitted their questionnaires, the researchers could collect their responses. Finally, the researchers analyzed the data using a professional statistical software SPSS 22.0.

Data analysis

Data were coded and entered into the SPSS (22.0) for statistical analysis. No questionnaires were excluded due to the online questionnaire's advantages. Thus, a total of 730 student questionnaires were analyzed in the SPSS software. The data were first analyzed for reliability and validity in the SPSS. Data analysis includes descriptive statistics, frequencies, percentages, means, and standard deviations. The *T*-test and ANOVA tests analyzed significant differences between the selected groups.

Table 3. Correlations among questionnaire dimensions.

	D1	D2	D3	D
D1	1			
D2	0.642**	1		
D3	0.578**	0.640**	1	
D	0.792**	0.857**	0.917**	1

Note. D1 is the dimension of values and attitudes; D2 is the dimension of management and environment; D3 is the dimension of teaching and instruction. D is overall level.

** $p < .01$.

Table 4. Means and standard deviations of each dimension and the overall level.

Dimension	<i>M</i>	<i>SD</i>
D1	3.310	0.500
D2	3.318	0.449
D3	3.257	0.467
D	3.286	0.408

Note. D1 is the dimension of values and attitudes; D2 is the dimension of management and environment; D3 is the dimension of teaching and instruction. D is overall level. 1 = definitely disagree, 2 = slightly disagree, 3 = slightly agree, 4 = definitely agree.

Results

In this part, the results of the study are presented. They include the means and standard deviations of each dimension and the overall level, the findings of the three dimensions, and significant differences analysis.

Means and standard deviations of each dimension and overall level

Table 4 shows that the overall mean of the three dimensions is 3.286 (between ‘sightly agree’ and ‘definitely agree’), and the standard deviation is 0.408. The means of dimensions ‘values and attitudes’ and ‘management and environment’ are higher, but the dimension ‘teaching and instruction’ is the lowest. That is, schools have inclusive values, and students have positive attitudes toward inclusive teaching strategies, but the use of inclusive teaching strategies needs to be improved.

Findings of three dimensions

Table 5 presents the results of the descriptive statistics in terms of the means and standard deviations of dimension ‘values and attitudes’. There are two critical data. The mean (3.70) of item 3, ‘My teachers expect me to always try my best’ is relatively high. It indicates that an overwhelming majority of students think their teachers have high expectations for them. However, the mean (2.50) of item 5, ‘People from the community come to our school and classroom’ is very low. This implies that the support of the local community is not sufficient.

Table 6 shows that the means of items 7, 8, 9, 10, 11, 12, and 13 are more than 3.2. It is between the ‘slightly agree’ and ‘definitely agree’. It demonstrates that students think they have inclusive school management and environment. More importantly, the mean of item 14 is 2.50, between the

Table 5. Means and standard deviations on the dimension 'values and attitudes'.

Items of dimension 'values and attitudes'	M	SD	N
1. I like to go to school	3.48	0.705	730
2. My teachers treat everyone friendly in my class	3.46	0.704	730
3. My teachers expect me to always try my best	3.70	0.562	730
4. I am happy to have students from different backgrounds in my class, such as students with special educational needs	3.35	0.768	730
5. People from the community come to our school and classroom	2.50	0.977	730
6. My family sometimes comes to participate in our activities	3.37	0.663	730

Table 6. Means and standard deviations on the dimension 'management and environment'.

Items of dimension 'management and environment'	M	SD	N
7. My teachers like to listen to my ideas	3.28	0.720	730
8. My teachers like to communicate with each other	3.48	0.602	730
9. My teacher likes to help me with my work	3.47	0.595	730
10. My teachers try to help students who have problems	3.57	0.551	730
11. I can get learning support from the psychologist, physical therapist, special education teacher, etc.	3.37	0.667	730
12. I think our classroom rules are fair	3.48	0.622	730
13. When children in my class quarrel, the teacher sorts it out fairly	3.49	0.611	730
14. Some of the children in my class call others by unkind names	2.50	0.989	730
15. Sometimes, I am bullied in the playground	1.79	0.883	730

'slightly disagree' and 'slightly agree.' Specifically speaking, the 393 (53.83%) students agree, '*Some of the children in my class call others by unkind names*'. Furthermore, the mean of item 15 (1.79) is between the 'definitely disagree' and 'slightly disagree.' In other words, most students disagree that they were bullied. A small number of students (19.17%) think they were bullied in their playground. In summary, schools have inclusive school management and environment to implement inclusive education.

As Table 7 indicates, the means of all the items are more than 2.80, between 'slightly disagree' and 'slightly agree', close to 'slightly agree'. Therefore, in general, students think their teachers use inclusive teaching strategies in their teaching and instruction, but not so often. Some students (9.86%) definitely disagree that '*I can move my desk for group work*'. It seems that the learning arrangement is not flexible enough to adapt. The item '*My teachers provide us with different activities or materials in class*' ($M = 3.23$, $SD = 0.757$) demonstrates that teachers regularly use curriculum differentiation. The means of items 18, 19, 20 are more than 3.40. This means that teachers frequently use universal design for learning to support all student learning. Item 21 ($M = 3.37$, $SD = 0.691$) reveals that differentiated instruction is constantly used in classrooms. Nearly one-third of students (33.29%) disagree, '*Sometimes there is more than one teacher in my class*'. That is, co-teaching is rarely used in their classes. The item '*Sometimes, I do classwork in pairs with a friend*' ($M = 3.51$, $SD = 0.560$) shows that their teachers repeatedly use collaborative learning to guide in students learning from each other. Similarly, items 24 ($M = 3.49$, $SD = 0.577$) and 25 ($M = 3.46$, $SD = 0.610$) imply that the teachers frequently use peer-tutoring. A couple of students (9.45%) think there is no special plan for students with special educational needs in their classrooms. Several students assume that they can assess the learning of their classmates. But they

Table 7. Means and standard deviations on the dimension ‘teaching and instruction’.

Items of dimension ‘teaching and instruction’	M	SD	N
16. I can move my desk for group work	2.87	0.882	730
17. My teachers provide us with different activities or materials in class	3.23	0.757	730
18. My teachers provide many ways for me to learn such as the Internet, video, audio, and so on for me to learn	3.40	0.666	730
19. I can show what I learn in different ways, such as presentations, reports, projects, tests, etc.	3.47	0.599	730
20. My teachers encourage me in multiple ways	3.52	0.593	730
21. My teachers sometimes give me activities or materials which I like	3.37	0.691	730
22. Sometimes, there is more than one teacher in my class	2.81	0.960	730
23. Sometimes, I do classwork in pairs with a friend	3.51	0.560	730
24. I help my friends with their work when they get stuck	3.49	0.577	730
25. My friends help me with my work when I get stuck	3.46	0.610	730
26. There is a special plan (for example, different homework, after-class tutoring) for students with special educational needs in my classroom	2.96	0.927	730
27. My teachers present me with a straightforward and visual procedure to help me finish my work	3.29	0.719	730
28. I am allowed to assess my learning	3.31	0.681	730
29. I am allowed to assess my classmates’ learning	2.90	0.872	730

are not always allowed to assess the learning of their classmates. It seems that teacher assessment strategies should be improved. Despite many obstacles to implementing inclusive practices, some teachers still apply different inclusive teaching strategies or methods to accommodate students’ diverse needs. In summary, while these inclusive teaching strategies-co-teaching, individualized education plans and assessment strategies - are not often used in the classrooms, curriculum differentiation, universal design for learning, differentiated instruction, collaborative learning, peer-tutoring and structured teaching are relatively frequently used.

Significant differences analysis

A *t* test and two ANOVA (analysis of variance) tests are used to examine statistically significant differences among different gender, schools, and grades. Table 8 presents the ANOVA analysis of various dimensions and the overall level between the three schools. The level of significance p in the dimension of ‘values and attitudes’ between the three schools is 0.16, greater than 0.05. It suggests that there are no significant differences in the dimension of ‘values and attitudes’ between different schools. However, the differences between the three schools are statistically significant in the dimension ‘management and environments’ ($F = 8.58$, $\eta^2 = 0.023$). According to the criteria proposed by Cohen (1992), 0.01 is a small effect, 0.06 is a medium effect, and 0.14 is a large effect. Therefore, this dimension between three schools has a small effect. After comparison, it is found that the means of ‘management and environments’ dimensions: W school > T school, W school > H school. In the third dimension, different schools also show significant differences, and this dimension between the three schools has a small effect. Similarly, the analysis also indicates the means of ‘teaching and instruction’ dimensions: W school > T school, W school > H school after multiple comparisons. Moreover, the overall differences between the three schools are statistically significant, and this dimension between the three schools has a small effect. After

Table 8. Significant differences in three dimensions among different schools.

Dimension	School	<i>M</i>	<i>SD</i>	<i>F</i>	η^2	Multiple comparisons
D1	T school	3.33	0.50	1.81	0.005	/
	W school	3.33	0.50			
	H school	3.23	0.50			
D2	T school	3.34	0.42	8.58***	0.023	W > T, W > H
	W school	3.36	0.46			
	H school	3.17	0.45			
D3	T school	3.23	0.45	6.88***	0.019	W > T, W > H
	W school	3.31	0.46			
	H school	3.14	0.48			
D	T school	3.29	0.39	7.31***	0.020	W > T, W > H
	W school	3.33	0.41			
	H school	3.17	0.41			

Note. D1 is the dimension of values and attitudes; D2 is the dimension of management and environment; D3 is the dimension of teaching and instruction. D is overall level.

*** $p < .001$.

multiple comparisons, it is found that the means of overall levels: W school > H school, W school > T school.

To find out whether girls and boys show a significant difference in three dimensions, the independent sample *t* test is used. According to Cohen (2013), 0.80 is considered a large effect estimate, 0.5 a moderate estimate, and 0.20 a small estimate. Table 9 indicates that male and female students show significant differences in the dimension ‘values and attitudes’, the girls ($M = 3.35$, $SD = 0.48$) and boys ($M = 3.27$, $SD = 0.52$), ($t = -2.22$, $p = .03$, Cohen’s $d = 0.16$) and overall level, the girls ($M = 3.32$, $SD = 0.40$) and boys ($M = 3.26$, $SD = 0.41$), ($t = -2.03$, $p = .04$, Cohen’s $d = 0.15$). Therefore, there are significant differences with small effect estimates in the ‘values and attitudes’ dimension and overall level. That is, girls have a more positive attitude toward inclusive teaching strategies than boys.

Discussion

The children’s views are valuable (Ainscow & Messiou, 2018; Demetriou, 2019; Messiou, 2019; Wang, 2016). This study collects student perspectives on inclusive teaching strategies through a reliable and valid questionnaire. The results show that schools have inclusive values and students have positive attitudes toward inclusive teaching strategies. As a consequence of international advocacy and domestic practices on inclusive education, more regular schools have been building inclusive values and positive attitudes toward inclusive education in China (Ma & Tan, 2010; Mu et al., 2015). Shenzhen, as one of China’s special economic zones, increased investment in education to develop equitable and high-quality education for all. For example, in 2020, Shenzhen’s education expenditures reached 85.1 billion yuan, an increase of 18.8%, accounting for more than 20% of fiscal expenditure (Shenzhen Finance Bureau, 2021). It ranks first among first-tier cities in China, and the per-student funding standard is among the top in the country. We believe these regular primary schools will have more inclusive values and positive attitudes toward inclusive teaching strategies in subsequent years. In the dimension ‘values and attitudes’, it seems that girls are more favorable than boys to inclusive teaching strategies. It is consistent with Tan’s findings (Tan, 2015). Perhaps girls have more empathy than boys and like to help others. It is needed to explore more in future studies.

Table 9. Significant differences in three dimensions between boys and girls.

Dimension	Gender	M	SD	t	p
D1	Boy	3.27	0.52	-2.22	.03
	Girl	3.35	0.48		
D2	Boy	3.29	0.44	-1.52	.13
	Girl	3.34	0.46		
D3	Boy	3.23	0.47	-1.72	.09
	Girl	3.29	0.46		
D	Boy	3.26	0.41	-2.03	.04
	Girl	3.32	0.40		

Note. D1 is the dimension of values and attitudes; D2 is the dimension of management and environment; D3 is the dimension of teaching and instruction. D is overall level.

Inclusive school management and environment play important roles in inclusive practices. We find that the sample schools have inclusive school management and environment. Through the ANOVA test, we also find that the W school has the most inclusive school management and environment among the three schools because means of the dimension ‘management and environments’ and ‘teaching and instruction’ are significantly higher than the other two schools. We agree with Booth and Ainscow (2011) and Azorin and Ainscow (2018). Inclusion is an unending process, and every school makes its own process by identifying and resolving contextual barriers. The W school is one of the best schools in this district, led by a team of headteachers with inclusive values and attitudes. Everything is student-centered, including the curriculum, school building, teaching activities, etc. The school is well-resourced in inclusive education, with one psychological teacher responsible for managing students with special educational needs.

As for the use of inclusive teaching strategies, the results indicate that inclusive teaching strategies are used in regular primary schools. This study resonates with other research in South Africa (Themane & Thobejane, 2019), Indonesia (Kurniawati, 2021), and the United Kingdom (Pantić & Florian, 2015). Despite the challenges of implementing inclusive education and terrible schooling conditions in South Africa, teachers still make a difference in their classrooms to accommodate all students through planning, presentation and evaluation of their lessons (Themane & Thobejane, 2019). Kurniawati (2021) also found that a small number of teachers used effective inclusive teaching strategies in rural Indonesian primary schools with limited knowledge of strategies and big class sizes. When teachers devote themselves to developing a sense of social justice, they can acquire inclusive pedagogical approaches even if they face harsh conditions (Pantić & Florian, 2015). Specifically, curriculum differentiation, universal design for learning, differentiated instruction, collaborative learning, peer-tutoring, and structured teaching are frequently used. However, co-teaching, individualized education plans and assessment strategies - are not often used in regular classrooms. Due to the international influence of inclusive education (Ainscow et al., 2019), the local government has taken many measures to promote inclusive practices. According to the government action plan, Shenzhen has recently formulated 25 new measures to promote inclusive and special education for equitable and high-quality education for all children (Shenzhen Government Online, 2021). One of the measures is to strengthen research on special and inclusive education to improve teaching methods or strategies in local schools.

As Messiou and Ainscow (2015) emphasized, listening to the view of students, more than anything else, promotes responding to learner diversity. Although the small sample size cannot be generalized to findings relevant to all regular primary schools, the study results likely represent the

current situation of inclusive teaching strategies in this district or this city. The researchers will invite more regular schools from other parts of China to participate in this study in the future.

Conclusions

This study analyzes the pupil perspectives of inclusive teaching strategies from three Chinese primary schools by a questionnaire. Based on the analysis and discussion above, we can make the following conclusions:

These regular primary schools have inclusive values, and students have positive attitudes toward inclusive teaching strategies. More girls are more favorable than boys to inclusive teaching strategies. Students think that sample schools have inclusive school management and environment concerning inclusive teaching strategies. The W school has the most inclusive school management and environment among the three schools. Pupils think some inclusive teaching strategies are used, but others are not so often in their classrooms.

The means of dimensions ‘values and attitudes’ and ‘management and environment’ are higher, but the dimension ‘teaching and instruction’ is the lowest. Inclusion has profoundly impacted educational policies and practices world since the Salamanca Statement ([Ainscow et al., 2019](#)). More schools in Shenzhen have inclusive values and positive attitudes toward inclusive teaching. Many regular teachers still apply different inclusive teaching strategies or methods to accommodate students’ diverse needs in their classes, such as collaborative learning and peer-tutoring, with the limited and unsound support system in China ([Mu et al., 2015](#)).

Specifically, we find that these inclusive teaching strategies-co-teaching, individualized education plans, and assessment strategies - are not often used in classrooms, but curriculum differentiation, universal design for learning, differentiated instruction, collaborative learning, peer-tutoring, and structured teaching are relatively frequently used. As [Davis et al. \(2004\)](#) suggested, a combination of strategies produces more powerful effects than a single strategy. Teachers should employ a variety of inclusive teaching strategies according to students’ characteristics and learning styles.

Our findings provide insights into informing policy concerning inclusive practices in China, especially the use of inclusive teaching strategies. Policymakers should listen to students’ voices and reflect on their policies to promote the implementation of evidence-based teaching strategies in Chinese regular primary schools. The W school can be taken as a good example of developing inclusive practices, and other local primary schools can learn many specific methods to promote inclusive teaching in their schools. The local government and school leaders should pay attention to male students who may need more guidance and support to develop their inclusive values and positive attitudes toward inclusive teaching strategies. Additionally, we are making a contribution to enriching empirical research on inclusive teaching in developing countries. ‘There is no one single model of inclusive education that suits every country’s circumstances’ ([Mitchell, 2005](#), p. 19). More than half of publications and 75% of citations on inclusive education research emerge from developed countries, such as the United States, the United Kingdom, Australia, and Canada ([Hernández-Torrano et al., 2020](#)). International researchers should pay attention to the research on inclusive practices in Asian countries and reflect on global developments in inclusive education.

Acknowledgments

The authors would like to thank Dr Li Baowei for his revisions and comments on our article.

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: The first author received financial support from China Scholarship Council (201708310219).

ORCID iD

Dandan Li  <https://orcid.org/0000-0001-8841-5654>

References

- Ainscow, M., & Messiou, K. (2018). Engaging with the views of students to promote inclusion in education. *Journal of Educational Change*, 19(1), 1–17. <https://doi.org/10.1007/s10833-017-9312-1>
- Ainscow, M., Slee, R., & Best, M. (2019). Editorial: The Salamanca statement: 25 years on. *International Journal of Inclusive Education*, 23(7–8), 671–676. <https://doi.org/10.1080/13603116.2019.1622800>
- Azorín, C., & Ainscow, M. (2018). Guiding schools on their journey towards inclusion. *International Journal of Inclusive Education*, 24(1), 58–76. <https://doi.org/10.1080/13603116.2018.1450900>
- Booth, T., & Ainscow, M. (2002). *Index for inclusion: Developing learning and participation in schools*. Centre for Studies on Inclusive Education (CSIE).
- Booth, T., & Ainscow, M. (2011). *Index for Inclusion: Developing learning and participation in schools*. Centre for Studies on Inclusive Education.
- Bourke, R., & Loveridge, J. (2018). Using student voice to challenge understandings of educational research, policy and practice. In *Radical collegiality through student voice* (pp. 1–16). Springer.
- Boyle, C., Anderson, J., Page, A., & Sofia, M. (2020). *Inclusive education global issues and controversies*. Brill.
- China Disabled Persons' Federation. (2019). *Zhang Haidi's speech: Strengthening the capability of teaching staff and promoting special education*. In Special Session of Eighth Standing Committee of the 13th National Committee of the Chinese People's Political Consultative Conference, August 27, 2019, Beijing. <https://www.cdpcf.org.cn/xwzx/clyw2/29041dacbf324e37bcea7c834dd78259.htm>
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112(1), 155–159. <https://doi.org/10.1037//0033-2909.112.1.155>
- Cohen, J. (2013). *Statistical power analysis for the behavioral sciences*. Routledge.
- Cohen, L., Manion, L., & Morrison, K. (2007). *Research method in education* (6th ed.). Routledge.
- Creswell, J. W. (2009). *Research design: Quantitative, qualitative and mixed methods*. Sage Publications.
- Davis, P., Florian, L., & Ainscow, M. (2004). *Teaching strategies and approaches for pupils with special educational needs: A scoping study*. Department for Education and Skills.
- Demetriou, H. A. (2019). More reasons to listen: Learning lessons from pupil voice for psychology and education. *International Journal of Student Voice*, 5(3). <https://ijsv.psu.edu/?article=more-reasons-to-listen-learning-lessons-from-pupil-voice-for-psychology-and-education>.
- Deng, M., & Poon McBrayer, K. F. (2012). Reforms and challenges in the era of inclusive education: The case of China. *British Journal of Special Education*, 39(3), 117–122. <https://doi.org/10.1111/j.1467-8578.2012.00551.x>
- Deng, M., Wang, S. S., Guan, W. J., & Wang, Y. (2016). The development and initial validation of a questionnaire of inclusive teachers' competency for meeting special educational needs in regular

- classrooms in China. *International Journal of Inclusive Education*, 21(4), 416–427. <https://doi.org/10.1080/13603116.2016.1197326>
- Education, A. (2013). *Indicators of inclusive schools: Continuing the conversation*. https://education.alberta.ca/media/6880391/indicators_of_inclusive_schools.pdf
- European Agency for Special Needs and Inclusive Education. (2012). Teacher education for inclusion. Profile of inclusive teachers. European Agency for Special Needs and Inclusive Education.
- European Agency for Special Needs and Inclusive Education. (2020). *I+5+N: Using a three-level resource room system to promote inclusive education (learning in mainstream classrooms) in China*. European Agency for Special Needs and Inclusive Education. <https://www.inclusive-education-in-action.org/case-study/15n-using-three-level-resource-room-system-promote-inclusive-education-learning>
- Farrell, M. (2000). The impact of research on developments in inclusive education. *International Journal of Inclusive Education*, 4(2), 153–162. <https://doi.org/10.1080/136031100284867>
- Fernández-Archilla, J. A., Álvarez, J. F., Aguilar-Parra, J. M., Trigueros, R., Alonso-López, I. D., & Echeita, G. (2020). Validation of the index for inclusion questionnaire for compulsory secondary education students. *Sustainability*, 12(6), 2169. <https://doi.org/10.3390/su12062169>
- Florian, L. (2005). Inclusive practice: What, why and how? In: K. Topping & S. Maloney (Eds.), *The routledge falmer reader in inclusive education* (pp. 29–40). Routledge.
- Hernández-Torrano, D., Somerton, M., & Helmer, J. (2020). Mapping research on inclusive education since Salamanca statement: A bibliometric review of the literature over 25 years. *International Journal of Inclusive Education*, 26(9), 893–912. <https://doi.org/10.1080/13603116.2020.1747555>
- Kurniawati, F. (2021). Exploring teachers' inclusive education strategies in rural Indonesian primary schools. *Educational Research*, 63(2), 198–211. <https://doi.org/10.1080/00131881.2021.1915698>
- Ma, H., & Tan, H. (2010). Survey of the status quo of Shanghai teachers for special students Learning in Regular Classes. *Chinese Journal of Special Education*, (1), 60–63+82.
- Mangiaracina, A., Kefallinou, A., Kyriazopoulou, M., & Watkins, A. (2021). Learners' voices in inclusive education policy debates. *Education Sciences*, 11(10), 599. <https://doi.org/10.3390/educsci11100599>
- Messiou, K. (2012). Collaborating with children in exploring marginalisation: An approach to inclusive education. *International Journal of Inclusive Education*, 16(12), 1311–1322. <https://doi.org/10.1080/13603116.2011.572188>
- Messiou, K. (2019). The missing voices: Students as a catalyst for promoting inclusive education. *International Journal of Inclusive Education*, 23(7–8), 768–781. <https://doi.org/10.1080/13603116.2019.1623326>
- Messiou, K., & Ainscow, M. (2015). Responding to learner diversity: Student views as a catalyst for powerful teacher development? *Teaching and Teacher Education*, 51, 246–255. <https://doi.org/10.1016/j.tate.2015.07.002>
- Ministry of Education the People's Republic of China. (2020). *The enrollment in Chinese special schools increased by 80% during Thirteenth Five-Year Plan*. http://www.moe.gov.cn/fbh/live/2020/52763/mtbd/202012/t20201210_504687.html
- Miranda, L., Villahermosa, R., Mendoza, R., Bobadilla, R. A., & Javier, E. (2021). Listening to students' voices: A participatory approach in improving teaching and learning: Listening to students' voices. *International Journal of Curriculum and Instruction*, 13(3), 2167–2177. <http://ijci.wccci-international.org/index.php/IJCI/article/view/366>
- Mitchell, D. (2005). Sixteen propositions on the contexts of inclusive education. In D. Mitchell (Ed.), *Contextualizing inclusive education: Evaluating old and new international perspectives* (pp. 1–21). Routledge.
- Mitchell, D. (2014). *What really works in special and inclusive education: Using evidence-based teaching strategies*. Routledge.
- Mu, G. M., Wang, Y., Wang, Z., Feng, Y., Deng, M., & Liang, S. (2015). An enquiry into the professional competence of inclusive education teachers in beijing: Attitudes, knowledge, skills, and agency.

- International Journal of Disability Development & Education*, 62(6), 571–589. <https://doi.org/10.1080/1034912X.2015.1077934>
- National Council for Special Education (NCSE). (2010). *Literature review of the principles and practices relating to inclusive education for children with special educational needs*. NCSE.
- Noyes, A. (2005). Pupil voice: Purpose, power and the possibilities for democratic schooling. *British Educational Research Journal*, 31(4), 533–540. <https://doi.org/10.1080/01411920500153614>
- Pang, W. (2017). Research on the current situation and development of inclusive education for persons with disabilities in China. *Disability Research*, (4), 35–43.
- Pantić, N., & Florian, L. (2015). Developing teachers as agents of inclusion and social justice. *Education Inquiry*, 6(3), 333–351. <https://doi.org/10.3402/edui.v6.27311>
- Qu, X. (2019). *Inclusive education in Chinese primary schools – a critical realist analysis* [PhD thesis, University College London].
- Rouse, M. (2009). Developing inclusive practice: A role for teachers and teacher education. *Education in the North*, 16, 6–13. <http://birbhum.nic.in/DPSC/reference/79.pdf>
- Shenzhen Government Online. (2021). *Notice of the general Office of the people's government of Shenzhen municipal on issuing the 'Shenzhen action plan for promoting the special education equitable and inclusive*. http://www.sz.gov.cn/zfgb/2021/gb1210/content/post_9053648.html
- Shenzhen Finance Bureau. (2021). *Report on the implementation of the Shenzhen budget in 2020 and the draft budget for 2021*. http://szfb.sz.gov.cn/szsczjwzgkml/szsczjwzgkml/zjxx/czyjs/content/post_8814237.html
- Slee, R. (2006). Limits to and possibilities for educational reform. *International Journal of Inclusive Education*, 10(2–3), 109–119. <https://doi.org/10.1080/13603110600578372>
- State Council Information Office of the People's Republic of China. (2019). *White paper on equality, participation and sharing: 70 years of protecting the rights and interests of persons with disabilities in the People's Republic of China*. <http://www.scio.gov.cn/ztk/dtzt/39912/41159/41170/Document/1660536/1660536.htm>
- State Council of the People's Republic of China. (2021a) *Notice of the general Office of the state Council on forwarding the '14th five-year' special education development and improvement action plan of the ministry of education and other departments*. http://www.gov.cn/zhengce/content/2022-01/25/content_5670341.htm
- State Council of the People's Republic of China. (2021b) *Notice of the state Council on printing and distributing the '14th five-year plan' for the protection and development of disabled persons*. http://www.gov.cn/zhengce/content/2021-07/21/content_5626391.htm
- Tan, Q. (2015). *Examining the barriers to inclusive education for students with special educational needs. A case study of two primary schools in Mainland China*. Universitat Autònoma de Barcelona.
- Themane, M., & Thobejane, H. R. (2019). Teachers as change agents in making teaching inclusive in some selected rural schools of Limpopo Province, South Africa: Implications for teacher education. *International Journal of Inclusive Education*, 23(4), 369–383. <https://doi.org/10.1080/13603116.2018.1434690>
- Tichá, R., Abery, B., Johnstone, C., Poghosyan, A., & Hunt, P. (Eds.) (2018). *Inclusive education strategies: A textbook*. University of Minnesota.
- UN. (1948). *Universal declaration of Human rights*. United Nations.
- UN. (2006). *Convention on the rights of persons with disabilities*. United Nations.
- UNESCO. (1994). *Salamanca statement and framework for action on special needs education*. UNESCO.
- UNESCO. (2020). *Policy paper 43 inclusive teaching: Preparing all teachers to teach all students*. UNESCO.
- Wang, Y. (2016). *Imagining inclusive schooling: An ethnographic inquiry into disabled children's learning and participation in regular schools in shanghai*. University of Edinburgh.
- Wiersma, W., & Jurs, S. G. (2009). *Research methods in education: An introduction* (9th ed.). Pearson.

- Yang, L., & Zhang, T. (2018). Progress in the research into the quality of learning in regular classes on the Chinese mainland. *Chinese Journal of Special Education*, 25(9), 3–7.
- Yu, L. (2016). On the practice in improving the quality of local inclusive education. *Chinese Journal of Special Education*, (4), 11–17.
- Zan, F., Liu, C., Wang, M., & Sharmar, U. (2011). On the investigation into in-service teachers' self-efficacy in inclusive education in Shanghai. *Chinese Journal of Special Education*, (5), 3–9.