Study on the Performance of Learning Competence of Rural Preschool Children in the Context of Play

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Abstract: In the future development of rural preschool children, learning competency absolutely occupies an important position. Many studies have also shown that learning competency is closely related to the physical and mental development, school preparation and other aspects of rural children. Even many countries in the world have put forward similar initiatives in their own education strategies, that is, "pay attention to the cultivation of learning competence of children in rural areas". Learning competency is not a skill that can be acquired by special training. It is a skill that children can continuously accumulate and improve in the daily life and teaching of children's kindergarten, especially in the game situation. This study took construction games in rural kindergartens as the investigation situation, investigated the performance of children's learning competency, and tried to summarize the influencing factors of children's learning competency training. It aims to enrich relevant theories and achievements, respond to the current call for quality education and high-quality personnel training, and provide useful suggestions and help for the smooth connection between rural preschool education and primary education.

Keywords: Learning Competency; Rural Preschool Children; Context of Play; Construction Games

1. Introduction

At present, many scholars attach importance to rural children's learning competency, which is the premise and guarantee of children's learning readiness, and one of the important indicators of children's cognitive healthy development [1]. To improve the learning competence of rural children is to lay a key foundation for children's lifelong development. However, it should be noted that children have unique psychological characteristics and cannot be taught in the traditional mode. Diversified games and activities are the key scenarios for the development of learning competence [2]. Some studies have concluded that teachers' purposeful delivery of game materials and the creation of high-quality game environment will play an inestimable role in the formation of good learning competency of rural children [3]. Because children can not only experience happiness in the game situation, but also develop children's practical ability, social skills, and most importantly, can stimulate children's concentration, imagination, creativity, problem-solving ability, and so on.

Among the different regional games, construction games are one of the most exciting types for children. Construction games belong to creative games, which include comprehensive thinking and operation activities [4]. Children freely manipulate and stack low-structured materials in construction games, freely exercising their imagination and creative skills. They even form small teams, stimulating the sense of cooperation, and jointly engage in division of labor, discussion, problem-solving, etc. All these require the participation of children's thinking, language, and operation skills, as well as the support of curiosity, initiative, and perseverance. And precisely, the development of children's learning competence is reflected in these behaviors [5]. It can be said that construction games can bring quite optimistic progress to the development of rural children's learning competence. However, learning competency is a psychological concept. In practice, how rural preschool teachers understand learning competency, how to support the development of children's learning competency, and how to transfer the game theory to teachers' guiding behavior and other related issues need more research to provide empirical basis, which are still in urgent need of breakthroughs.

After collecting and consulting the relevant literature on the learning competency of rural children, this study found that the existing research mainly focused on the cultivation of the learning competency of children in primary school, and less explored the learning competency of children in the transition stage of preschool education. The game situation is a special environment in which children can truly show their learning competence, psychological state, cognitive level and personality traits [6]. Among them, the construction game is an important part of children's garden play activities, and it has a positive promoting function for children's physical and mental development [7]. The learning competence of children is more unique in the construction play, which is incomparable to other play activities [8]. It can be said that the cultivation of children's learning competence is one of the core values of the construction of games.

Therefore, this study comprehensively considers the context of construction games, takes rural preschool children in Guangdong Province of China as the research object, observes their specific performance in construction games, and then analyzes the development status of their learning competence, analyzes the existing problems and potential reasons in the development, and puts forward corresponding improvement strategies. To improve the understanding of learning competency, strengthen the importance of rural children's play and learning competency, and provide experience and reference for rural teachers to organize high-quality construction games in the future.

Table 1. Operational Definitions of the Four Dimensions of Learning Competencies

Dimensions	Operational Definition	Specific Indicators
Curiosity and Interest	Children's interest in construction games is manifested by a strong desire for exploration and sustained curiosity.	(1) Interest: Maintaining a high level of enthusiasm for constructing games, even accompanied by positive language; (2) Observation: Carefully observing the relevant things in the construction area; (3) Willingness: Willing to engage in construction games such as building with blocks; (4) Initiative: Proposing one's own ideas before starting the construction.
Persistence and Concentration	During the activity, children can maintain their concentration and continue to focus on the activity even in the presence of distractions.	(1) Observation: Continuously paying attention to materials related to the game construction; (2) Concentration: Focusing attention on the construction process; (3) Resistance to Distractions: Not easily being distracted, and being able to continue activities even after the concentration is interrupted; (4) Execution of the Theme: Being able to adhere to the original idea and carry it through to the end; (5) Fluency: Whether the task can be completed smoothly and continuously during the activity process.
Independence	When children encounter difficulties in construction, they do not easily give up. Instead, they rely on their own thinking and gradually try different methods, demonstrating persistent efforts, concentration, and the ability to solve problems independently, and achieving a sense of accomplishment.	(1) Overcoming difficulties: Face difficulties bravely and never give up easily; (2) Solving problems: Try to solve problems independently and never give up easily; (3) Achieving experience: The sense of self-achievement displayed by an individual after completing a task, often accompanied by expressions, language and other behaviors.
Imagination and creativity	Children create something different from real objects or the works of their peers during the activity, and they make innovations in aspects such as the shape of the objects or the way they are constructed.	(1) Goal awareness: Select the building materials with a clear goal based on the imagined theme; (2) Description of the building outcome: Use rich language to describe one's own work; (3) Conceptualization of the building content: Before the start of the construction and before the exhibition, did one have creative ideas about the content to be built; (4) Novelty: The degree of difference between the imagined building outcome and the actual object; (5) Originality: Compared with peers, does the building outcome have unique features.

2. Method

2.1 Research Subjects

This study employed a stratified random sampling method. The final research subjects were 176 children from 3 rural kindergartens in Guangdong Province, China. There were 93 boys and 83 girls, with a relatively balanced gender ratio. The average age was 4.5 ± 1.3

years. Among these three rural kindergartens, each activity room is equipped with a variety of construction game materials and has allocated sufficient free play time and area-based game time. Furthermore, each class adjusted the schedule according to their own circumstances, conducting at least 4 construction games per week. The activity duration was generally around 50 to 60 minutes, which was an appropriate length for children to engage in deep play.

2.2 Observation Method

Observation method is a research approach where the researcher, based on their research goals and plans, uses various research tools to observe and record the corresponding behaviors and phenomena of the subjects being studied, thereby obtaining relevant data and information [9]. This study employed the "Observation and Evaluation Scale for Learning Competence of Children Aged 3-6", which was developed by Zhao et al. The scale is divided into four dimensions, covering 17 specific behavioral indicators (see Table 1) [10]. These 17 behavioral indicators are divided into 4 different score levels ranging from 0 to 3, with 51 being the full score. The corresponding critical scores for high and low levels and the three levels of learning competence they correspond to are as follows: 43 and above indicate "excellent", 32 to 43 indicate "good", and 32 and below indicate "average". This observation scale has good validity and reliability. The reliability of each dimension ranges from 0.708 to 0.845, and the overall reliability reaches 0.893.

During the investigation, the researchers observed a total of 176 rural preschool children. For each child, the observation duration and the number of learning competence evaluations were both ≥ 5 times. For each individual sample, the corresponding 4 dimensions and 17 behavioral indicators in the observation scale were evaluated.

3. Results

The researchers transformed the distribution of the total scores obtained by the children on the Learning Competence Observation Scale into grades (see Table 2). Among them, there were 19 children whose performance in learning competence was at the excellent level, accounting for only about one-tenth of the total sample; 53 children had a good level of competence, approximately accounting for 30% of the total; and 104 children, accounting for nearly 60% of the total, demonstrated a moderate level of learning competence. From the perspective of the distribution of grades, the majority of rural children have an average level of learning competence, which indicates that there is considerable room for improvement.

Table 2. Overall Grade of Children's Learning Competence

Grade	Excellent	Good	Average
Number	19	53	104
Percentage	10.8%	30.1%	59.1%

Through the statistical analysis of the research data, it can be observed that among the average scores of the various dimensions of learning competence of the research subjects in the construction game, those that are higher than the corresponding median scores are curiosity and interest, persistence and concentration, and independence (as shown in Table 3). Among them, the scores exceeding the median in the independence dimension were the highest, followed by the curiosity and interest dimension, and then the persistence and concentration dimension. However, the means of the imagination dimension and the creativity dimension did not reach the median of the scale dimensions. Meanwhile, the average total score of children's learning competence was 28.28, slightly higher than the median. This indicates that the development level of children's learning competence in the studied class as a whole is at a medium level with a slight upward trend. Among them, the development of independence reached a relatively high level, the development of curiosity and interest, persistence and concentration was relatively better as well. However, the development of children's imagination and creativity still requires careful cultivation.

Table 3. Distribution of Scores for Each Dimension

Dimensions	Total score of indicator items	Min	Max	Mean	Standard deviation
Total score of learning competence (n = 176)	51	13	44	28.28	7.343
Curiosity and Interest (n = 176)	12	2	12	8.00	2.541
Persistence and Concentration (n = 176)	15	2	14	8.14	3.449
Independence (n = 176)	9	4	9	6.64	1.457
Imagination and creativity (n = 176)	15	1	12	5.50	2.913

The researchers further analyzed the above data in detail, and found that the minimum and maximum values of the dimension of independence were 4 points and 9 points, respectively, which showed that the development gap between children was relatively small in the performance of independence. In addition, the minimum and maximum scores of curiosity and interest were 2 and 12 respectively, the minimum and maximum scores of persistence and concentration were 2 and 14 respectively, and the minimum and maximum scores of imagination and creativity were 1 and 12 respectively. The differences between the maximum scores of the above three dimensions were significant. The analysis of the standard deviation value shows that the scores of all dimensions of the learning competency performance of the rural children in the construction game are basically scattered, indicating that there are large individual differences in the development of their learning competency.

4. Discussion

4.1 The Game Activity Scene and Materials are Relatively Single

Compared with traditional games, construction games emphasize autonomy, and require a more open and free environment and colorful materials [11]. In construction, materials are the main interaction objects for children. Only materials with rich types and novel styles can stimulate children's interest and guide them to explore new things. In the research and investigation, it is found that some rural kindergartens have insufficient input in materials. They only have two or three common low-structure materials, which are not supplemented or updated in the second half of the school year, and the activity materials are simple and repetitive. When children are exposed to the same materials for a long time and lack fresh stimulation, they will lose interest in construction materials and become tired of construction games. This will not only fail to promote the development of children's learning competence, but also affect the fun effect of construction games.

In addition, it is found in the research that the construction games carried out in most rural kindergartens are mainly based on the class area activities, and the large-scale autonomous construction games in the kindergarten are rarely carried out. In the construction area of the class, the play time is relatively fixed, without paying attention to the cultivation of children's planning consciousness in the game, and the stimulation of exploratory thinking before the game is also less. Among them, the construction area is the fastest area full of people, indicating that children are full of interest in construction materials. However, the materials in the construction area are mainly blocks and strip plastic, and other living materials are less. In addition, the two materials of building blocks and plastic accumulation are placed separately, and the space for playing with the two materials is also separate. Children carry out different construction in the two areas, but have no awareness of resource integration. However, a variety of materials can increase the interest of building and promote divergent thinking.

4.2 The Adverse Factors in the Game Lead to a Low Achievement Experience for Children

It can be observed that in construction games, children most often have conflicts such as scrambling for materials and knocking down the construction results of others. When these conflicts occur, children's emotions are easy to be impulsive and lead to quarrel. Teachers often intervene directly with children to prevent arguments and clarify the cause of the matter, and guide children to calm down and solve the problem. Nevertheless, children still have conflicts over the same things in construction games, and the root causes of these conflicts need more continuous attention.

In addition, it is worth noting that construction needs to use a lot of materials, so it is a big project to organize materials after the game, so some children are prone to fear, avoid the behavior of cleaning materials, and lack of initiative.

Each child has its own unique character. Although the construction game is a place where children can play freely, there will be unbalanced opportunities to participate. Some children may be difficult to fully express their thoughts and needs in activities due to their introverted personality or weak language expression ability. As a result, these children who do not have the opportunity to enter the construction zone gradually develop resistance to construction games, and their participation and exploration desire are reduced, and even

hinder the development of learning competence.

Learning competency is a complex whole, and the development of various aspects and dimensions is cross-linked. "Curiosity and interest" is a dimension that is easier to stimulate and improve. As long as there are rich and interesting environments and materials, children can be immersed in exploration, but they are also easy to be attracted by new stimuli from the outside world. Learning competencies such as "persistence and concentration" and "independence" are relatively easy to diagnose and evaluate, but they have challenges that require long-term and continuous cultivation, that is to say, teachers and parents need to continue to demonstrate and encourage. The dimension of "imagination and creation" is easy to be affected by subjectivity in the evaluation process, and it is difficult to measure and guide children with unified standards. Teachers and parents need to provide open materials for children and treat their growth with a dynamic perspective, so the cultivation of this dimension is also quite difficult. The degree of difficulty in cultivating each dimension of learning competency varies with children's own characteristics, parents' parenting style and other factors. Therefore, it is necessary to take children's personality and development needs as the starting point, provide targeted education guidance, and provide suitable teaching and support for children to promote their comprehensive development of learning competency.

5. Conclusions

Every child is unique and different, and the development of their learning competency will also show the gap between individuals. This difference is closely related to children's own personality, interests, gender and other factors. Adults should respect children's personality traits and developmental differences, and pay attention to different developmental needs. Such as to help introverted children to strengthen curiosity, initiative and other qualities; For active and active children, we can help them to enhance their learning competency such as concentration and independence, adopt the "compliance" strategy, and teach students in accordance with their aptitude, so as to see the significant effect of good development of learning competency of all children.

Good learning competence has a great promoting effect on children's future development. As an important carrier to cultivate children's learning competence, construction games should be given full play to its educational nature. In today's complex social competition, the development of rural children's learning competence is of great value to their smooth preparation for primary school in the future.

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References

[1] Wang J, Wang L. Action research on how high-quality teacher-child interaction promotes the approaches to learning of young children. Journal of Education and Educational Policy Studies, 2025, 3(3), 71-78.

[2] Han L, Abdul Rahman MN. "Development of a STEM instructional model to foster approaches to learning in preschool children: a Fuzzy Delphi Method". Asian Education and Development Studies, 2025, 14(5), 899-920.

[3] Suo C. Conceptual analysis of young children’s learning dispositions. Preschool Education Research, 2019, (6), 35-44.

[4] Zhou X, Yu C, Zheng Z. Research on the relationship between parental media literacy and preschool children’s quality of learning in the new media environment. Front Psychol, 2025, 16, 1600859.

[5] Schmitt M B, Pentimonti J M, Justice L M. Teacher-child relationships, behavior regulation, and language gain among at-risk preschoolers. Journal of school psychology, 2012, 50(5), 681-699.

[6] Stearns P N. The Managed Heart: Commercialization of Human Feeling. Journal of Social History, 1984, 18(2), 310.

[7] Allard É, Bouchard C, Richard, V. Using guided constructive play to enhance instructional support in 4-year-old preschool classes. Journal of Early Childhood Teacher Education, 2026, 47(1), 25-40.

[8] Marton F, Salio R. On qualitative differences in learning: i-outcome and process. British journal of educational psychology, 2011, (1), 4-11.

[9] Li X M. A Study on the Development of Young Children's Problem-Solving Abilities in Outdoor Construction Play and Teacher Support Strategies. EIR, 2025, 3(5), 121-127.

[10] Zhao J, Wang X. Development of the learning quality observation evaluation scale for children aged 3 to 6 years. Preschool Education Research, 2018, (06), 44-59.

[11] Phair R. International early learning and child well-being study assessment framework. Directorate for Education skills, 2021, (3).

