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RESEARCH ARTICLE

STRATEGIES FOR IMPROVING TEACHER-CHILD INTERACTION IN KINDERGARTEN COLLECTIVE TEACHING ACTIVITIES

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ABSTRACT

Collective teaching activities are important scenes of teacher-child interaction, and the quality of teacher-child interaction is a key factor affecting teaching quality. In order to deeply explore the status quo of teacher-child interaction in kindergarten collective teaching activities and its optimization path, this study collects 30 video samples of kindergarten collective teaching activities, analyzes teacher-child interaction in kindergarten group teaching using the CLASS classroom assessment system, and analyzes the quality of teacher-child interaction by using SPSS26.0 for data analysis. The study found that the overall teacher-child interaction in kindergarten collective teaching activities is at a moderate level, and teachers show positive attitudes in emotional support, but still need to strengthen their educational support and language modeling, and there are still problems such as teachers' low educational sensitivity, teachers' dominance, children's lack of subjectivity, poor feedback quality, and insufficient language modeling. Based on this, this study proposes feasible recommendations: first, teachers should improve their educational sensitivity and flexibly adjust their interaction strategies; second, they should enrich their teaching and guidance methods to enhance children's independent explorations; and third, they should strengthen their verbal modeling to guide children's in-depth expressions.

1. INTRODUCTION

Policy documents such as the Guidelines for Kindergarten Education (for Trial Implementation) (Ministry of Education, 2001) and the Guidelines for Evaluating the Quality of Kindergarten Care and Education clearly state (Ministry of Education, 2022) that teacher-child interaction is one of the most important indicators for evaluating the quality of education. As an

important part of early childhood education, kindergarten collective teaching activities occupy an important position in the day-to-day life of young children, directly affecting the development of young children in many aspects. The purpose of collective teaching is to utilize the shortest possible time to maximize the knowledge and skills imparted to all children, i.e., to obtain the maximum educational results through limited resources. High-quality collective teaching requires teachers to get rid of the traditional concept of education, fully increase the participation and enthusiasm of young children's learning, and improve the quality of teaching (Han, 2016). Teacher-child interaction is an indispensable part of the kindergarten education process, which directly affects young children's cognitive development, emotional experience and social growth. As the state attaches increasing importance to preschool education, the subjective position of young children in the learning process is becoming more prominent. At the same time, teacher-child interaction has received widespread attention as an important factor in promoting the comprehensive development of young children. The quality of teacher-child interaction not only affects children's participation and learning effect in collective teaching activities, but also becomes a key indicator of the quality of early childhood teaching activities. It is not only the hot spot of current academic research, but also the key to improve the quality of preschool education. The quality of teacher-child interaction directly affects other quality factors such as the level of teaching activities, and is the main body of the quality of preschool education process (Huang & Song, 2013). High-quality teacher-child interaction can provide children with rich learning opportunities, stimulate their interest in learning and promote their overall development (Wang et al., 2024).

As the importance of teacher-child interactions in preschool development is increasingly emphasized, it is particularly important to assess the quality of teacher-child interactions in a more objective and comprehensive way. Classroom Assessment Scoring System (CLASS) is one of the most widely used tools (Ishimine & Tayler, 2014). CLASS was designed and compiled by a team led by Prof. Pianta at the School of Education of the University of Virginia in the U.S. It is divided into six versions for students of different ages, covering three major domains of emotional support, classroom management, and pedagogical support as well as 10 dimensions, which are specifically designed to assess teacher-child interactions in the classroom, and its reliability and validity have been verified in many countries and have received more and more attention in the international community (Ansari et al., 2022; Pianta et al., 2005).Therefore, the CLASS classroom assessment system used in this study as a research tool is feasible and scientific, and can objectively and comprehensively assess the quality of teacher-child interactions in kindergarten collective teaching activities.

2. RESEARCH DESIGN

2.1. Research Target

In this study, six large kindergarten classes from one of three kindergartens in Luoyang City were selected as observation targets. The author conducted non-participant observations and recorded 30 collective teaching activities, each lasting approximately 20 minutes, covering five major fields: language, science, art, health, and society.

The selection of kindergartens and classes followed purposive and convenience sampling strategies to ensure diversity in teaching practices. Factors such as educational philosophy, geographic location, teacher qualifications, and willingness to participate were considered. Within each kindergarten, two classes were chosen to maintain balanced representation in teacher experience, classroom size, and instructional approaches, providing a comprehensive view of teacher-child interaction quality in collective teaching settings.

2.2. Research Methods

2.2.1. Research Instruments

This study used The Classroom Assessment Scoring System: CLASS (2017) as the main research tool. CLASS was selected for its reliability in assessing teacher-child interactions and providing structured, quantifiable insights. Unlike ECERS and TCIS, CLASS focuses on real-time interactions across emotional, organizational, and instructional domains, ensuring a comprehensive assessment suitable for early childhood settings.

CLASS is a widely used international assessment tool for teacher-child interactions, which is able to quantitatively assess the quality of teacher-child interactions in three major domains: emotional support, activity organization and educational support. There are several dimensions under each domain, as follows: (1) Emotional Support (ES): including four dimensions of Positive Climate (PC), Negative Climate (NC), Teacher Sensitivity (TS), and Focus on Young Children's Perspectives (RSP); (2) Activity Organization (CO): including three dimensions of Behavioral Management (BM), Productivity (PD), and Educational Learning Facilitation (ILF); and (3) Educational Support (IS):including the dimensions of cognitive development (CD), quality of feedback (QF) and language modeling (LM). The details are shown in Figure 1:

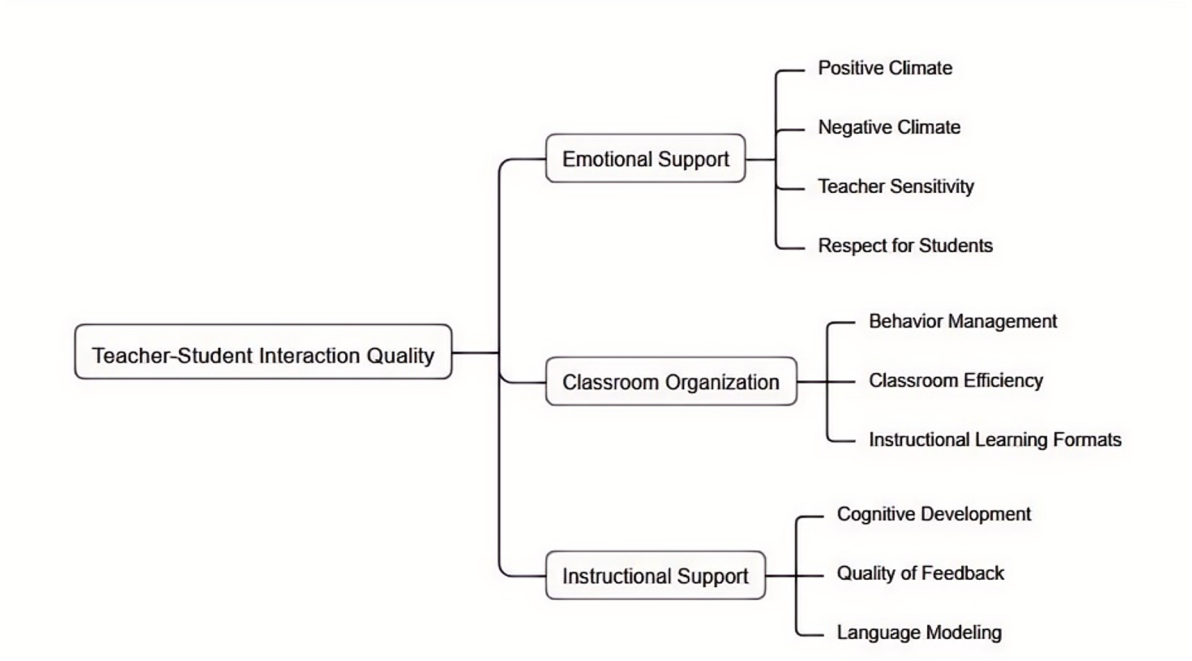

Figure 1: CLASS (Pre-K CLASS) Classroom Assessment System Structure Diagram

The CLASS assessment system starts from the three domains and ten dimensions of emotional support (ES), activity organization (CO) and instructional support (IS), and contains forty-two behavioral indicators under the ten dimensions to guide the observers to understand the scoring content of each dimension more accurately, and adopts a seven-point dimensional scoring method, with each dimension divided into different levels of low (1,2), medium (3,4,5), and high (6,7). The degree of this dimension in the class was demonstrated (2007) as a means of statistical analysis. This type of assessment is both objective and comprehensive, and helps us to more accurately understand the status of teacher-child interactions and the problems that exist. Through careful observation and recording of these behavioral indicators, researchers are able to deeply analyze the specific performance of teacher-child interactions, discover potential teaching strengths and weaknesses, and provide strong data support for subsequent teaching improvement. The CLASS system is divided into different versions according to the age of the students, and has now been increased to six versions (Han, 2015; Sun, 2013). The main ones that are currently widely used are the early childhood version and the preschool through third grade version. This study designed the CLASS Classroom Interaction Evaluation Observation Form and the CLASS Classroom Evaluation Scoring System Operation Standards, drawing on JIANG (2018), “Research on the ‘Classroom Assessment Scoring System’ (CLASS) in the United States”, and Han's (2015) teacher-child interaction evaluation standards.

2.2.2. Research Process

In order to investigate the teacher-child interactions in the collective teaching activities of large classes in a natural, authentic and objective state, the author observed and filmed the teacher-child interactions in the activities of six large classes in one of the three schools in a non-participant capacity, rated the teacher-child interactions in the video samples according to the scoring criteria of the CLASS system, and then analyzed the data using SPSS26.0. First of all, this study used non-participant observation, during which the observer recorded the whole process of teacher-child interactions in advance by using the video recording method, and use SPSS26.0 to conduct descriptive statistical analysis on each video sample.

During the formal observation, the observers recorded the whole process of teacher-child interaction by video-recording method in advance, and each sample was a 20-30-minute video recording. After the recording was completed, the video was observed by two observers at the same time, and was evaluated according to the CLASS system indicators and the elements shown in the video of teacher-child interaction, and the score of each teacher was averaged by the two observers in order to make the results of the observation more accurate and comprehensive. The scores were used to obtain an initial sample of data. Then, the data were entered into SPSS software and analyzed quantitatively to understand the teacher-child interactions in collective teaching activities in kindergartens. Finally, in order to have a more in-depth understanding of the specific scores of a particular item, two teachers with the highest and lowest scores were interviewed, aiming at exploring the deeper meanings and reasons behind the scores to form a more comprehensive analysis report.

In summary, detailed observation records and the CLASS scale were used in this study, covering 3 primary indicators and 10 secondary indicators of emotional support, activity

organization and teaching support. The objectivity of the data was ensured through non-participant observation and initial sample data collection. Group teaching videos were recorded and analyzed, and a seven-point scale was used to quantitatively assess the quality of teacher-child interactions. Interviews provided rich qualitative data, and video case studies provided insights into classroom interactions. The data were analyzed using a combination of quantitative and qualitative methods, and the interviews explored the underlying causes of the problems. These steps were designed to ensure the rigor and scientific validity of the study, as shown in Figure 2:

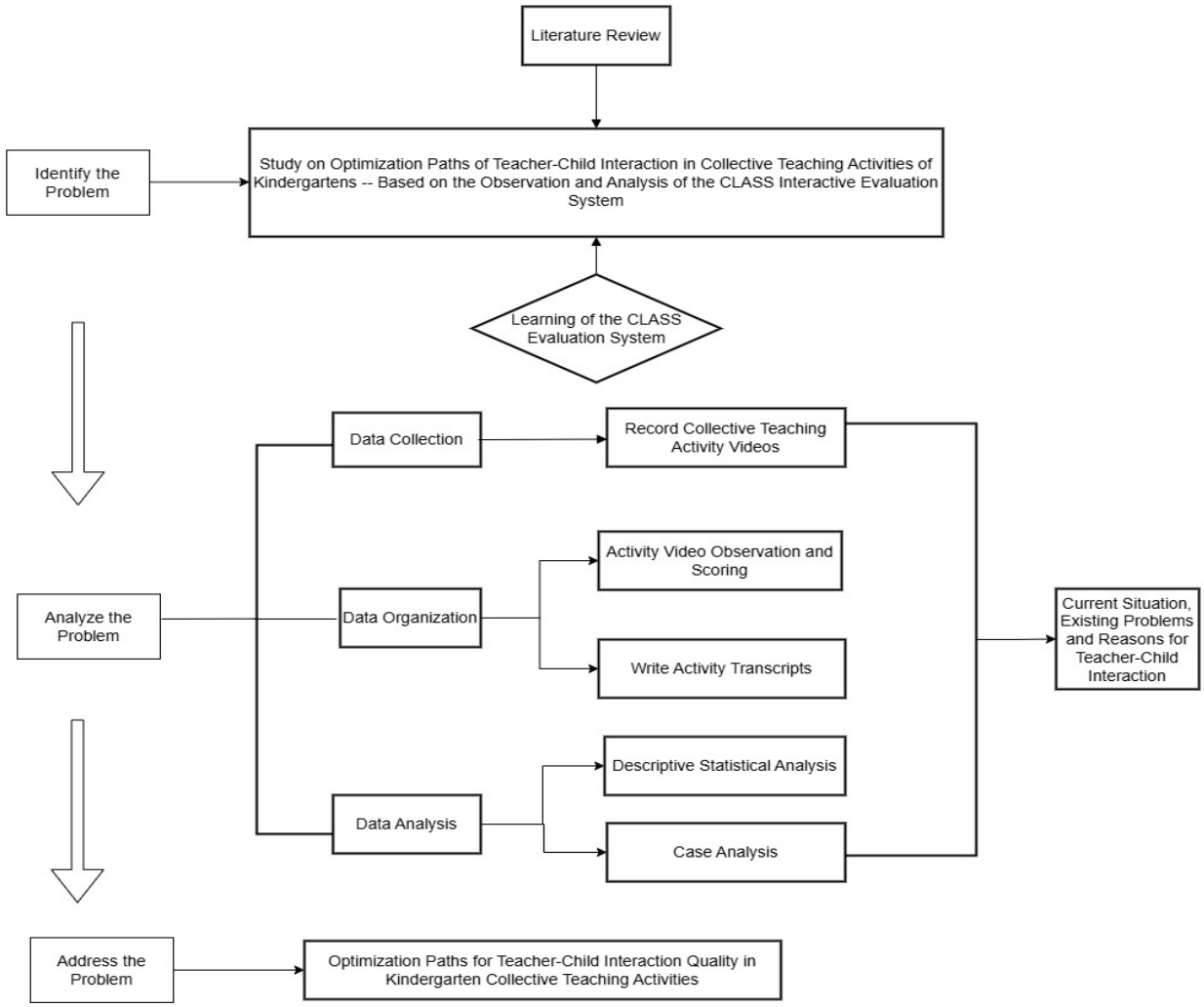

Figure 2 Research ideas

3. RESULTS

3.1. Overall Scores of Teacher-child Interaction in the Three Major Domains

This study scored the three major domains of emotional support (ES), activity management (CO) and instructional support (IS) according to the CLASS system, scored each observation

indicator according to the CLASS observation sheet and organized and analyzed the integrated data information, and the specific scores are as follows:

Table 1: Overall teacher-child interaction in the three domains (n=30)

	Range	Min	Max	M	SD
Emotional Support（ES）	2.73	2.80	5.53	4.22	.64
Classroom Organization（CO）	2.05	3.68	5.73	4.96	.66
Instructional Support（IS）	3.03	2.32	5.35	3.92	.85

Note: Each dimension consists of a score of 1-7, with negative climate (NC) being assigned using reverse scoring.

After tallying the scores on the observation scale, the levels of teacher-child interaction were as follows:

In the Emotional Support (ES) domain, the maximum value was 5.53, the minimum value was 2.80, the range was 2.73, the mean was 4.22, and the standard deviation was 0.64, which is of moderate quality; in the Activity Management (CO) domain, the minimum value was 3.68, the maximum value was 5.73, the range was 2.05, the mean was 4.96, and the standard deviation was 0.66, which is of moderate to high quality ; the minimum value in the Instructional Support (IS) domain was 2.32, the maximum value was 5.35, the range was 3.03, the mean was 3.92, the standard deviation was 0.85, and the quality was at a moderate level.

The results show that the overall teacher-child interaction in the current kindergarten collective teaching activities is at a medium level, and the distribution of the three major domains is relatively balanced. Among the three major domains, the average score of the emotional support domain is 4.22 (out of 7), the average score of the activity organization domain is 4.96, and the average score of the teaching support domain is 3.92. This shows that teachers perform relatively well in activity organization, but there is still much room for improvement in emotional support and teaching support.

From the mean value, activity organization > emotional support > teaching support, indicating that in the process of teacher-child interaction, the kindergarten teachers pay more attention to the effective management of time and behavior in the activities, cultivate children's self-regulation learning ability, improve children's learning initiative, make children have a clearer planning in the learning process, and promote children's self-cognitive ability and comprehensive quality of development. The children's self-knowledge and comprehensive quality development are promoted. Although the emotional support and teaching support are also at a medium level, they are significantly lower than the activity management domain, so this kindergarten should also pay more attention to the positive relationship between teachers and children, feel the emotional changes of children, provide good support for children in activities, and guide and respect children's choices.

In terms of standard deviation, the teaching support domain > activity management domain > emotional support domain. According to the concept of standard deviation, it can be seen that the smaller the value of this indicator is, the more balanced the overall situation is, and the data

distribution is more reasonable. Therefore, in contrast, the data in the teaching support domain is more discrete and fluctuates more, while the data in the emotional support domain is more concentrated. This suggests that in the area of instructional support, there are greater differences in performance between teachers, and some teachers' performance in this area needs to be improved, while the performance in the area of emotional support is relatively more consistent and the overall situation is more stable.

In summary, kindergartens should focus on improving the emotional support and instructional support domains in teacher-child interactions. In the area of emotional support, teachers need to be more sensitive to children's emotional changes and provide timely emotional support and encouragement to establish a more positive teacher-child relationship. In the area of teaching support, teachers should focus on the diversity and scientificity of teaching methods, improve the quality of teaching activities, and stimulate children's interest and initiative in learning. At the same time, teachers should constantly reflect on and improve their teaching practices in order to promote the overall development of young children in emotional, cognitive and social aspects.

3.2. Analysis of the Scores of Teacher-child Interaction in Ten Dimensions

3.2.1. The Level of Teacher-child Interaction on the Domain of Emotional Support

Table 2: Levels of teacher-child interaction in four dimensions under the domain of emotional support (n=30)

	Range	Min	Max	M	SD
Positive Climate（PC）	4.00	3.00	7.00	5.02	0.98
Negative Climate（NC）	3.00	4.00	7.00	5.69	.86
Teacher Sensitivity（TS）	4.00	3.00	7.00	3.76	.92
Regard for Student Perspectives（RSP）	4.00	3.00	7.00	4.94	1.11

Note: Each dimension consists of a score of 1-7.

According to the data in the above figure and table, the data indicators of the four dimensions under the domain of emotional support reflect the teacher-child interaction under the dimension to which they belong:

a. Positive Climate Dominates Teaching and Learning Activities

Positive climate (PC): the range is 4, the value is between 3-7 points, the mean value is 5.02 points, the standard deviation is 0.98, which is in the middle level, indicating that teachers do well in creating a positive classroom atmosphere, can establish a positive emotional connection with young children through smiles, encouraging language, etc., and teachers and students show more positive emotions, mostly in the form of mutual respect, and the relationship is more cordial.

Negative climate (NC): the range is 3, the value is between 4-7, the mean value is 5.69 points, which is at a high level, but because it is a reverse assignment, i.e., the higher the score, the lower the negative climate, combined with the standard deviation of 0.86, it can be seen that in the

kindergarten collective teaching activities teachers rarely appear in the situation of sarcasm and disrespect, and are less likely to present a negative climate and punitive control.

b. Low level of teacher sensitivity

The mean value of the teacher sensitivity (TS) dimension is 3.76 points, which is at a moderately low level, and the standard deviation is 0.92 points, which is less fluctuating. This indicates that it reflects the insufficient sensitivity of teachers to the needs of young children, and some teachers failed to notice the emotional changes and learning needs of young children in time. In the process of teacher-child interaction, teachers' own sensitivity has a greater impact on the quality of teaching and learning, and teachers are sometimes able to respond to young children and address their concerns, so young children also seek teacher support.

c. Insufficient teacher attention to young children's perspectives

The mean value of the dimension of concern for young children's perspectives (RSP) is 4.94 points with a standard deviation of 1.11 points, which is at a medium level and has a high standard deviation, indicating that the scores are discrete. This indicates that there are large differences between different teachers in terms of teaching flexibility and support for autonomous leadership, which suggests that teachers pay less attention to children's ideas and opinions during teaching and learning, and children's subjectivity is not fully realized. Since most of the group activities are still led by teachers, the activities are more controlled and less flexible.

3.2.2. Level of Teacher-child Interaction in the Field of Activity Management

Table 3: Levels of teacher-child interaction in the three dimensions under the domain of activity management (n=30)

	Range	Min	Max	M	SD
Behavior Management（BM）	4.00	3.00	7.00	4.78	.94
Productivity（PD）	4.00	3.00	7.00	5.39	1.05
Instructional Learning Formats（ILF）	4.00	3.00	7.00	4.72	1.03

Note: Each dimension consists of a score of 1-7.

According to the data in the above figure and table, the data indicators of the three dimensions under the domain of activity management reflect the teacher-child interaction under the dimension to which they belong:

a. Teachers are able to monitor and correct children's behavior in real time and in a timely manner

The data in the Behavior Management (BM) dimension show that teachers demonstrate some ability to monitor and correct young children's behavior in real time and in a timely manner, but there are individual differences. The scores ranged from 3-7, with a mean of 4.78 and a standard deviation of 0.94, with small fluctuations. This indicates that the teachers showed better performance in maintaining classroom order and managing young children's behavior, and were

able to effectively prevent and correct young children's misbehavior. Most teachers were able to maintain attention to young children's behavior and intervene in inappropriate behavior in a timely manner. However, some teachers' performance in behavior management needs to be improved, which may vary due to the different attention paid to young children's behavior or the importance attached to their own modeling role.

b. Teachers can organize activities efficiently and make full use of teaching time

In the dimension of activity arrangement efficiency (PD), teachers as a whole can organize activities efficiently and make full use of teaching time, with a mean value of 5.39 points, which is in the middle-upper level, indicating that teachers are more efficient in organizing activities and maximizing learning time. However, the standard deviation of 1.05 points, with a high value and large fluctuation, indicates that some teachers have deficiencies in the arrangement of activity time and transition links, and that there is a waste of time or poor articulation in some activities.

c. Teachers have the problems of insufficient science and single form in teaching guidance

The data on the Instructional Activity Facilitation (ILF) dimension show that teachers have the problems of insufficient science and single form in instructional guidance. The scores ranged from 3 to 7 with a mean of 4.72 and a standard deviation of 1.03, which is a moderate and fluctuating value. It indicates that teachers' performance in activity guidance is moderate, able to provide children with certain manipulative materials and guidance, but the stimulation and guidance of children's interest still need to be strengthened. Teachers' performance in the guidance of teaching activities is uneven, lacking in scientificity and feasibility, and the form of teaching is relatively single, failing to fully stimulate children's interest and initiative in learning, resulting in the quality of teaching to be further improved.

3.2.3. Levels of Teacher-child Interaction in the Area of Instructional Support

Table 4: Levels of teacher-child interaction on the three dimensions under the domain of instructional support (n=30)

	Range	Min	Max	M	SD
Concept Development（CD）	4.00	2.00	6.00	4.08	1.03
Quality of Feedback（QF）	4.00	3.00	7.00	4.11	.995
Language Modeling（LM）	4.00	2.00	6.00	3.56	1.04

Note: Each dimension consists of a score of 1-7.

According to the data in the above figure and table, the data indicators of the three dimensions under the domain of instructional support reflect the teacher-child interaction under the dimension to which they belong:

a. Inadequate support for cognitive development

The data of the cognitive development (CD) dimension shows that teachers' performance in promoting cognitive development of young children is average, with a mean of 4.08 points and a

standard deviation of 1.03 points, which is highly fluctuating. This indicates suggests that teachers perform poorly in promoting cognitive development of young children and provide fewer opportunities for young children to analyze, reason and think creatively. Teachers are sometimes able to provide creative opportunities for young children and teach in relation to their real lives, but on the whole they pay insufficient attention to the cultivation of young children's individual cognitive abilities, and there are large differences in performance between different teachers.

b. Feedback quality is moderate and mechanical

The mean value of the Quality of Feedback (QF) dimension is 4.11 points, and the standard deviation is 0.995 points, which is at a medium level. This indicates that the feedback process between teachers and children is relatively mechanical. Teachers are sometimes able to provide scaffolding or encouragement to children, but they are often prone to ignoring children's actual responses and fail to make timely adjustments to teaching strategies based on children's feedback, reflecting that teachers' feedback is mostly simple repetitions or affirmative responses, lacking in relevance and expansiveness.

c. Low language modeling ability

The mean value of the Language Modeling (LM) dimension is 3.56 points, with a standard deviation of 1.04 points, which is at a medium-low level. This shows that teachers are inadequate in language modeling, less use of open questions and advanced language, and communicate with children mostly in the form of simple instructions or closed questions. Teachers' pedagogical thinking is relatively rigid, and they can occasionally use language to describe the plan or the behavior of the teacher and the children, but the question and answer sessions are relatively conservative in the interaction process, and the lack of guidance for divergent thinking restricts the development of the children's language skills and thinking skills.

In summary, the mean values of the indicators are small, and the overall difference is not large and at an average level, with “negative atmosphere” being the highest, followed by “efficiency of activity organization”, and “language demonstration” being the lowest, although they are all basically at an average level. Negative atmosphere” is the highest, followed by ‘efficiency of activity organization’, and ‘language demonstration’ is the lowest, but all of them are basically in the middle level. This shows that it is important to incorporate children's ideas and opinions as much as possible in the collective teaching process, so that children have a certain degree of autonomy and are given the opportunity to communicate with each other. As for the dimension of “teacher sensitivity”, teachers do not pay more attention to children's needs, do not pay attention to children's feedback in a timely manner, cannot help children solve their problems effectively, and children seldom seek support from teachers. In terms of standard deviation, positive climate and concern for children are the highest, indicating that the data for these three dimensions are relatively discrete, and the smallest, except for negative climate, is teacher sensitivity, which has a small deviation, indicating that the data for these three dimensions are relatively centralized.

4. DISCUSSION OF PROBLEMS IN TEACHER-CHILD INTERACTION

4.1. Focusing on Goal Achievement and Neglecting Educational Sensitivity

The data show that the average value of teacher-child interaction in the dimension of "teacher sensitivity" is 3.76, which is in the middle-low level. Teachers' sensitivity is a kind of professional response that is gradually formed on the basis of certain educational concepts and professional skills to perceive educational situations or problems, make professional judgments quickly, grasp educational opportunities in time, and take appropriate educational actions. Teachers' sensitivity is manifested in their ability to respond to and guide children's requests in a timely manner, their foresight and anticipation of potential educational problems, and their planning and organization of educational activities, which also need to be continuously generated and improved through embodied learning, professional training, and reflection on experience. However, it was found that teachers' sensitivity in the implementation of teaching activities was not strong, mainly reflected in the lack of analysis of individual differences in children, and too much focus on the teaching plan as the dominant goal, while ignoring the emotional needs of children's growth process and differences in learning ability. In the teaching process, teachers do not provide positive and reasonable guidance or clear encouragement to children with poor basic skills and poor thinking ability, which leads to the children's self-confidence being undermined and questioning themselves. When children encounter difficulties in the process of solving problems, teachers fail to guide them appropriately according to the differences in their learning abilities, but choose to let other children solve the problems on the stage or give standard answers directly, showing a lack of patience in the teaching process, with relatively rigid answers and a lack of flexibility, and only completing the teaching task according to the book, without giving practical consideration to children's enthusiasm for learning, often dominated by the teacher's own teaching arrangements, ignoring children's learning goals. It is often dominated by the teacher's own teaching arrangement, ignoring the learning objectives and emotional aspirations of the children.

In kindergarten collective teaching activities, the lack of teachers' sensitivity not only affects the teaching effect, but also may have a negative impact on children's psychological development and interest in learning. Early childhood is a critical period for individuals to form self-knowledge and learning attitudes. Teachers should pay more attention to the emotional changes and learning needs of young children in the teaching process, and provide timely support and guidance. Teachers should adjust their teaching strategies by observing and understanding the characteristics of each child in order to meet the learning needs of different children and promote their overall development. At the same time, teachers should also focus on the improvement of their own professionalism and enhance their sensitivity and ability to cope with educational scenarios through continuous learning and reflection, so as to improve the quality of teacher-child interactions and create a more positive and effective learning environment for young children.

Case 1: T refers to teachers, S refers to children

*Background: the teacher combines theory with real life, draws 10*10 grasses on the blackboard, i.e. ten grasses in each row, ten rows in total, cultivates children's counting thinking, forms visual concepts, and realizes the conveyance of the concept of numbers through the blackboard*

T: Which one of you can count?

S1: I can count.

S2: I can count too.

S3: I can't count.

T: Well, Xiaoming raised his hand, come up to do a demonstration (S1 only counted half rows and then encountered a bottleneck), can anyone continue to count? OK, Xiaohong, you help him to continue counting down. (S2 from 6 to 10, then the second and third line ..... in accordance with the first line of the calculation method and then repeat a few times) Well, Xiaohong counted very well, a total of 100 all calculated, classmates together to encourage. (The class applauded, Xiaohong returned to his seat and sat down, Xiaoming sat there, looking a little bitter)

T: OK, let's see how many of these numbers there are.

It can be seen through the above case that the teacher encourages the children to come up to the stage and count when carrying out math teaching. Faced with the situation that some children said they could count and some said they couldn't, the teacher chose to let Xiaoming, who could count, come up to the stage to demonstrate, however, Xiaoming only counted half of the rows and then encountered difficulties. At this point, the teacher did not give Ming guidance and suggestions to help him continue to finish counting, but asked Ming to step down and ask other students instead. The teacher then asked Xiaohong to come up to the stage and start counting again. After Xiaohong finished counting successfully, the teacher gave her encouragement, but ignored Xiaoming who had failed before. This process fully exposed the lack of teacher sensitivity, only focusing on the completion of the task of Xiaohong, ignoring the loss of Xiaoming's emotions, and did not give guidance in the process of Xiaoming's counting. In the long run, children with poor foundation will easily lose their enthusiasm and motivation for learning and become less confident, which not only hinders the positive development of teacher-child interaction, but also is not conducive to the improvement of teaching quality and the long-term growth of children. Therefore, teachers should pay close attention to the emotional changes and learning needs of each child in the teaching process, and provide timely support and guidance to promote the overall development of children.

4.2. A Single Mode of Instruction Makes it Difficult to Stimulate Independent Learning

According to the results, the lowest score in the field of “activity management” is “guidance of educational activities”, with a mean value of 4.72, which is at a medium level. This indicator mainly examines whether teachers can provide children with rich and diversified opportunities for activities, so as to motivate children to actively participate in learning. In preschool education, group activities are still dominant, and teachers need to prepare teaching materials and equipments before organizing activities to lay the foundation for the smooth implementation of activities. At the same time, teachers should skillfully use various kinds of teaching aids to present abstract theoretical knowledge to children in a lively and interesting way, so as to broaden their

knowledge horizons and stimulate divergent thinking. However, through the observation of collective teaching activities in many kindergartens, it is found that although teachers generally set clear objectives and design the activities accordingly, the forms of the activities are still relatively simple. Current research and practice are mostly stuck in the traditional model, in which the teacher acts as a one-way transmitter of knowledge and the children are passive recipients. Teachers dominate the classroom by virtue of their professional advantages and authority, which makes it difficult for children to express their views independently and lack the ability to learn independently. The new curriculum clearly emphasizes the subjective status of children, and the ideal teacher-child interaction should be based on equal dialogue. However, in practice, teachers still occupy absolute authority, which leads to children's over-reliance on teachers' leadership. Teachers should give full encouragement and positive response to children's learning process, and mobilize children's enthusiasm and self-confidence through recognition and appreciation, so that they can experience their own value and at the same time take the initiative to find and correct their deficiencies, so as to continuously improve the efficiency of teacher-child interactions and the quality of teaching and learning, and to promote the holistic development of young children.

Case 2: Is the material bag useful?

Today's activity material is a handmade material kit, which is mainly used to train children's hands-on skills, and contains semi-finished products such as stickers, playdough, and light clay. After the teacher distributed the kits to the children, the children opened their kits and poured out all the materials, making a mess everywhere. The teacher then began to organize them, wasting about one-fifth of the activity time between the distribution of the packets and the start of hands-on work by most of the children.

In this scenario, the teacher prepared the packets of materials in advance to support instruction and facilitate children's learning. Although this practice saved preparation time, it took up too much of the children's activity time during use. As the materials are semi-finished products, children need extra time to learn how to use them, which seriously limits their creativity and imagination, reduces the efficiency of the activities, and thus affects the quality of interaction. Therefore, when choosing and using teaching materials, teachers should fully consider whether they can truly serve children's learning goals and stimulate their initiative and creativity; at the same time, they should pay attention to the way the materials are presented and the process of using them, so as to avoid interfering with normal teaching and ensure that all kinds of teaching methods can effectively promote the holistic development of children.

4.3. Focus on Encouraging Feedback, Lack of Verbal Modeling, and Attention to Individual Differences

Overall, teachers scored the lowest in the area of “teaching support”, especially in “language modeling”, with a mean value of 3.56, reflecting that teachers failed to give full play to the role of language guidance in teacher-child interactions. The so-called “language modeling” refers to teachers' efforts to provide children with examples to learn from through rich and accurate expressions, extended dialogues, open-ended questions and effective feedback, so as to promote

the development of their language ability, deepening of thinking and communication skills. Although teachers commonly use encouraging feedback in the classroom, it is often limited to simple instructions or closed questions (e.g., “Is it there?”, “Is it right?”, “What is it?”), resulting in The classroom communication method is single, and it is difficult to stimulate children's independent thinking and creativity. At the same time, teachers often use formulaic language in the evaluation process, failing to take into account children's individual differences to provide targeted guidance, making the interaction lack of vividness and inspiration. Teachers fail to effectively combine encouraging feedback with in-depth verbal modeling, ignoring the importance of creating an open and exploratory communication environment for children, which affects the cultivation of children's active learning and innovative thinking. Against this backdrop, it is urgent to improve teachers' verbal modeling skills and optimize interaction strategies, which can help improve the overall effectiveness of instructional support and further stimulate children's inner potential.

Case 3:

Background: The teacher set up a learning group in the class. During the explanation of “Conservation of Length”, the children were divided into groups of two and given a piece of cotton thread to guide them to compare the differences in length of the threads, so as to expand their thinking and deepen their understanding of the textbook knowledge through hands-on manipulation.

T: Which child says his/her opinion after observing the difference in the length of the two cotton threads?

S1: Mine is longer and Zihan's is shorter.

(Teacher lets the children compare again and realizes that the two cotton threads are actually the same length.)

T: Look again.

S1: Hey, it's the same length. Why is it sometimes longer and sometimes shorter?

C2: Because they are not aligned.

T: Yes, the cotton threads themselves are the same length, but they look different because of their shapes or positions; when you align them, you can see that they are the same.

The case shows that the teacher failed to provide enough thinking space for the children, and the classroom activities were still dominated by teacher-led and children's passive acceptance. In the process of questioning and guidance, the teacher's language expression lacks clarity and inspiration, and fails to effectively guide children to observe, compare and think on their own, which limits the development of children's innovative thinking. Teachers rely too much on preset encouraging feedback, lack flexible language demonstration and differentiated instruction, and fail to dynamically adjust their teaching strategies according to children's actual responses, thus limiting children's independent expression and problem solving. According to some studies, the use of the “trigger-response-feedback” discourse sequence to interact with young children can lead to new discourse understanding and experience enhancement in the interaction (Wu & Fan, 2020). Therefore, teachers should change their teaching concepts, reduce direct intervention in

children's thinking process, focus on the use of open-ended questions and diversified language demonstration, so as to better stimulate children's enthusiasm and initiative in learning, create an interactive environment that encourages exploration and tailored teaching, and continuously improve the overall quality of teacher-child interaction (Sha et al., 2024).

5. SUGGESTIONS FOR IMPROVEMENT

5.1. Enhancing Educational Sensitivity and Flexibly Adjusting Interaction Strategies

Young children are in the early stage of mental development, their independent thinking ability is not yet mature, and they are easily influenced by the environment and other people's evaluation. Teachers' educational sensitivity is the key to high-quality teacher-child interaction (Åström et al., 2022). Teachers should learn to observe children's emotions, behaviors and needs through training and practice, and give timely responses and support. For example, teachers can set up special observation time in the classroom to record children's responses and needs, and reflect and make adjustments after class. Teachers must continually improve their educational sensitivity to capture the subtle changes in each child's emotions, interests and behaviors in a timely manner, so that they can flexibly adjust their interaction strategies in the teaching and learning process. Specifically, teachers should fully understand the cognitive level and individual differences of children, develop teaching programs that meet the actual needs of children, and encourage children to express their views freely in the classroom, allowing them to make mistakes in exploration without rushing to judgment. In the design of teaching activities, teachers can adopt differentiated teaching methods according to children's knowledge reserves and interests, and use diversified teaching resources to stimulate children's enthusiasm for learning. At the same time, through continuous observation and feedback, teachers are able to continuously reflect on and improve their teaching methods, create a relaxed and inclusive classroom atmosphere, and enable every child to fully develop in an appropriate environment. Only by continuously improving teaching sensitivity and flexibly adjusting interaction strategies can we truly realize the goal of child-centered education and promote the overall healthy growth of young children.

5.2. Enriching the Teaching and Guidance Methods to Enhance the Independent Exploration of Young Children

Good teacher-child interaction can make young children better understand their own strengths and weaknesses, and on the basis of a full understanding of themselves, young children can better utilize their own strengths and make up for their own deficiencies, so that young children can grow and develop in their learning and life in a more clear direction, and the path is more scientific and reasonable (Ji, 2023).Teachers should fully integrate the characteristics of independent learning of young children when organizing teaching activities, and adopt a variety of creative teaching guidance to break the single mode of transmission. Teachers should enhance young children's subjective participation through a variety of ways, such as setting up group discussions, role-playing, independent exploration, etc., so that young children can take the initiative to express and think in the activities. At the same time, teachers should respect

children's ideas and opinions and encourage them to make decisions and solve problems on their own. Firstly, diversified means such as situational simulation and project-based learning can be utilized to create realistic and vivid teaching situations, so as to stimulate children's active participation and interest in exploration. Secondly, teachers should focus on grasping children's latest developmental zone when designing activities, and provide moderate challenges according to children's current cognitive level and interests, so as to ensure that the content of the activities is interesting without losing its educational significance. In addition, in the process of classroom implementation, teachers should encourage young children to think and express themselves, guide them in discussions through open questions, and promote them to discover and solve problems in interaction (Salminen et al., 2021). Through this diversified teaching guidance, it can not only broaden children's learning horizons, but also enhance their ability to explore on their own, and establish proactive learning habits and innovative spirit for children, thus effectively improving the overall quality of teacher-child interaction.

5.3. Strengthening Language Demonstration and Guiding Children to Express Themselves in Depth

It is pointed out in the Guidelines that “young children's language learning needs to be supported by corresponding social experience, and should be enriched by a variety of activities to expand children's life experience, enrich the content of language, and enhance comprehension and expression skills” (Ministry of Education of the People’s Republic of China, 2012). In teacher-child interaction, the language modeling role of the teacher is especially crucial. Teachers are not only the transmitters of knowledge, but also the guides of language expression and thinking patterns. In order to strengthen language modeling, teachers should focus on the use of standardized, rich and logical language in daily teaching, and stimulate children to think deeply through explanation, discussion and inspiring questions. Teachers should pay close attention to children's linguistic feedback and make timely adjustments to their expressions to help children transition from simple answers to in-depth expressions and the development of critical thinking. Teachers should improve the quality of feedback and emphasize the relevance and expansiveness of feedback. When children answer questions, teachers can guide children to think deeply by asking follow-up questions and expanding. For example, when children answer correctly, teachers can further ask: “How did you think of this answer?” When the children answer incorrectly, the teacher can guide other children to discuss together instead of giving the answer directly. Meanwhile, in the interactive process, teachers should show how to construct reasonable arguments and use innovative thinking through demonstrative expressions to provide effective language demonstrations for young children. Through continuous practice, reflection and improvement, teachers will gradually improve their own language organization and interactive skills, thus creating a more efficient and inspiring communication environment in the classroom. Teachers should focus on the quality of language modeling and use more open-ended questions and advanced language to guide children to engage in complex thinking and expression. For example, during a science activity, teachers can ask, “Why do you think that is?” ”What new discoveries did you make?” and other questions to stimulate young children's interest in inquiry. Only in this way can we truly promote the dual development of young children in language and cognition, and comprehensively improve the educational quality of teacher-child interaction.

CONFLICT STATEMENT

The authors declare no conflict of interest.

COOPERATION STATEMENT

All authors contributed equally to this work and approved the final manuscript.

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