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Individualizing Instruction for Students with Intellectual and Developmental Disabilities in China: Teachers' Perceptions and Practices

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Corresponding Author:	Shuoxi Huang East China Normal University Shanghai, CHINA
First Author:	Shuoxi Huang
Order of Authors:	Shuoxi Huang
	Donna Lehr
	Zachary Rossetti
	Mian Wang
Manuscript Region of Origin:	CHINA
Abstract:	This study investigated Chinese special education teachers' perceptions and practices of individualizing instruction for students with intellectual and developmental disabilities (IDD). Semistructured interviews were conducted with 31 teachers who taught elementary Chinese language arts and math in six public special education schools for students with IDD in Shanghai. In addition, lesson plans written by 19 of the 31 teachers were collected. Thematic analysis revealed that teachers recognized the necessity of adapting instruction. However, practices and beliefs associated with one-size-fits-all approaches to teaching were prevalent. Although all teachers described making efforts to address individual differences, these efforts appeared to be inadequate. Teachers perceived fully addressing the needs of individual students as difficult and described challenges in four areas.

Abstract

This study investigated Chinese special education teachers' perceptions and practices of individualizing instruction for students with intellectual and developmental disabilities (IDD). Semistructured interviews were conducted with 31 teachers who taught elementary Chinese language arts and math in six public special education schools for students with IDD in Shanghai. In addition, lesson plans written by 19 of the 31 teachers were collected. Thematic analysis revealed that teachers recognized the necessity of adapting instruction. However, practices and beliefs associated with one-size-fits-all approaches to teaching were prevalent. Although all teachers described making efforts to address individual differences, these efforts appeared to be inadequate. Teachers perceived fully addressing the needs of individual students as difficult and described challenges in four areas.

Key words: individualized instruction, students with intellectual and other developmental disabilities, special education teachers, China

Individualizing Instruction for Students with Intellectual and Developmental Disabilities in China: Teachers' Perceptions and Practices

Tailoring instruction to meet individual student needs, often referred to as individualized instruction, has long been considered the most important feature of effective special education practice in the U.S. (Landrum & McDuffie, 2010). Individualized instruction involves two essential components: (a) identification of individual characteristics and needs via student assessment and (b) arrangement of educational environments and provision of instruction to meet individual needs, especially through instructional adaptations (Janney & Snell, 2011). Extensive research has demonstrated positive effects of individualized instruction or adaptations on the behavioral and learning outcomes of students with intellectual and developmental disabilities (IDD) (e.g., Collins et al., 2011; Lee et al, 2010).

The concept and practices of individualized instruction for students with disabilities were first introduced to mainland China in the 1980s (Chen, 1994) and have gained increasing attention among Chinese special educators, researchers, and policy makers in recent years. Chinese scholars have discussed the meaning and importance of individualized instruction (e.g., Chen, 1994; Sheng, 2005). Published articles written by special education teachers have described strategies that they used to individualize instruction (e.g., Lai, 2016; Liu, 2004). Special education legislation (Regulation on the Education of Persons with Disabilities, 2017) and the central government's policy documents (e.g., Ministry of Education, 2016) call for attention to individual differences and implementation of individualized instruction.

While showing interest and support for individualized instruction, some scholars have expressed concerns about the challenges of successfully implementing this practice in China's social and cultural context (Ding, 2001; Ding et al., 2006; Zhao & Hua, 2006). They pointed out

the differences between China and Western countries in terms of cultural values, educational practices, and available resources. They argued that these differences might affect acceptability and feasibility of individualized instruction in Chinese schools.

Cheng (1998), for example, described individualism–collectivism as an important dimension of cultural differences between Western and Asian countries that may impact educational practice and thinking. According to Cheng (1998), in Western cultures, where individualism is valued, students are encouraged to "develop according to their unique needs and potentialities" (p.16), and the education system is expected to adapt to the needs of individuals with varying abilities and interests. By contrast, in Chinese society, where a collectivist culture dominates, the education system is characterized by conformity and uniformity. Students are supposed to learn to adapt themselves to the expectations shared by the community. Given such differences, it can be assumed that individualized instruction, which requires attention to individuals and adaptations to expectations and instructional practices appropriate to meet individual needs, may not be well suited to the teaching philosophy of Chinese teachers. Scholars have pointed out other factors that may impede individualized instruction in Chinese schools, such as standardized curricula and school facilities, the practice of whole class instruction as a norm, high student–teacher ratios, inadequate teacher training, and limited teaching resources (Ding, 2001; Ding et al., 2006).

Considering these barriers described as concerns, one may wonder whether and how instruction is actually individualized for students with disabilities in Chinese schools and how teachers perceive individualized instruction. Do the potential barriers pointed out by Chinese scholars actually impede the individualization of instruction? These are important questions to answer to ensure appropriate instruction.

However, a close examination of Chinese literature revealed little empirical information related to these questions. An electronic search of the China Academic Journal Network Publishing Database generated 168 journal articles related to individualizing instruction for students with disabilities published between 1982 and 2021. The vast majority of these were introductions of foreign practices (e.g., Yu, 2011), anecdotal reports of Chinese teachers' practices (e.g., Lai, 2016; Liu, 2004), and conceptual or theoretical discussions of individualized instruction (e.g., Deng & Guo, 2010; Sheng, 2005). Although there were a few empirical studies, they relied mainly on quantitative research methods to investigate the content and development of Individualized Education Programs (e.g., Xin & Cao, 2015, 2016; Zhu & Yu, 2011). Few investigated the degree to which and the ways that instruction is individualized and teachers' perceptions of individualizing instruction.

Study Purpose

This study aimed to investigate Chinese special education teachers' perceptions and practices related to individualizing instruction for students with IDD. In China, students with IDD are primarily placed in special education schools that previously served exclusively students with mild to moderate intellectual disabilities (hereafter referred to as *schools for students with IDD*). These schools now serve an increasingly diverse student population, including students with intellectual disabilities, autism, and other multiple disabilities, who have more complex learning needs. The general model in these schools is one in which content area teachers alternate in teaching different subjects to the same class of students during the school day (Ellsworth & Zhang, 2007). Chinese language arts and math are the two core subjects taught and therefore were chosen as the focus of this study.

The following research questions guided the study:

(a) How do elementary Chinese language arts and math teachers in public special education schools for students with IDD in Shanghai individualize or adapt instruction for their students?

(b) How do these teachers perceive the concept and practice of individualizing or adapting instruction for students with IDD?

(c) What are the barriers to individualizing or adapting instruction for students with IDD in these schools?

Method

A qualitative research design was used for this exploratory study. This inquiry was guided by a critical realist perspective, which combines ontological realism with epistemological constructivism (Maxwell, 2018). Critical realists view qualitative data not only as "texts to be interpreted, or as the constructions of participants . . . but also as evidence about the real phenomena . . . that the researcher wants to understand" (Maxwell, 2018, p. 23). In this study, the researchers saw participants' accounts as their construction and sought to understand their subjective meaning and experiences. At the same time, teachers' accounts were also used as a source of information to generate knowledge about events and processes occurring in reality.

Participants and Settings

The participants were 31 teachers teaching elementary Chinese language arts and math in six public special education schools for students with IDD in Shanghai. Table 1 presents their demographic information. Two purposeful sampling strategies were used to recruit participants (Patton, 2015). First, this study focused on teachers who were identified by school administrators as effective teachers, based on the assumption that effective teachers are more likely to have a good knowledge of individualized instruction and insights into the topic. Second, purposeful

sampling with logic of maximum variation (Patton, 2015) was used, with an intention to create a sample of between 15 to 20 effective teachers who represented some diversity in important teacher characteristics. These characteristics included the school in which they were teaching, grade level and subject they taught, teaching experience, and educational background.

At the time of the study, there were 20 public special education schools providing Grades 1–6 educational services for students with IDD in Shanghai, with at least one school in each of Shanghai's 16 districts. Nine of the schools were in urban districts and 11 in suburban districts. Two special education experts who knew local schools well were asked to identify potential participating schools. One expert was a city-level special education supervisor and the other was a faculty member in a special education teacher preparation program in Shanghai.

During the first round of participant recruitment, the city-level special education supervisor was asked to nominate three schools for students with IDD that included both urban and suburban schools and were of lower, medium, and higher quality schools based on her judgment about these schools' curriculum and instructional practices, resources, and reputation. The university professor then verified these nominations. Administrators from all three schools agreed to participate in this study and were asked to nominate teachers who (a) taught elementary Chinese language arts or math; (b) were perceived by them to be effective in teaching students with IDD; and (c) represented a diverse array of subject areas, grade levels, teaching experience, and educational background. They distributed recruitment letters to the nominated teachers to request their participation. This procedure resulted in the identification of 12 potential participants from the three schools.

Because this fell short of the optimal sample size of 15–20 participants, a second round of recruitment was conducted. The same special education supervisor nominated another set of

three schools that included both urban and suburban schools and were considered to be of lower, medium, and higher quality. The lower quality school nominated declined participation. Since the special education supervisor was not able to recommend another lower quality school, another medium quality school was identified for recruitment. This second round recruitment process yielded an additional 19 potential participants from two medium quality schools and one higher quality school. In total, 31 teachers were recruited from six schools, in different districts.

Data Collection

The study was approved by the Boston University Institutional Review Board. Data were collected primarily through (a) one-on-one semistructured interviews, (b) a demographic questionnaire, and (c) reviews of written lesson plans. The first author conducted all the interviews at the school sites in an empty classroom or office. At the beginning of the interview meeting, the participants were asked to complete an online demographic questionnaire that began with a consent form. An interview protocol was used to guide the interviews. All interviews were conducted in Mandarin and audio recorded for transcription. The interviews lasted 30 to 97 minutes. After completing the interview part of this study, all participants were asked to provide a written lesson plan. Nineteen of them agreed to provide one.

Interview Protocol

The interview protocol consisted of a list of carefully designed open-ended questions about the characteristics of students taught, what the participants did to address student differences, and what they thought about individualizing or adapting instruction. For example, the participants were asked to describe a specific lesson that they taught and how they engaged students with different ability levels in the lesson. According to Maxwell (2013), asking questions about a particular occasion or event is more likely to produce concrete descriptions of

what happened. The interview protocol was piloted with two teachers who were not participants of this study and revised based on their feedback to improve clarity.

Data Analysis

Data were analyzed using a codebook approach to thematic analysis, which involves the development of a coding frame as a tool to map patterned meaning (i.e., themes) across a data set (Braun & Clarke, 2022). Analysis was conducted by the first author, in collaboration with her dissertation advisors (the second and the third authors) and two peer debriefers, who reviewed the analysis process and the coding through discussion throughout. A computer-assisted qualitative data analysis software program, NVivo, was used.

The interview data were analyzed through a four-stage process. The first phase involved preparing and getting familiar with the data. After each interview was conducted, the participant was assigned an identity code, and the interview was transcribed verbatim in Chinese and then imported into an Nvivo database. The second phase involved coding and categorizing the interview data. The first author started this process by coding the first 10 interviews. While she used some priori codes (*e.g., student information* and *perceived challenges and barriers*) based on the interview questions, codes were primarily developed inductively. Similar codes were grouped to create a smaller number of categories. These hierarchically organized codes and categories served as a tentative coding frame to sort data from all the cases. As the analysis proceeded, codes and categories were continually revised to better fit the data. This process resulted in 38 codes (with subcodes) organized into nine categories.

The third phase involved the identification of themes. The first author examined the nine categories of data to identify areas of similarity. Some categories went on to form main themes, whereas others were further combined. This process resulted in five distinctive but related

themes. The fourth phase involved more detailed analysis within and across themes to describe and relate the themes, categories, and concepts represented. The final coding frame derived from the interview data was used to code information regarding instructional and adaptation practices in the lesson plans. Data were considered to be saturated in the sense that all the codes in the final coding frame were identified within the first 20 interviews and applied to the rest of cases.

Trustworthiness and Credibility

Several strategies were used to enhance the trustworthiness and credibility of the findings, including researcher reflexivity, methodological triangulation, member checks, and peer debriefing (Brantlinger et al., 2005). The primary researcher was an international doctoral student from China with a background in special education. She had personal experience as a school-age student in whole-class-instruction-dominated classrooms in China. She acknowledged that her values and assumptions (e.g., perceptions of what quality individualization should look like based on her training in special education) inevitably shaped and informed the research, and analysis was understood as always subjective. At the same time, she constantly reflected on her values and assumptions to avoid forcing data to fit her preconceptions.

Methodological triangulation involved using two data collection methods, interviewing and document analysis, to cross-validate findings. To conduct member check, the first author sent transcriptions and preliminary findings to each of the participants. All participants reviewed the transcriptions, and they all agreed that the transcriptions were accurate. Thirteen (42%) reviewed the findings, and all agreed that the themes and descriptions reflected their practices and perceptions.

Two Chinese graduate students enrolled in university special education programs served

the role of debriefers. Throughout the analysis process, they met regularly with the first author to review the coded transcripts and provide feedback on her analysis (e.g., pointed out overlooked participants' perspectives, brought up alternative interpretations, and assessed whether the findings were credible). The first author also discussed her analysis with her dissertation advisors. They provided feedback that resulted in revisions of the coding frame (e.g., combining codes and refining code names). Themes were reviewed and agreed by all authors.

Results

Five themes were developed: (a) recognition of the necessity of adapting instruction, (b) predominance of practices and beliefs related to standardized teaching, (c) imprecision in identifying individual differences, (d) inadequacy of adaptation strategies, and (e) difficulty related to addressing the individual needs of students. Each of these is discussed in the following sections.

Recognition of the Necessity of Adapting Instruction

Teachers recognized the necessity of providing differential treatment to accommodate students' different needs, using words such as "necessary," "important," and "beneficial" to describe the practices related to individualizing or adapting instruction. They believed that adapting instruction could help students "learn something" and make progress, "have something to do" and be engaged in class activities, reduce problem behaviors, and increase self-confidence and sense of achievement.

All teachers reported that they or their school adopted a *fenceng instruction* approach in an attempt to address students' individual differences. The Chinese word fenceng (分层) literally means dividing something into levels. Some Chinese researchers translated fenceng instruction as teaching at different levels or multilevel teaching, and the practice mostly resembles within-

class ability grouping described in English literature (Hu, 1992; Steenbergen-Hu, 2016). Teachers in this study demonstrated the use of fenceng instruction by classifying students into groups by their ability. Most reported that they divided students into high, medium, and low ability groups, which they identified as Group A, B, and C, respectively. A few participants divided students into two or four groups.

Teachers' reports revealed their recognition of between-group differences in their class. For example, a second-grade Chinese language arts teacher described group differences in learning Chinese pinyin: "Group A can read the pinyin letters independently; Group B students need some assistance; and Group C can only repeat after me" (Participant 27). Some teachers also noted individual differences that existed within the same ability groups and a need to respond to such complexity: "I wish I could adapt instructional content and goals for each individual student because, for example, although they're all in Group A, each of the Group A students has different ability levels" (Participant 22).

Predominance of Practices and Beliefs Related to Standardized Teaching

While teachers perceived adapting instruction to be beneficial, the data revealed that practices and beliefs associated with standardized approaches to teaching remained dominant. First, all teachers reported that they planned instruction at a whole class level, with a predetermined set of skills and knowledge chosen for all students based on textbooks and curriculum standards for students with IDD. Although teachers mentioned consideration of students' characteristics in determining and adjusting instructional content, in most instances, teachers referred to students as a whole without mentioning consideration of student differences or individual needs.

Analysis of teacher reports and lesson plans revealed that teachers' lessons were

composed of primarily teacher-led whole class instruction, in which teachers typically conveyed standardized instructional content to the whole class through lecture-type presentations and demonstrations. Although some teachers reported using various modes to present information (e.g., visual supports and modeling) and different strategies to promote students' understanding of information presented (e.g., creating contextual or story math problems), these strategies were reported to be used more as general or routine adaptations provided for all students in the class, instead of individual or subgroups of students. Teachers reported that only when individual or subgroups of students were called on to answer questions or when students were engaged in practice or hands-on activities (e.g., exploring a math concept using manipulatives), some adaptations were provided (e.g., low ability group students answering easier questions). Such adaptation opportunities, however, were reported to be limited.

In addition, teachers seemed to hold the general beliefs that the structure of whole class instruction should be maintained. They described that their priority responsibility was to deliver the planned content in a specific period of time, maintain the integrity of whole class instruction, and meet the needs of "the majority of students." These beliefs, together with their low expectations of students in low ability groups, seemed to contribute to teachers spending most of their instructional time on undifferentiated whole class instruction, thus limiting opportunities to address some students' unique needs, especially those in low ability groups:

> Because there're only 35–40 minutes in a lesson period and I have to deliver the new content and guide Group A and B students' practice, and Group C students have a low level of abilities, you certainly cannot spend too much time on them. (Participant 2)

Similarly, another teacher stated, "If I have time, I certainly need to spend the time focusing on the whole class. Then I don't have much time left to pay one-on-one attention to that Group D

student, who…are really severe" (Participant 7).

Imprecision in Identifying Individual Differences

Despite their recognition of student differences, teachers were imprecise in identifying how their students differed from each other. Analyses of their descriptions of student characteristics as well as how they got to know students revealed that most teachers had a narrow understanding of what constitutes instructionally relevant individual differences and used limited methods to determine individual needs. When talking about student characteristics upon which their instructional decisions were based, teachers mainly focused on how well students could work within the predetermined curricular and instructional approaches, such as students' abilities to master the standard academic content, participate in whole class instruction, and stay on task during seatwork. Basic skills such as cognitive and communication abilities were also emphasized. When describing the methods that they used to get to know their students, most teachers spoke in broad terms about relying on informal observations of students' behaviors and their own judgment. For example, a third-grade Chinese language arts teacher stated, "My assessment tool includes reviews [of what was previously taught] at the beginning of the lessons and observations of students' responses during the instruction" (Participant 7).

Inadequacy of Adaptation Strategies

All teachers reported making some efforts to adapt instruction to address student differences. However, most adaptations were described as being made at the group level instead of for each individual. For example, teachers described using the objectives for the medium ability group as a baseline and increasing expectations for students in high ability group and reducing expectations for those in low ability groups. Teachers' reports and lesson plans showed that they used several types of adaptations, including modifications of learning objectives and

tasks, different types and levels of instructor supports, and environmental and presentation accommodations. The adaptations described did not appear to be sufficient to address individual students' needs.

Modifications of Learning Objectives and Tasks

All teachers reported making changes to what students were expected to learn or to do, including differentiation of learning objectives, task requirements, and assignments. This was also the only type of adaptations documented in collected lesson plans. Teachers provided various examples of objective and task adaptions. These included (a) expecting students to learn different skills or topics (e.g., reading characters versus naming pictures and objects); (b) expecting students to learn the same skills but changing the difficulty level or the amount of skills or tasks (e.g., reading a whole passage versus reading an easy part of the passage); (c) adding or changing materials to scaffold learning or to assist completion of tasks (e.g., providing pictures as a clue for naming words); and (d) allowing alternative response modes to demonstrate learning (e.g., pointing instead of providing oral responses).

A careful examination of adaptions to learning objectives and tasks revealed teachers' low expectations for students in low ability groups. These students were expected to learn academic skills that were significantly limited in scope and depth and lacked variations across grade levels. For example, Chinese language arts teachers from all grade levels consistently and repeatedly reported identifying and naming pinyin letters, characters, and pictures as skills targeted for instruction for students in low ability groups. No teachers mentioned that these students were required to acquire higher level skills such as spelling and writing words and reading comprehension. Similarly, in math lessons, learning targets for students in low ability

groups were often limited to counting and identifying numerals, regardless of their grade levels, while for high ability students the targets were time, money, and/or computation skills.

In addition, for students with the most severe disabilities, many teachers reported adaptations focused on having students "participate" or experience the lessons or having students exposed to or interact with learning materials by looking at, listening to, touching, and holding the materials without specific learning goals. For example, for a student who had difficulty reading and pointing to Chinese characters, the teacher described showing a flashcard to the student but expecting no response from the student, with a hope that the student will "finally get the skills one day given the continued stimulus" (Participant 7).

The rationale that teachers mentioned for choosing specific objective or task adaptations for students in low ability groups often included deficit-based statements. Teachers frequently mentioned that students in low ability groups lack ability to complete certain tasks and therefore they provided alternative or simplified tasks "matching students' ability level" so that they could "participate." A sixth-grade math teacher stated,

> Group C students can't add or subtract. What they can do is to imitate what I say. So, when teaching eleven plus four equals fifteen, for example, I'll have Group C students identify, read, and point at the number fifteen. They show some interest, and they participate. (Participant 10)

Some teachers acknowledged limitations to this approach to adapting learning objectives. Several teachers commented that the adaptations they provided such as having students passively point to or imitate naming Chinese characters, pictures, and numbers, might not lead to student engagement in active learning or understanding the meaning of learning materials.

Different Types or Levels of Instructor Supports

Instructor supports was the second most frequently mentioned adaptation. Instructor supports included additional teacher support, peer support, and teaching assistant support. Almost all teachers reported that they provided extra support for students in low and/or medium ability groups during class time. The extra support included teachers (a) prompting students who had difficulty responding to questions or completing tasks; (b) providing more supervision or additional instruction during practice sessions for students who had difficulty staying on task or had not mastered the skills; and (c) providing instruction for students who had alternative skills or topics as learning objectives while other students were engaged in independent practice.

Almost three quarters of the teachers reported higher ability students providing assistance for lower ability students by modeling, helping with assigned tasks, or tutoring. About three quarters of the teachers also mentioned teaching assistant support, supports provided by adults other than the teacher, including teaching assistants paid by schools, those hired by parents, or parents, themselves, working as volunteers. Specific supports that teaching assistants provided included aiding the students with personal care, monitoring and managing students' behaviors, and/or providing instruction-related supports. An important role that teaching assistants played was to help students participate in teacher-directed whole class instruction, aiding them in staying in their seat and keeping quiet during teacher presentations, or modeling correct answers when teachers asked questions.

Environmental and Presentation Accommodations

Environmental accommodations and presentation accommodations are changes made to classroom environments and methods used to present instructional information, respectively, and are essential supports needed for some students with IDD (Janney & Snell, 2011). In this study, there were limited reports of use of these types of adaptations. Fewer than one third of the

teachers reported changing classroom environments to accommodate individual needs, and the most frequently described environmental accommodations were changes in seating arrangements, such as having a specific student sit closer to the teacher. Only five teachers reported adapting methods or materials used to present information (e.g., enlarged materials, audio recordings of reading materials, and using concrete materials).

Difficulty Related to Addressing the Individual Needs of Students

Teachers acknowledged that their current adaptation practices were inadequate, and that it was difficult to fully address the individual needs of their students. They reported challenges in four broad areas related to adapting instruction, which are described below.

Difficulty Creating Sufficient Adaptation Opportunities

All teachers indicated that they did not have sufficient energy, time, or opportunities to effectively deal with the full range of student needs during a 35–40 minutes lesson period, and some students' unique learning needs were therefore overlooked, especially the needs of those in low ability groups. Many teachers associated this challenge with the range and nature of student needs in their classes. Students' diverse and complex needs put great demands on and competed for teachers' attention and instructional time. A fifth-grade math teacher stated,

> The difficulty for teachers is that our students have low ability and many problems. I can hardly take care of students in Group A because, although they are in Group A, they still need my support and a lot of time to learn. Then I don't have much time and energy to take care of Group B and C. (Participant 15)

Students' challenging behaviors (e.g., tantrums, running away, self-injury, avoidance of work, and off-task behaviors) were considered to be particularly problematic and reported as a barrier to adapting instruction. Teachers reported that challenging behaviors interrupted the

teaching and learning process, resulting in less time for instruction and adaptation.

Teachers also described large class sizes and insufficient personnel helping out in the classrooms as factors that prevented them from paying enough attention to each and every student's needs. For example, A fifth-grade math teacher highlighted the importance of teaching assistant support:

> When there are Groups A, B, and C or even more ability levels in a class, how can you distribute the 35 minutes to as many students as possible? It requires teaching assistants helping out. We don't have such support. . . . As a result, some students' needs are unintentionally overlooked. (Participant 29)

Difficulty Teaching Standardized Curriculum to Students with Severe Disabilities

The second challenge was difficulty in assessing and teaching students with severe disabilities. This challenge seemed to reflect a mismatch between the nature of students' needs and teachers' extant knowledge and skills, further complicated by requirements to teach standardized academic content to this student population.

A small number of teachers reported difficulty in accurately predicting or knowing their students' performance as a barrier to effectively addressing individual needs. A fourth-grade Chinese language arts teacher stated, "Sometimes I find I don't know my students well. My previous observations may make me think, this student can do this. But actually when delivering instruction, I find the student can't do what I have anticipated. . . . "(Participant 21).

Over half of the teachers described difficulty they experienced when trying to have students in low ability groups master targeted academic skills and participate in instructional activities. A fourth-grade math teacher explained:

> Students don't understand [what is taught] . . . because math requires logic thinking. I

> feel I've tried very hard, but the adaptations I made only help Group B and C students participate. As we're getting students with more severe disabilities, I can't guarantee they're actually learning . . . because they are really severe, really severe. (Participant 3)

Experiencing these difficulties, some teachers wondered what the learning goals for students with the most severe disabilities should be. Some of them questioned the appropriateness or necessity of teaching academic skills. A fourth-grade Chinese language arts teacher wondered, "Do they need to learn these skills? . . . They really have difficulty learning to read and write" (Participant 14). Some teachers also indicated that they were challenged by the requirement to follow the national and local curriculum guides for students with IDD and to cover the content in the textbooks, which limited the flexibility to provide alternative learning options. A math teacher teaching third and fourth graders stated,

> There will be a test administered to all ninth graders with IDD before they graduate, which will test the content in the curriculum guides. So I have to cover the content and can't make many adaptations to accomodate students' different abilities. (Participant 8)

Difficulty Collaborating with Other Stakeholders

Some teachers described issues related to collaboration and communication with other stakeholders as a barrier to effective instruction and adaptation. They emphasized that parents should play an important role in their child's education (e.g., helping students practice what was taught at school) and expressed a concern about some parents' low expectations of their child and lack of involvement resulting in low student outcomes. The following statement from a third-grade Chinese language arts teacher was typical:

> Sometimes I have problems communicating with parents. Some parents feel that there's no need to spend too much time teaching their child. They give up on their child. . . . I try

> to individualize instruction, but students only spend a few hours at school each day. Their outcomes depend on whether the parents continue to teach them at home. (Participant 31)

A few teachers also mentioned a lack of support from experts or specialists such as special education supervisors, medical professionals, and speech therapists as a barrier.

Difficulty Planning Adaptations

The fourth challenge was limited time and resources for instructional and adaptation planning. Teachers indicated that they had too much to do and too little time to do it, and their other responsibilities distracted them from preparing instruction and adaptations. A fourth-grade math teacher described this challenge:

> Experts have a good intention when they advocate individualizing instruction, but they fail to consider the difficulty we teachers have. It requires a lot of work to create different learning materials for different students. . . . I teach other subjects. I'm also in charge of a class as a homeroom teacher. I also have to do teacher research. (Participant 3)

Teachers also indicated that limited curriculum and teaching resources added to their burden. A first-grade math teacher described her stress: "In regular schools, they have teacher reference books that match the curriculum standards and materials for student practice ready for use. We have nothing. I have to look for resources by myself. This is stressful. . . ." (Participant 6)

Discussion

Practices and perceptions as well as the difficulties in individualizing instruction reported by special education teachers participating in this study provide some support for Chinese scholars' concerns that cultural values, existing educational practices, and available resources may impede acceptability and feasibility of individualized instruction in Chinese schools (Ding, 2001; Ding et al., 2006; Zhao & Hua, 2006). In terms of teachers' practice, the findings revealed

that in the six special education schools for students with IDD, traditional standardized approaches of teaching (e.g., whole class instruction) were dominant (Ellsworth & Zhang, 2007). In this context, all participants adopted a fenceng instruction approach in response to student differences. They classified students in the same class into ability levels and provided some adaptations mainly at the group level and in the forms of (a) differentiated learning objectives and tasks and (b) different types and levels of instructor supports. Highly individualized, specially designed instruction with systematically planned adaptations focusing on each individual student' needs (Giangreco et al., 2011; Janney & Snell, 2011) was not reported. These findings raise several concerns.

The first issue is the use of fenceng instruction, an approach to individualization similar to within-class ability grouping discussed in the U.S. context. The two concepts are not exactly the same though. Ability grouping described in the U.S. literature typically involves physically placing students with similar abilities into small groups as distinct units of teaching or learning (i.e., homogeneous small group instruction), which represents an organizational feature of the class (Lou et al., 1996). Fenceng instruction, by contrast, puts more emphasis on conceptually grouping students by ability and providing differential treatments for different groups and does not imply use of small group instruction (Mao, 2000).

Although fenceng instruction has gained popularity and support among special and general educators in China (Mao, 2000; She, 2014), grouping students by ability has long been a controversial practice in the U.S. (Park & Datnow, 2017) and may not be a valid or sufficient strategy for addressing the individual needs of students with IDD. For this highly heterogeneous population of students, it is impossible to form truly homogenous groups and unlikely that an adaptation provided for a group would fit the needs of each student in that group. Furthermore,

research has revealed that when students are classified by ability, those in lower ability groups are more likely to experience low expectations from teachers and lower quality of instruction (Slavin, 1987). The practice of fenceng instruction, therefore, should be used with caution.

Another issue is the inadequacy of adaptations in both quantity and quality. Participants reported infrequent use of adaptations during class time. In addition, the adaptations reported to be used seemed to lack solid assessment data as their basis, represent a limited array of the full range of adaptations that students with IDD need, and conflict with the best practices in teaching students with IDD suggested in the literature (Downing, 2005; Giangreco et al., 2011; Janney & Snell, 2011). For example, in most cases, reported modifications to learning objectives for students in low ability groups did not seem to reflect individualized, meaningful, or challenging learning goals (Giangreco et al., 2011). Adaptations such as those that involved passive instruction (e.g., showing learning materials but not expecting active student responses) are invalid for promoting meaningful learning and participation (Downing, 2005).

In terms of teacher perceptions, the findings revealed that the participants perceived individualizing or adapting instruction as beneficial or necessary but difficult to implement. This indicates that these teachers have some positive attitudes towards individualized instruction, at least at the explicit, self-report level, instead of completely rejecting this idea. At the same time, they described experiencing difficulty in creating sufficient adaptation opportunities, getting to know and teaching students with severe disabilities, collaborating with other stakeholders, and planning adaptations.

Teachers identified specific factors that contributed to the difficulty, including contextual factors, student characteristics, and teacher characteristics. Examples of contextual factors mentioned were large class sizes, inadequate classroom staff, the requirement of teaching to meet

curriculum standards, a lack of support from parents, and teachers' heavy workloads and limited time for planning. Student characteristics identified as barriers included challenging behaviors, low abilities, and the wide range of individual differences. Teacher characteristics that appeared to hinder individualization included (a) limited knowledge and skills in teaching students with IDD, (b) beliefs related to standardized teaching approaches, and (c) low expectations of students with severe disabilities. Some of these factors, such as high student–adult ratios, lack of planning time, and teachers' limited skills and training, have also been frequently reported as barriers to adapting instruction in U.S. school contexts (Bondie et al., 2019; Scott et al., 1998).

In this study, it appeared that teachers' beliefs in whole class teaching prevented them from providing more individualized instruction. Similarly, in a study comparing classroom practices in elementary schools in France and England, Raveaud (2005) found that French teachers were reluctant to differentiate instruction because they viewed differentiation as a means of perpetuating social inequalities, and this perception was rooted in a fundamental belief in social justice in the national culture. Raveaud's study also revealed that although social justice was a concern in England, this belief tended to be overridden by English teachers' values related to promoting individual development, and therefore English teachers used more differentiated instruction than their French counterparts.

The basis for teachers' instructional decisions in the present study and in Raveaud's (2005) study reflects what some researchers called deep structure beliefs about schooling (Tye, 2000). According to Tye (2000), deep structure beliefs are widespread and deeply rooted in a society's culture and influence instructional decisions that teachers make and act as "inhibiting forces that actively seek to prevent changes in how schools are put together and work" (p. 83). Whole class instruction has been "one of the hallmarks of teaching" (p. 152) in classrooms in

China (Stevenson & Lee, 1995) and teachers' deeply held beliefs related to whole class teaching may be part of societal and organizational cultures. This may explain, at least partially, why innovations that challenge the traditional practices and perceptions of whole class instruction, like implementation of highly individualized instruction for students with IDD, are difficult.

Taken together, the findings of this study suggest complexities involved in the process of individualizing instruction in schools for students with IDD in China. Holding the conflicting perceptions that instruction should be adapted to accommodate individual needs and that the structure of standardized teaching approaches needs to be maintained, teachers adopted a fenceng instruction method to address individual differences. This method involved teachers making minor changes to traditional approaches of teaching and using limited assessment and adaptation practices, which did not seem to fully address students' individual needs.

Limitations of the Study

The findings of this study must be interpreted with several limitations in mind. The study was limited to a purposeful sample of 31 teachers. It cannot be assumed that all teachers teaching students with IDD throughout Shanghai or China would have the same practices or options. In addition, this study focused on teacher practices in Chinese language arts and math classes. It is not known to what extent teachers teaching different subjects and other professionals provide an individualized education program for each student. Furthermore, the findings were mainly based on teachers' self-reports and their lesson plans. There may be incongruity between the information provided by teachers in interviews and on written plans and their actual practices. Finally, the scope of this study was limited to collecting general, descriptive information from teachers, and the findings were intended to provide information for further studies. In-depth case study research to comprehensively examine individual students' educational programs is needed.

Implications for Practice and Policy

The results from this study suggest that teachers of students with IDD in China should adopt new practices to address the individual differences among their students. This may require a change in organizational cultures and teachers' beliefs related to traditional teaching approaches. Researchers should collaborate with teachers to explore effective and feasible ways to change traditional whole class instruction structure to provide appropriate instruction for individual students. School administrators should work to build a school culture that encourages teachers to address the needs of each individual student and provide administrative support to enable teachers to do so. This should include resources such as trained teaching assistants, scheduled planning time, and teaching materials to facilitate implementation of these practices.

Teacher preparation and professional development programs should provide training in how to individualize instruction to meet the needs of students with IDD, including appropriate assessment and adaptation strategies. Teacher educators may also need to address preservice and inservice teachers' fundamental beliefs about whole class instruction, which may impact acceptance and implementation of new practices.

Individualized instruction for each student with disabilities is not mandatory in China, and related policy documents lack specific guidelines on how to develop and implement individualized education programs. Therefore, it is recommended that future amendments of the Regulation on the Education of Persons with Disabilities make individualizing instruction for every student with disabilities mandatory. Policy documents such as the curriculum standards for special education schools (Ministry of Education, 2016) should also provide guidelines for developing individualized learning goals.

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Table 1

Participant Demographics

Characteristic	n	%
Gender		
Female	30	97
Male	1	3
Age		
20–29	4	13
30–39	17	55
40–49	7	23
50 and above	3	10
Main subjects taught		
Chinese language arts	15	48
Math	16	52
Grades taught		
Grade 1 and/or 2	10	32
Grade 3 and/or 4	11	35
Grade 5 and/or 6	9	29
Other (Grades 3 and 5)	1	3
Years of teaching students with IDD		
0–5 years	2	6
6–10 years	7	23
11–20 years	18	58
More than 20 years	4	13
Education level		
College without a degree	1	3
Bachelor’s	29	94
Master’s	1	3
Areas of study/major		
Special education	15	48
Other education only	10	32
Non-education only	6	19