

A Study on the Professional Key Competences of Kindergarten Teachers

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Abstract**Original Research Article**

Professional key competences comprise the necessary personality traits and action competences that meet the requirements of work. For kindergarten, they are an important reference for selecting and training teachers. This study uses the paradigm of qualitative research and is based on job analysis and the semi-structured interview method. Researchers conducted 37 semi-structured interviews with 29 kindergarten teachers from different provinces in China. A three-level professional key competence model of kindergarten teachers is preliminarily constructed. The inner layer of the model is the core professional values of kindergarten teachers, the middle layer comprises the four core personality traits of kindergarten teachers, and the outer layer comprises the nine key action competences of kindergarten teachers. The results of this study have important reference value for the training of kindergarten teachers and for the team building of teaching staff.

Keywords: Kindergarten teachers, professional key competence, core professional values, personality traits, action competences.

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INTRODUCTION

Having highly qualified kindergarten teachers is the key to ensuring the quality of early childhood education. In 2012, the Ministry of Education of China (2012) issued *'The Professional Standards for Kindergarten Teachers (Trial)'*, which advanced 62 specific requirements for the professional development of kindergarten teachers in 14 fields in the three dimensions of professional concept, professional knowledge and professional competence. The promulgation of professional standards filled the policy gap in this field in China, which is conducive to the professionalization and standardization of kindergarten teachers and the improvement of the quality of kindergarten teacher education.

OECD (2005) reported that competence refers to the ability, including knowledge and skills, to use and mobilize psychological and social resources (including skills and attitudes) to meet complex needs in specific situations. Competence is the ability of people to comprehensively use knowledge, skills and attitudes to solve problems in specific situations. Core competency generally refers to the most important part of competence; it is the higher and human ability to

meet the needs of the information era and knowledge society, to solve complex problems and to adapt to unpredictable situations (Zhang Hua, 2016).

To better implement the professional standards of kindergarten teachers and improve the professional competences of kindergarten teachers, scholars have conducted much research in recent years. Researchers uses keywords such as "core / key competencies / competences / skills" to summarize and sort out the professional competences that kindergarten teachers need.

The literature in the field of preschool education shows huge differences in the views of different researchers on professional competence. They have carried out research on the professional competence of kindergarten teachers from different perspectives such as professional knowledge, professional skills, professional ability, professional competence and competency. Liu Zhanlan (2012) interprets the professional competences that kindergarten teachers should have, such as the creation and utilization of the environment, the organization of one day of kindergarten life, the support and guidance

of game activities, the planning and implementation of educational activities, motivation and evaluation, communication and cooperation, and reflection and development.

Wang (2005) described the professional competence of kindergarten teachers from the perspectives of teaching ability, communication ability, professional development ability, children's life care ability, and management ability (including class management and the ability to manage the affairs of the kindergarten). From the perspective of professional knowledge, Liu Wei (2013) advanced five key competences that kindergarten teachers need: thinking ability, organization and management ability, practical operation ability, observation and analysis ability, and education and scientific research ability.

Bredenkamp (1995) emphasized the importance of knowledge about children's development, learning and subject knowledge. Zhang Dongmei (2012) believes that kindergarten teachers' professional skills include curriculum design, creating the learning environment, teaching strategy, teaching reflection, evaluation of children's development, communication and cooperation, and lifelong learning.

Zhang Bo (2003) divides the professional competences of preschool teachers into two aspects: general competence requirements and advanced competence requirements. He believes that professional dedication, love for children and good artistic skills are the general competence requirements for preschool teachers, while advanced requirements include advanced education concepts and higher education ability, mastering advanced education means and technology, high-level activity design ability, and ability to interact with children at a high level, to communicate with parents, to design and use the environment, and to research competence with respect to children.

Basing on combing the professional standards and expert surveys of kindergarten teachers, Su Hang (2018) has come to the conclusion that kindergarten teachers' core competence system includes five dimensions, namely, communication and cooperation, independent development, care and education, children-oriented and dedication to work. Liu Yanting (2018) divides the competence of kindergarten teachers into four dimensions – professional knowledge, professional ability, professional attitude and personal characteristics – and establishes 13 secondary indicators for competency models.

Based on the existing research results, research on kindergarten teachers' professional competence shows a trend of diversification. Because many researchers have not reached a consensus on the connotations of kindergarten teachers' professional

competence, the results presented are relatively scattered, and the phenomenon of mixing the use of professional knowledge, professional skills, and professional competence is prominent. The core competence proposed by different researchers shows a phenomenon of high dispersion and even conflict with each other. It is very hard to judge which opinion is more reasonable. In addition, many studies view the core concept of professional competence as comparatively simple, and many researchers directly transform the work content of kindergarten teachers into the corresponding core competence requirements. In terms of research methods, questionnaire survey is the main method. In addition, the operation of kindergarten teachers' professional standards needs to be further improved, so it is necessary to formulate corresponding professional standards for teachers at different stages of development (Guo Yuanyuan, Duan Qingru & Jiang Yong, 2015).

This research defines professional core competency as the personality and action competence that professionals must possess to meet the requirements of work tasks in a specific professional field, which is mainly composed of professional core values, personality traits and specific functional action competence.

RESEARCH METHOD

1. Research object

This research uses a qualitative research paradigm. Under the guidance of empirical sampling and theoretical sampling principles, researchers chose 23 kindergarten teachers and 6 kindergarten managers as research participants who participated in the national training programme in Beijing Normal University. With the semi-structured interview method, researchers conducted one-to-one interviews whose topic was the competence requirements of kindergarten teachers, and there were 37 interviews in all, distributed as follows. There are 19 public and private kindergarten teachers in Beijing, 3 in Hebei Province, and 4 in Yunnan Province, and the remaining three teachers are from Henan, Inner Mongolia and Guangdong province. Among the 29 teachers who participated in the interview, 22 are female and 1 is male. Among the managers interviewed, there were 2 kindergarten principals, 3 deputy principals and 1 director who were in charge of teaching and research issues.

2. Research Tools and Data Collection

This research takes the interview outline of kindergarten teachers' professional key competency as the main research tool. Most of our interviewees have 3-5 years working experience. The critical incident technique (CIT) and job element method (JEM) are used in these interviews. The interviewees were asked to describe the professional work tasks, work situations, work processes, work content, competence and

qualification requirements of kindergarten teachers and to analyse the professional competence necessary for kindergarten teachers in the process of undertaking various work tasks.

The researchers recorded all the interviews and transcribed the recorded data into texts. The total recording time of the interviews was 35 hours and 42 minutes. Researchers obtained 604,072 transcriptions, the average interview time of each interviewee was 58 minutes, and the average text transcribed for each interviewee was 16,326 words.

3. DATA ANALYSIS

NVivo 11.0, a qualitative research software package, is used as a tool for data analysis and coding in this research. The research data are coded at three levels: open coding, axial coding and selective coding. In the coding process, the open coding method is first used to determine the relevant topics in the opinions of the interviewees. Over time, increasingly similar views appear. At this time, open nodes are transformed into axial nodes, and through the classification of relevant views under the axial nodes, selective coding is gradually formed to generate an analysis framework (Zhang Fenfen, 2008).

Social Competence	0	0
Communication Competence	12	23
Communicate with leaders	3	3
Communicate with team members	1	1
Competence with children	2	2
Effective way to communicate with parents	1	2
How to communicate with parents	3	3
Cooperation Competence	2	5
Expression Competence	0	0
Language expression Competence	6	6
Writing Skill	6	7
Interpersonal Relationship	2	2
How to deal with interpersonal relationship	1	1
Organization & Coordination Competence	5	12
Team cooperation	2	3

Fig-1: The coding process for key competencies of kindergarten teachers

Through the coding analysis of the interview data, this research finally obtained 14 selective coding sets of content, corresponding to the three levels of the main class teachers' professional key competence: professional core values, core personality traits, and key action competence. The core professional values of kindergarten teachers are love, that is, love for children; the core personality traits are sense of responsibility, patience, carefulness and affinity; and the key action competences in the professional field are communication, expression, cooperation, organization and coordination, design, observation, reflection, learning and adaptability.

In this research, the extraction of the 14 categories of professional key competencies is mainly based on three principles. First, the researchers refer to the types of professional key competencies of kindergarten teachers generally mentioned in the Chinese and English literatures. Second, according to the views of the interviewees, the researchers classified the views of different interviewees from the work tasks

and required abilities mentioned by the interviewees according to frequency and emphasis to determine the level of each professional core competency category. The third principle is the researchers' own professional judgment. The frequency of some key competency categories on which teachers were interviewed did not appear frequently, but there are important studies in support, which has more important value and significance in the eyes of the researcher, reflecting the important role of the researcher as a research tool in qualitative research; thus, it is also shown as a core category.

RESEARCH RESULT

3.1 Professional Key Competences Model of Kindergarten Teachers

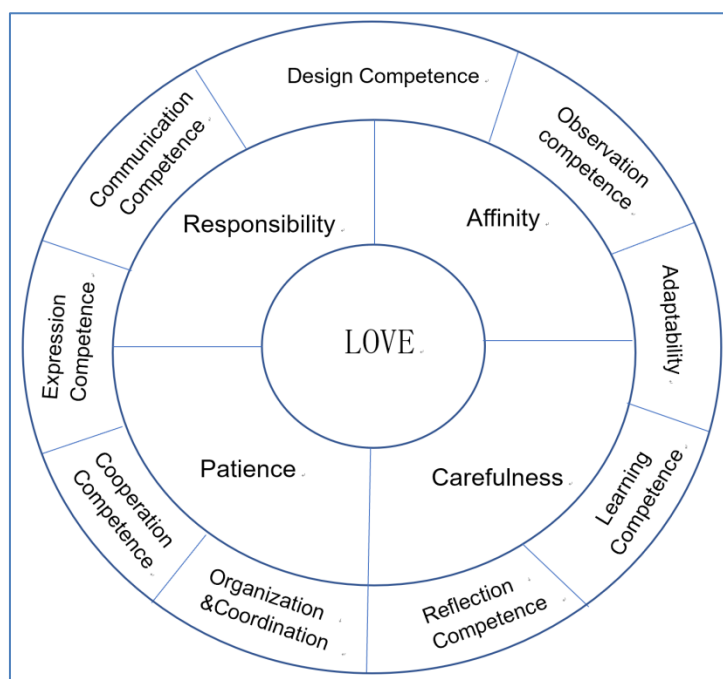
Through the coding analysis of the interview data, researchers extracted 14 key competency items from the 330,000 words in these interview texts. Table 1 comprises the specific frequency statistics.

Table-1: Frequency statistics for professional key competences of kindergarten teachers

Key competences	Frequency	Percentage (total interviewees)
Love	40	89.66%
Patience	26	48.27%
Carefulness	29	58.62%
Responsibility	42	93.1%
Affinity	32	51.72%
Observation Competence	34	75.86%
Reflection Competence	37	75.86%
Learning Competence	39	82.76%
Design Competence	41	79.31%
Organization and Coordination Competence	44	75.86%
Communication Competence	56	96.55%
Expression Competence	38	79.31%
Adaptability	29	58.62%
Cooperation Competence	34	72.41%

Through analysis, researchers designed these 14 professional core competences of kindergarten teachers into three levels of an onion model, as shown in Figure 2. The inner layer is the core professional value, which points to the core value of kindergarten teachers – love. Love is the most basic, important and indispensable competence of a kindergarten teacher; the middle layer is the core personality characteristics, including responsibility, affinity, patience and care, which are the four most important personality

characteristics of a kindergarten teacher as professional staff; the outer layer is action competences, including observation, design, adaptability, communication, expression, cooperation, organization and coordination, reflection and learning, which are the necessary professional competences for kindergarten teachers. These three levels are related to each other, together constituting a dynamic kindergarten teachers' professional core competence system.

**Fig-2: Professional Key Competency Model of Kindergarten Teachers**

3.2 The connotation explanation of Professional Key Competency Model of Kindergarten Teachers

3.2.1 Core professional value of Kindergarten Teachers – Love

The research found that 25 interviewees think that the most important quality of a kindergarten teacher

is love. Loving children is the most basic requirement and core value of this profession. Of all the respondents, 86.21% hold this view.

As teacher LY said, "Love is a crucial factor for kindergarten teacher. It can be seen from teacher's daily life, and it's the most essential requirement for

kindergarten teachers to love children." Kindergarten teachers should not only love children but also respect their personalities and treat them equally. As teacher WSC said, love should be in the core position of the core competencies required for kindergarten teachers. If kindergarten teachers do not have the quality of love, then their qualification to become a teacher is questionable.

According to teacher ZYZ, *"kindergarten teachers need to have higher moral level, because you think it's normal for you to love your own children. As a kindergarten teacher, you need to love other people's children, and all kinds of children, which is the fundamental requirement of this profession. I think it's ok even if your other competences are not so professional; love for children can make up for the defects of other competences, but no matter how high your other competences are, you really can't be a kindergarten teacher without love and patience."*

Early childhood education is a career about love. Love is the guiding light and the core for early childhood teachers to carry out all education and teaching activities (Liu Wei, 2013). The most important thing for kindergarten teachers to do their job well is to love children. Early childhood education is a profession about love (Howes, Whitebook & Phillips, 1992). Loving this profession and children is the basic premise and competency that a kindergarten teacher should first have and is also the most important work value of kindergarten teachers (Jiang Fuer, 2014).

3.2.2 Core personality characteristics of kindergarten teachers

(1) Responsibility

Researchers found 21 kindergarten teachers who think that responsibility is the core personality trait that kindergarten teachers should have, and 72.42% of the respondents agree. Due to the immaturity of children's physical and mental development, they lack corresponding life experience and self-care ability in physical activities and independent life and need to be carefully cared for (Puckett, Diffily, 2004). *As teacher XQ said, "as a kindergarten teacher, responsibility is very important. A teacher's professional competence has no directly relationship with his/her responsibility. The key point is that the teacher should do things by heart and think about the children all the time. It is a sense of responsibility, and professional competence can be learned, but whether a teacher is responsible or not is very hard to train. For example, during the period of outdoor activities, you must pay much more attention to every child with your eyes, especially when [the] child is in individual activity time. As an observer, for example, before you let children enjoy their free time, you should remind them of what is dangerous and prevent it in advance."*

To ensure the safety of children is the essential requirement of a kindergarten teacher. Responsible teachers will always focus on children's safety and health problems, a task embodied in the inspection work during children's siesta, supervision of children during outdoor activities, and the sports after meals. In the interview, XQ indicated, *"for example, after lunch, some irresponsible teachers often let children watch cartoons. Because it's the easiest to care children. While watching TV, children are often quiet, and are attracted to it. Teachers don't need to put much effort into it. However, organizing activities for children will definitely be more difficult, because children will be noisy."*

Teacher LXY told us, *"It's very important for teachers to inspect the condition of children when they are in siesta by seeing and touching. We need to walk around and inspect every five or ten minutes, including helping kids cover the quilt and checking to see whether kids are uncomfortable or have problems. Do they pee on the bed? "*

Compared with primary and secondary school teachers, kindergarten teachers do not have the right to "get off class"; they have the responsibility to focus on the children all the time (Hong Xiumin, 2018). Kindergarten teachers are responsible for the initial education stage of children's physical and mental health development, requiring them to have a strong sense of social responsibility and mission, high professional ethics and a high sense of responsibility to love children (Puckett, Diffily, 2004).

(2) Patience

Researchers found that 19 respondents talked about the importance of patience at work, accounting for 65.52% of the total interviewees. For kindergarten teachers, patience is a very important personal trait. As ZWY said, *"patience is necessary for kindergarten teachers, especially when they act with children."* Because every child is unique, and their learning progress and acceptance are also different, effective teaching requires patience (Colker, 2008); in addition, children are generally too young to fully establish their awareness of rules, such as the steps of hand washing, discipline in class, cooperation and communication among children, etc., so kindergarten teachers should repeatedly remind children to follow certain rules, especially children with special needs, compared with other children in the class. It is more difficult for such children to integrate into the class and understand the rules, so teachers have to remind them almost every moment; then, they can gradually adapt to the environment and remember the rules. As described by teacher LM, *"Since kids are too young to acquire this ability for a while, they should be taught repeatedly so that they can learn it."*

Children are so young that their mental development is not mature, and their expression and self-control ability are weak. When a problem surfaces, teachers need to listen to the reasons patiently and guide the children on how to solve it repeatedly. National and international researchers show patience is an important personality characteristic of kindergarten teachers (Happo & Määttä, 2011) (Chen Haiyan & Chu Qingqing, 2017). The professional standards of kindergarten teachers in China (2012) also advanced the requirements of patience in the dimensions of personal ethics and behaviours.

(3) Carefulness

Researchers found that 22 respondents emphasized the importance of carefulness for kindergarten teachers, accounting for 75.86%. Kindergarten teachers' daily work is rather trivial, so it is very important to be careful in the work. Especially for daily activities of children in the junior class, everything needs to be done carefully. Kindergarten teachers should focus more on details and observe children's behaviour more carefully to avoid dangerous accidents. For example, teacher SY mentioned that kindergarten teachers should be particularly careful in the physical examination of children. *"When we did immunization injection for children, a kid in junior class didn't know that's the medicine alcohol. He thought it was a kind of drink. He took it up and prepared to drink it. I quickly stopped him and told him that it's medicine alcohol and you can't drink it!"*

The carefulness for children's daily life is directly related to children's health. SLW said, *"Teachers should be careful and attentive. Because everything can happen to children at any time, especially to children in junior class, if teachers can't take care of their children, they will get sick, which will affect their health. In all, teachers have to be very careful anyway."*

Children's expression ability is limited, and many problems are hidden in their daily behaviours, which needs teachers' carefulness to discover. It is a basic requirement of kindergarten teachers to observe every child's physical, mental, and emotional conditions, learning habits, and interpersonal communication, etc., very carefully and record individual cases when necessary (Zheng Yuming, 2015).

(4) Affinity

It is found that 16 respondents regard affinity as an important core competence of kindergarten teachers, accounting for 55.17%. Affinity is the dynamic level and ability of intimacy behaviour when people get along with each other (Yang Zhengping, 2018), which reflects people's strong interest in specific people or things, processes, experiences, and places, etc. (Nolan & McBride, 2014). For kindergarten

teachers, affinity refers to the ability of kindergarten teachers to generate a sense of intimacy with children in a short time, to gain their trust and intimacy. Children are leaving the familiar environment of their families, coming to the unfamiliar environment of kindergarten, and communicating with unfamiliar teachers and partners; thus, they are often shy and do not want to talk. Therefore, it is very important to help them to integrate into the kindergarten environment. To help the children adapt to the new environment, affinity of the kindergarten teachers is important because it can help teachers to build close relationships with children and help children build a sense of security and adapt to the new environment. Affinity is very important for establishing intimacy and trust between kindergarten teachers and children. As teacher WZ said, *"I think, as a kindergarten teacher, the most important competence may be to walk into children's hearts, quickly gain their dependence and trust, be able to play with them, and find their advantages."*

This sense of trust and intimacy is not innate to teachers but rather requires kindergarten teachers to carefully observe and understand every child, understand each child's inner emotional needs, communicate with children, spend much time accompanying children, find children's interests, walk into children's inner world, and provide them with appropriate help. As a fundamental competence for kindergarten teachers, affinity requires kindergarten teachers to be full of love for children but not indulge children, be able to keep moderate expectations for them, be good at finding the virtue in each child, and treat every child equally (Tao Zhiqiong, 2010).

3.2.3 Key Action Competences of Kindergarten Teachers

The third level of professional core competence is the core action competence. The research result shows that kindergarten teachers have nine necessary key action competences: observation, design, reflection, communication, learning, cooperation, expression, organization and coordination and adaptability.

(1) Observation competence

Researchers found that 22 respondents believed that observation competence plays a key role in kindergarten teachers' daily work, accounting for 75.86%. It is very important for kindergarten teachers to understand children's behaviour and the significance and needs behind children's behaviour and take correct guidance strategies through observation (Qian Bin, 2018). As teacher SY said, *"Kindergarten teachers must have good observation competence, which is a prerequisite for an excellent kindergarten teacher. Through observation, you can have an intuitive understanding of the children in the class."* Kindergarten teachers need not only to be able to observe according to the predesigned scheme but also to

observe randomly, which is more challenging. Teachers need to be able to judge the behaviour of children in time and give them necessary help (Jia Shuanghe²⁰¹⁷), which can lay the foundation for building mutual trust and close relationships between teachers and children.

Observation is the first step towards understanding children (Zhu Mengmeng, 2017) and is the premise for teachers to understand the development characteristics and needs of children. Information collected through purposeful and planned observation can help teachers to improve their real understanding of children's internal psychology and motivation to promote the development of children's individualization.

Observing children's behaviour is the precondition of good communication with parents. As teacher WYL said, "*Observation competence is very important for kindergarten teachers because your work objects are children, and each child's situation is different. Communication with parents is based on your full observation and understanding of children.*" Observation is also the beginning of the kindergarten curriculum and teaching. It not only contains the educational concept and understanding of children but also provides the information foundation for curriculum design and activity implementation (Dai Xiaohong, 2018). Observation competence is an important part of teachers' professional development (Bredenkamp¹⁹⁹⁵). It plays an important role in thematic activities, functional area activities, outdoor games, and classroom teaching. It is also the main premise of effective communication with parents.

(2) Adaptability

Researchers found that 13 respondents mentioned the importance of adaptability, accounting for 44.83%. Children's imagination is boundless; in the process of teaching, many unexpected problems often show up that must be dealt with by teachers in time. Based on the premise of completing the teaching objectives, the teachers need to skilfully help children solve unexpected problems, guide children to think, and even design further education activities based on children's situations. As teacher XQ said, "*Class teaching is a more challenging thing, especially some unexpected answers or questions of children. Sometimes, there are many things you can never expect from children's imagination, so teachers need to deal with it flexibly.*"

In addition to dealing with children's unexpected thoughts in the teaching process, a change in the external environment, such as weather, noise, small animals and other unexpected situations, can also occasionally divert children's attention and disrupt normal activities. In particular, when accidents happen, it is more necessary for kindergarten teachers to calmly respond in time, change the activity plan, send children

to the health care room in time and contact the parents if necessary.

Whether emergencies can be dealt with in the process of education is an important sign of whether a kindergarten teacher is mature and is also an important performance reflection of the teacher's own competence (Rao Shuyuan, 2002). Kindergarten teachers should be good at finding problems in educational activities and at artistically solving problems that arise at any time. They should be able to deal with emergencies calmly (Gu Pengbo, 2010). The particularity of kindergarten's educational subjects requires teachers to feel sensitively, accurately judge the new trends and problems that may appear in the process of education, which always generates changes, grasp the opportunity of education, and transform educational contradictions and conflicts (Zhang Jianbo & Guo Li, 1999).

(3) Reflection Competence

Researchers found that 16 kindergarten teachers thought that reflection competence is very important for work in kindergarten, and 55.17% of the respondents hold this view. Self-reflection plays a leading role in early childhood education (Bers, Ponte, Juelich, Viera & Schenker). As teacher WH said, "*I think self-reflection is particularly important because you do the same thing with everyone, such as a teaching and research project. If you don't reflect after you've finished the work, the activity may be over, and the impression you left at that time will fade away. It's just to repeat the experience of the last time; you didn't get constantly internalizing and improving.*"

The reflection competence of kindergarten teachers is usually manifested in several aspects: at first, in life activities, kindergarten teachers need to reflect after a day's work, find their own advantages and disadvantages, and find opportunities for education in life activities. In addition, reflection after collective teaching activities is also very important. Kindergarten teachers need to focus on the details in the process of teaching activities and avoid the same problems happening again through reflection (Bao Jie, 2015). SLW mentioned in the interview, "*I think that when you finish a teaching, you need to reflect. You can talk to other teachers or even the supervisor who supervised your teaching process; especially, write reflection notes for your own shortcomings. For example, when I was in this teaching, what small problems did I encounter and what did I feel dissatisfied with? What's the children's response? What did I not expect in advance? Through continuous adjustment, we can also carry out teaching a second time, step by step until we are really satisfied with our teaching.*"

Effective reflection plays an important role in improving the ability of kindergarten teachers. Reflection can help teachers acquire deep knowledge

about different situations, content, children's learning and development, and it is an important method to understand children's authentic ideas (Sheridan, Williams, Sandberg & Vuorinen, 2011). Deep reflection can help kindergarten teachers better evaluate their own teaching behaviours (Happo, Määttä, 2011).

(4) Design Competence

The research found that 23 respondents emphasized the demand for design competence in all aspects of kindergarten work, accounting for 79.31%. The design competence of kindergarten teachers is mainly reflected in teaching activities, environment creation, theme activity design, and regional and outdoor activity design.

The creation and utilization of an educational environment is an extremely important and indispensable part of kindergarten teachers' professional competences (Xiao Boan & Song Jing, 2018). The head teachers need to regularly lead other teachers in the class to create and design the class environment. Usually, each environment has a corresponding theme; kindergarten teachers need to adjust the design of the environment regularly according to the themes. As teacher LM said, *"I have to do a lot relevant regional materials design according to the needs of the theme or the actual needs. For example, in the art work area, my theme is Beijing opera, and I will make a lot of things related to Beijing opera. When the next autumn comes, for example, I will collect some leaves, some fruits, and some things related to the season. On Mother's Day, I will put some related things such as flowers and display children's works; these contents change constantly."*

Kindergarten teachers need to design appropriate courses according to children's age and educational goals. Before the implementation of teaching, teachers need to design the whole process of teaching in advance so that teaching activities can be carried out smoothly, which requires kindergarten teachers to be qualified with the competence of teaching design (Li Hui, 2004). As teacher XQ said, *"Kindergarten teachers should have the competence to design teaching. For example, for the decomposition of numbers, we all know the basic knowledge, but how can we make children accept it? To make children understand this, it depends on your teaching design. What kind of teaching method do you use in your teaching design? What kind of game do you use? In what way? How can you lead children to operate and finally understand the decomposition of numbers. It's very important for you to design your teaching in a way that children can accept. I think it's very difficult."*

In addition, in regional activities and outdoor games, kindergarten teachers need to design appropriate content to help children explore and learn according to their current state and existing experience. At the same time, activities also need to be interesting to attract

children's interest and attention to better obtain growth. As mentioned by teacher WYL, *"for example, in regional activities, in addition to the daily preparation of materials, teachers also need to design supports for children in activities. If you want to generate new activities according to children's ability, or according to children's favourite points, it needs creativity."* Teacher SLW talked about the importance of design competence in outdoor games. *"When we design outdoor games, for example, when we design games to practice physical fitness, how to make games interesting is very important. At the same time, we should promote the development of children purposefully in the game. In addition, we need innovation in the design of game content."*

According to the requirements of the Ministry of Education of China (2012), kindergartens mainly take games as their main activities, and government is not allowed to recommend or organize the subscription of various kindergarten teaching books and teaching auxiliary materials, which means that the teaching work of kindergartens does not need to follow the same teaching syllabus and standards as that of primary and secondary schools. Teachers can freely design teaching activities under the guidance of advanced education concepts, which brings about huge freedom to do the work and provides a broad space for creation.

(5) Cooperation Competence

The research shows that kindergarten education and teaching work is usually carried out with the close cooperation of different teachers. In the interview, a total of 21 interviewees think that the division of work and cooperation between teachers is very important, accounting for 72.41%. Generally, each teaching class has 25-35 children and is equipped with 3 kindergarten teachers. Teachers need to assign work and cooperate with each other. Each teacher has his/her own main responsibility, but occasionally the content of the division is not very fixed. For example, the childcare worker is not only responsible for the food distribution and cleaning but also can guide and remind the other teachers, cooperating with each other in kindergarten class work to maintain class order. As teacher WZ said, *"In class, there are many children, so teachers should divide their work and cooperate, because if they don't know the division of work and cooperation, it will be very messy, and they can't take into account so many children. Everyone has to know their own occupation and division of work and their responsibilities. Then the class work will be orderly."*

For the head teacher in the class, when she/he is in charge of the overall work of the class, she/he also needs to cooperate with other teachers in the class. As teacher LY mentioned, *"The head teacher in the class is responsible for a lot of work. Teachers should observe every child and some details; the work needs the cooperation of all the teachers in the class. For*

example, I didn't observe this aspect, and then other teachers observed it. That needs teachers to cooperate and try to minimize the possibility of problems happening in the class."

Cooperation is an important expertise in the field of early childhood education (Karila & Nummenmaa, 2001). In a broad sense, the cooperation competence of kindergarten teachers includes the ability to cooperate with teachers, children, parents, colleagues and the community (Liu Yuan, 2016). In a narrow sense, kindergarten teachers' cooperation mainly refers to the cooperation between class teachers. Kindergarten teachers need to seek the support and help of other colleagues in their work. Experienced teachers in the class can provide more-abundant information and resources to help young teachers achieve self-improvement (Borich²⁰¹⁶).

(6) Organization and Coordination Competence

The research shows that there are 22 respondents who think kindergarten teachers need to have good organization and coordination competence, accounting for 75.86%. For the main class teachers, the organization and coordination competence is mainly reflected in the organization of children's activities and the distribution and coordination of the work of other teachers in the class.

When organizing children's activities, kindergarten teachers should establish a sense of rules to ensure the safety of the children. Over the course of one day, children should be organized reasonably and in an orderly fashion to eat, drink and wash in queue. If the organization ability of kindergarten teachers is relatively poor, it is easy to cause chaos and bring safety risks. As teacher GHM said, *"Kindergarten teachers must have an organizational ability. You should organize children to do things orderly, consciously cultivate children's awareness of rules, and tell them that the toilet floor will be slippery, do not crowd around, do not push each other."*

The head teacher in class needs to reasonably coordinate and assign the work tasks for each teacher in the class. As teacher ZWY said, *"As a head class teacher, your own work is also very huge and trivial. You should think about how you coordinate your work, how you make your team members play their roles, and make others feel comfortable with your cooperation. To be an excellent kindergarten teacher, we need to have a strong ability of organization and coordination and the ability to solve problems flexibly."*

The organization and coordination competence of kindergarten teachers is reflected in many aspects, including coordinating the physical environment and available resources (Saracho¹⁹⁸⁴) and organizing one day of life activities, education process, content and activities to achieve a balance between life routines,

activity plans and children. In the process of teaching, kindergarten teachers should organize and implement educational activities based on children's cognitive characteristics and existing experience (Lillvist, Sandberg, Sheridan & William, 2014) and organize and coordinate one-day activities smoothly (Happo & Määttä, 2011). For the head class teachers, it is also necessary to organize and manage class activities, coordinate the work of each teacher in the class and assign tasks.

(7) Expression Competence

The research found that 18 respondents said that kindergarten teachers need to be good at spoken language, written language and body language in their daily work, accounting for 62.07%.

In daily life and education activities, teachers often use spoken language to interact with children. Kindergarten teachers should have certain skills in organization and increasing children's interest in using language, be able to take into account the age and demand of children, use spoken language reasonably to express the objectives, content and process of activities, and guide children to work alone or to collaboratively complete a task. According to XQ, *"Kindergarten teachers should have good language organization ability because what the teacher said, and the interaction with the child, are mainly the interaction in language, mainly through spoken language, so you should use language to attract them, lead their eyes to focus on you."*

Second is the ability to express by writing. Almost every day, kindergarten teachers need to write teaching plans or take reflective notes; writing work occupies a large part of their work. It is very important for teachers to show clearly what they think about, and to express those thoughts logically. As WY said, *"Kindergarten teachers also have a lot of writing work. They need to write class plans, a semester plan at the beginning of each year, weekly plans, a summary at the end of the semester, and summaries of cases, etc. The head teachers must write a class plan, class summary, theme plan, theme summary and theme case, etc. You can't usually leave immediately after class, and you need to record today's children's behaviours and important performances."*

In the field of art teaching, kindergarten teachers are also required to express with the help of body movement language, especially in art, music, dance and physical courses.

Summarized from the above point of view, the competence of expression is a very important part of preschool teachers' core competence (Li Hui, 2004). Kindergarten teachers express themselves all the time in their daily activities, so it is very important to express the content clearly and concisely to attract children's

attention. Especially in oral expression, teachers should use Mandarin correctly, using coherent, fluent, vivid, concrete and logical language to express emotionally (Zhang Minghong, 1995).

(8) Learning Competence

Researchers found that 17 respondents believed that kindergarten teachers need to have the desire and action of active learning, accounting for 58.62%. The analysis of interview data shows that learning competence is a necessary requirement for kindergarten teachers. As CTS said, *"After I graduated from university and came to kindergarten, I feel that it's a learning process again. For kindergarten teachers, learning ability is very important; you need to have strong learning awareness and learning ability. As a kindergarten teacher, I think the ability to learn and the awareness of learning are still affecting children, which is very crucial."*

For kindergarten teachers, practice is a very good means of learning. Through continuous imitation – practice, re-imitation and re-practice – teachers can acquire more advanced education methods and strategies. As teacher SS said, *"We still need to see and imitate because as kindergarten teachers, I think, you need to constantly imitate and stand on the shoulders of giants. When you master these advantages and good teaching strategies of others and then they become your own, you have already made a big step forward, which is not easy. Then you can form your own characteristics after mastering these, and you can find that this aspect is particularly good and that aspect needs to be improved. I think it really needs practice to understand myself and others."*

With the rapid development of modern society, a variety of new knowledge and skills emerge endlessly. The era of acquiring all knowledge in one lifetime is in the past. The survival of kindergarten teachers is also an endless process of improvement and learning (Bao Huiling, 2011). A kindergarten teacher should have the idea of lifelong learning, constantly learn professional knowledge through the Internet, early childhood education magazines, books and other resources to enrich their cultural spirits, understand the latest trends in preschool education, and timely write their own feelings and reflections. To become an outstanding teaching expert and a kindergarten teacher with professional competence, this concept of lifelong learning is the magic weapon to win (Ye Bo, 2010).

(9) Communication Competence

Researchers found that communication competence is one of the most important abilities of kindergarten teachers. Twenty-eight respondents said that in their daily life, kindergarten teachers communicate all the time, which is the key competence of kindergarten teachers, accounting for 95.55%. Through the analysis of interview data, the

communication competence of kindergarten teachers is mainly reflected in three aspects:

The first is the communication between teachers and parents. In the process of communicating with parents, kindergarten teachers need to understand the needs of parents, understand what issues concern parents about their children, and sincerely communicate with parents about children's performance in the kindergarten. As teacher LM said, *"Communication with parents is very important. First of all, we need to understand what parents think about and what the concerns are of parents when facing their children. After you know their concerns, you can usually pay more attention in the right direction. If you communicate with parents in this way, parents will have great interest in talking with you."*

In addition, the accidental risk of children in kindergartens is relatively high. When safety accidents happen, communicating with and comforting parents requires teachers to have good communication competence. SLW said, *"For example, in kindergarten, children sometimes inevitably get hurt. When we face this situation, what will you say to parents? How to explain this? How to comfort parents? I think it's a test of the teacher's communication ability at this time. How can you tell parents how to solve the conflicts between children? You need to explain this problem to parents. At this time, it's very important to communicate with the parents. If you communicate in a good way, then the children's problems are solved, and parents will be satisfied with your way. If you don't communicate in the right way and right time, parents will be anxious. It may be out of control, so communication skills are particularly important."*

The second is the communication between teachers and children. The communication between kindergarten teachers and children is very important. Good communication can help teachers comprehensively understand the needs of each child, become close to children, and help children solve problems. For example, teacher LY said, *"In terms of communication, in the actual work, you can communicate with your children in another way. You can slowly see what kind of way can arouse children's interest, what kind of communication way can make close contact with them, so that they don't have a great sense of distance, and say something to you. You need to communicate more with children and learn more about them."*

The third is communication between teachers. Each kindergarten class is generally equipped with 3-4 kindergarten teachers. Therefore, it is necessary to communicate with other teachers in the class. Teachers need to communicate with each other about the situation and needs of children in the class at any time and understand the children's emotional life and

learning situation in time. When organizing activities and games, the head teacher should communicate with other teachers in time to make the activities and games develop smoothly. As teacher LY said, *"For example, to organize children, we must communicate well with other teachers in the class. For example, if there are naughty or sick people today, try to communicate with them first and ask them about the situation. Sometimes I will also talk to other teachers of the class; 'to communicate with the children more, try to let them have something to tell you and hear them out'."*

Communication competence can be listed as one of the necessary abilities of kindergarten teachers in the professional standards of many countries (Jia Shuanghe, 2017). Kindergarten teachers need to know how to communicate effectively with different people in different contexts. Communication competence mainly includes the communication between teachers and children, between teachers and parents, and between teachers (Wang, 2005). In the process of communication, teachers' attitude, emotion, trust and listening are very important. The teachers need to empathize with the objects of communication to better understand the needs of different people (Sheridan, Williams, Sandberg & Vuorinen, 2011).

DISCUSSION

The professional core competence of kindergarten teachers is the necessary personality and action ability for kindergarten teachers to meet the requirements of kindergarten work. This research uses the semi-structured interview method with job analysis as the core to build a three-level professional core competence model for kindergarten teachers.

This model has changed the dotted and scattered description and interpretation of professional core competence found in previous research. Aiming at different levels of core competence, from the perspective of professional science, a systematic level model has been established for the core competence of kindergarten teachers.

The inner layer of this model is the professional core value. Professional core value refers to the value generally recognized by professionals for their own careers and is the standard value for professionals to make value judgments, value choices and value pursuit (Li Hong, 2016). In the process of research, the interviewees think that children are the core of kindergarten teachers' value subject, and love is the core professional value of kindergarten teachers. Respondents believe that whether there is selfless love for children is the most important indicator to measure the professional value of a kindergarten teacher.

The middle layer of the model is the core personality of kindergarten teachers. Personality is a

unique mode of thinking, emotion and behaviour that contains a stable and unified psychological characteristic different from others (Peng Danling, 2004). Personality is composed of two aspects, physical and mental characteristics, under the interaction of innate genetic environment and education; it makes individuals respond to stimulation relatively consistently (Yu Hongmei, 2008). In the past, most studies used the method of psychological measurement to test the personality characteristics of kindergarten teachers, ignoring the requirements of the work itself for kindergarten teachers. This research mainly uses the method of job analysis to obtain the four core personality traits of kindergarten teachers: responsibility, patience, carefulness and affinity.

The outer layer of the model is the core action competence of kindergarten teachers. Action competence refers to the ability to perform an observable and measurable task in a specific professional field and is composed of domain knowledge, professional skills, work attitude, motivation tendency, social behaviour and other elements (Rychen & Salganik, 2001). Action competence is a comprehensive reflection of the intelligence, knowledge, skills, actions, emotions, attitudes and values that individuals need to complete a certain work in the professional field. Due to the different requirements of professional action competence in different stages of career development, this research focusses on the core action ability of kindergarten teachers who have worked for 3-5 years. The research shows that observation, design, adaptability, communication, expression, cooperation, organization and coordination reflection and learning competence are the nine essential key action competences of kindergarten teachers.

The research on kindergarten teachers' professional core competence in this paper is different from the previous research on kindergarten teachers' professional knowledge, professional skills, professional ability and competence. The previous research focusses more on the reflection of kindergarten teachers' specific work content, such as teaching ability, the ability to create and use the environment, and the ability to organize outdoor activities, etc. In addition, this research performs an in-depth analysis of the work tasks of kindergarten teachers. However, it does not stop at the level of simply transforming the work content into professional competence but rather extracts the essential core personality characteristics and functional action competence of kindergarten teachers from a large number of studies and interview data, studies that have good generality and explanatory effects.

The research results can provide a scientific basis for the recruitment, selection and training of kindergarten teachers. In the recruitment process of

kindergarten teachers, the professional knowledge and skills of candidates are often valued. The model illustrates that a more important trait for a teacher who is competent for kindergarten work is whether the candidates agree with the core values of the kindergarten teachers' profession and whether they have the four core personality characteristics of the associated work requirements. Professional values and personality characteristics are relatively stable characteristics formed in the long-term work, learning and life process; they are the result of the joint effect of genetics, environment and education and cannot be effectively cultivated in a short period of time. A teacher who lacks love or a sense of responsibility and affinity is not suitable for kindergarten teachers' work, even if other professional competences are strong. Teachers who lack patience and carefulness will also find it difficult to complete children's education and care.

The model can also provide useful guidance for teacher training. The nine key action competences of kindergarten teachers proposed in the model come from the results of kindergarten teachers' task analysis, which covers the ability requirements of all typical work tasks of kindergarten teachers. In the process of teacher training, managers can carry out teacher training according to the authentic situation and professional development goals of teachers in the kindergarten.

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