

Playing to Learn in China v.s. in the Western World: How China Can Learn from the Western Experiences

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ABSTRACT

For children from birth to the age of eight, the play has been regarded as a training ground for their growth. The play has been well discussed theoretically and empirically in early childhood education settings due to its age appropriateness and individual appropriateness for children in early childhood programs, specifically in the Western world. In contrast to the rich and dense discussion on play in Western countries, the discussion on playful learning in China started relatively late. It is only gaining popularity among Chinese scholars in recent decades. However, even though playful learning has gained popularity, limited research discussions on how playful learning was and/or should be used in the new context in China were found. Thus, this paper aims to discuss what and how plays were/are used in Western countries to shed light on how plays could be used in China's new context.

Keywords: *early childhood education; playful learning; construction play; skill-development play; creative play*

1. INTRODUCTION

For children from birth to the age of eight, play has been regarded as a training ground for their growth [1] because children can access environmental information and experience the environment via interactive plays [2]. Children can explore their surroundings through play activities to be able to distinguish, understand and learn. Play is also an adaptive mechanism to promote children's cognitive development [3]; children can construct abstract concepts through repeated play exercises, providing a foundation for children's cognitive development.

The play has been well discussed theoretically and empirically in the early childhood education settings due to age appropriateness and individual appropriateness for children in early childhood programs [4]. Children's play was conceptualized by theorists, including Erikson [1], Bronfenbrenner [5], Piaget [6], and Vygotsky [3], in terms of creativity, exploration, experimentation, learning, communication, socialization, and mastery as they attempted to understand the reasons why children play [7]. According to Piaget's theory of constructivism

that addresses the stages of cognitive development [6], play is identified as being the primary vehicle for children's cognitive development [6]. Play is also considered the leading source of children's social, emotional, and physical development [3].

In contrast to the rich and dense discussion on play in Western countries, the discussion on playful learning in China started relatively late. It is only gaining popularity among Chinese scholars in recent decades. The abandonment of the historically notorious one-child policy, the continual implementation of the new two-child policy since 2016, and China's long-time population aging issues have forced scholars and the country to value and emphasize the education of the new generation more than ever before. Therefore, playful learning that emphasizes teaching for children's personal and balanced growth, instead of teaching for tests like the traditional Chinese education model, is deemed important and necessary by early childhood education scholars to better equip the next generation to meet China's societal challenges. However, even though playful learning has gained popularity, limited research discussions on how playful learning was and/or should be used in the new

context in China were found. Thus, this paper aims to discuss what and how plays were/are used in Western countries to shed light on how plays could be used in China's new context.

2. HISTORICAL DEVELOPMENT OF PLAYFUL LEARNING IN CHINA

In contemporary China, one of the symbolic figures who contributed greatly to the development of playful learning is Chen Heqin, who founded one of the earliest experimental centers of Children's Education-Nanjing Drum Tower Kindergarten. Chen considered the goals of playful learning are to (1) develop motor skills, (2) cultivate morals, (3) sharpen minds, and (4) relax. Chen's theorization of playful learning laid a solid foundation for the later development of plays in China. Until the 1990s, many scholars and teachers have achieved a great outcome in practicing playful learning in classrooms [8].

However, the problem persisted in regard to playful learning in China. Playful learning is not considered as important as soon as children starting elementary school. Starting elementary, playful learning is mostly considered a transition tool for students to get used to the play-to-learn style in elementary schools, even in policy documents published by the Chinese government. Indeed, the test-oriented education in China has driven the teaching of many teachers to aim their teaching at learning for tests instead of learning for the overall development of students.

Despite the historical, depressing test-oriented education in China, teachers nowadays are starting to realize the significance of playful learning for children. It is more common and often than before to see research addressing playful learning in classrooms. Further, with the full start of the second child policy in 2016, the Chinese government started to pay more attention to the overall personal development of children. Based on the recognition of self-development, the administration and parents, and teachers are revolutionizing their teaching method and upgrading their understanding of playful learning. Overall speaking, the development of plays in China is starting relatively late compared to other developing countries and thus is in urgent need of theorizing.

3. THE LITERATURE ON PLAYS IN CHINA

Plays are mainly used in language classes (e.g., Chinese language, English language) instead of content areas classes (e.g., Math, Science, Social Studies; [9]). However, a guiding opinion published by the Ministry of Education (MoE) in April 2020 that vigorously emphasized promoting the scientific connection between kindergarten and the elementary school changed the scenario. In the document, the MoE emphasizes the role

of plays in promoting the scientific connection from kindergarten to elementary school. The document specifically emphasized that plays are a transition tool instead of a long-term teaching method. The MoE stressed in the document that traditional lectures as still the main tool for elementary classes.

Plays among elementary schools in China are mainly incorporated into the teaching through a spiritual way. Studies on plays in China generally mentioned the concept "the spirit of play". However, studies on "the spirit of play" summarized that "the spirit of play" is significantly lacking in practice and policy. Affected by the utilitarianism approach of education in China, many teachers have set their teaching goals to getting higher grades in tests instead of teaching for children's general development. Hence, their teaching often oversimplified and robotic. Despite the wide use of "the spirit of play" in the literature, there is no consistent definition of it. Also, parents are found to stigmatize the spirit of playing [10]. Parents generally associate the concept of play with video games and online animated games instead of plays for education purposes. Thus, parents often tend to consider the play as a detrimental malady for children. To summarize, the literature on plays in China found that plays are mainly used in language classes instead of content area classes. Therefore, teachers and parents are not valuing the role of play in children's education in China.

4. PLAYS IN THE WESTERN WORLD

The development of plays in the Western world also experienced from not being valued to being valued more in the educational contexts. In early childhood settings, the play has traditionally been viewed as a child-initiated and directed activity [11]. The views on the nature of play, activities that are considered play, and the purpose and roles of play in education contexts were often very different and at times opposing. Despite evidence that play can be understood as serious and educational, the value of play in education settings is increasingly contested. In the formal education setting, play is often positioned by adults as a means to an end, such as a reward for completing work or as a holding task. The positioning of play in these ways suggests that it may be viewed by early years stakeholders as separate to and less important than learning [12] Anning.

Play in education contexts often underpins the concepts of play-based learning. Many international early childhood frameworks have identified play-based learning such as the Swedish Curriculum for the Preschool Lpfö 98, the Reggio Emilia approach, Te Whāriki, and the key Australian early childhood frameworks (e.g., the Early Years Curriculum Guidelines and Belonging, Being and Becoming: The Early Years Learning Framework).

Research shows play-based learning enhances children's academic and developmental learning outcomes. It can also set children up for success in the 21st century by teaching them relevant skills. Involvement in play stimulates a child's drive for exploration and discovery. This motivates the child to gain mastery over their environment, promoting focus and concentration. It also enables the child to engage in the flexible and higher-level thinking processes deemed essential for the 21st-century learner. These include inquiry processes of problem-solving, analyzing, evaluating, applying knowledge, and creativity. Play also supports positive attitudes to learning. These include imagination, curiosity, enthusiasm, and persistence. The type of learning processes and skills fostered in play cannot be replicated through rote learning, where there is an emphasis on remembering facts.

As with traditional approaches, play-based early years programs are focused on teaching and learning. In such programs, play can be in many forms with intentional teaching. Some typical forms of plays with intentional teaching include construction play, skill-development toys, creative play, symbolic play, etc. [13]. Below we are providing a detailed description and review of how these types of plays were used in the Western world, comparing how these plays differ in China and the Western world, and a discussion of how China can learn from the experiences in the Western world countries.

4.1 Construction Play

Constructive play is a creative play in which children use architectural and structural materials (such as building blocks, plastics, metal materials, sand, snow, stone, etc.) to construct structures (e.g., alignment, cladding, splicing, bonding, threads, spirals, etc.; [14]). The constructive play could help children develop representational skills, shape perception, spatial perception, and practical operational skills [15]. For example, in an interesting architectural game space, children can develop their perception, behavior, and mindset by exploring the space environment actively.

Constructive plays are often considered the type of play that connects children's physical, mobile experiences and abstract thinking (e.g., spatial awareness). For example, sand-playing often requires children to construct objects on the instructional manual. In this process, building an object is considered a physical, mobile experience, but children can develop their abstract thinking while they are involved in the physical sand-building experience. Also, the instructional manual may indicate the children on steps to build certain objects and the precise amount of sands needed for each step; children could develop abstract thinking and understanding by involving in and making sense of the active sensory experiences. For example, children could understand why certain sands are needed

and why certain sequences of steps are recommended while they are building objects.

China and West Countries have different views on the forms of children's constructive play [16]. For example, a study conducted by the University of Abertay Dundee in the UK chose 118 seven-year-old children of which 26 of them had learning disabilities. Half of the participants were assigned partners to play bridging games, while others competed against each other as individuals [17]. In the cooperative condition, children collaboratively carried out bridging games, and encouragements between partners were observed. However, children in the competitive condition must use their independent creative thinking and observation to compete with others. In such conditions, children often develop a sense of achievement and recognition by competing against their opponents. The comparison of the results of the two conditions found that children who work in groups: 1) learned to cooperate with others, 2) focused on their tasks and took on more responsibilities, and 3) made better and stronger Bridges (the final product). However, although the children in the competitive condition all completed the bridge construction task, the bridge quality was not good enough compared to the cooperative condition because they attached too much importance to the winning and losing of the competition. In addition, some children's emotions fluctuated greatly during the game due to the mismatch between their progress and expectation, which contributed to the relatively lower quality of the bridge built.

Compared with Western countries, education in China focused heavily on children's development toward individual excellence [18] instead of collaboration and cooperation within a team. According to a research report released by the Basic Education Research Institute of the Beijing Academy of Education Sciences, more than 70% of Beijing primary school students attended after-school classes in the autumn semester of 2012. More than one-sixth of them attended after-school classes for more than six hours a week. The goal of attending such additional classes is often for children to win places in various competitions in and out of school. However, cooperation and collaboration are important skills children need to succeed in the 21st century. As a result, cooperative, constructive play is a good approach for children in China to develop their ability to work collaboratively and cooperatively. Moreover, constructive play is of great significance for cultivating children's qualities such as earnestness, patience, carefulness, persistence in overcoming difficulties, division of labor, and cooperation in completing tasks.

The purpose of children's constructive play in China and the West is also different. Chinese parents and teachers often do not pay attention to the whole process of education. Instead, they are most likely to focus their teaching and education on excellence in

tests/competitions. As a result, children often lose the ability to judge situations and make the right decision. Instead, parents and teachers often made the decisions for them. Also, children's natural curiosity and creativity are most likely to be low compared to the children in Western countries exposed to cooperative and collaborative activities; this is also reflected in Chinese children's overall poorer performance in divergent thinking and creativity [17]. For example, in the bridging game, the Chinese way of education often would tell students what the most stable way to build a bridge is and then asks the students to complete the game according to the experience of previous students. On the other hand, in Western countries, teachers or parents would often emphasize that children should first explore building the most stable bridge in the bridge-building game and let them continue to see the problem and solve the problem through failure. Thus, western education pays more attention to the cultivation of children's learning process and ability and the knowledge, experience, and feeling they learn in the process of various activities and their ability to develop [17].

To sum up, excessive competition is not conducive to children's experience of their ability and the joy of success, to build self-confidence and enhance pride. Therefore, China's education needs more effort to cultivate children's ability to cooperate with others, which is conducive to cultivating their positive attitude towards life with love for nature and life. In addition, China should learn from Western countries in education, pay more attention to developing children's creativity and exploration spirit, and do not restrict children's development in divergent thinking and creativity, to cultivate better talents.

4.2 Skill-Development Toys

Skill development toys are generally defined as a type of play that may involve the board or card games, computer or video games, or group games involving strategy [15]. Skill-development toys were generally considered beneficial to developing children's social skills and intelligence. Specifically, Maria Montessori indicated that skill-development toys could be used in the learning process to nurture children's healthy personalities, promote children's self-confidence, and develop fundamental social ethics [19]. Interestingly, Maria Montessori's philosophy of 'herd instinct' for elementary-age children was based on her observation of children's cooperation when they are given sets of skill-development toys [20].

Generally speaking, most studies on skill-development toys focused on how skill-development toys should be designed (e.g. [21] and how it could develop children school's social and oral skills before elementary school (e.g., [22]). For example, Gabriel Guyton [22] studied how providing engaging skill-development toys

could help develop children's skills. She found that children learn the concept of senses through playing drums and other instruments. In addition, Sara Mostowfi [23] investigated design methods to cultivate environmental protection among students from 7 to 12 years old. They found that appropriately designed board games could help children understand and be aware of environmental protection.

Studies on how skills-development toys could help facilitate STEM learning were also found. Most studies on this subject generally considered the support and auxiliary function for classroom lectures. For example, Yvon Feaster & Jason O. Hallstrom [21] developed a new approach to teach binary arithmetic in the K-12 curriculum based on using an embedded hardware platform designed for teaching binary number systems engaged with visual and kinesthetic learners, which can be categorized as a skill-development toy.

Outside of traditional classrooms, some studies were found to focus on how skill-development toys could be used for children at different life stages, such as from infants to preschool kids at home. A popular reoccurring theme in this topic is the philosophy of Montessori education. Maria Montessori as a proponent of skill-development toys and a stronger supporter of playful learning, firmly disapproves of pretend play [24]. However, Angeline S. Lillard analyzed the efficacy of each discipline and method in Montessori's philosophy of education and found out that the lack of pretend play was a loss for Montessori education [24]. Maya Lestari also specifically studied game tools of Montessori schools for children's literacy development, and she found that Montessori has embodied the practice of literacy with games to invoke their interest in literacy at an early age [25].

In recent years, more studies were found to focus on how high-tech-based toys/games, like 3D geometric construction tools, computer-based board games, could be used to develop children's skills on mastering modeling and programming skills. For example, Doris G. Johnson studies how handheld computers for children recommended by The No Child Left Behind Act (NCLB) can be used with preservice teachers to acquaint students with bridging digital devices [24]. An engineer L.M. Lye investigated the effects of a pedagogical approach that used specially designed toys and software for students to conduct multi-factored experiments, and positive effects were found [26]. The study by Hannes Kaufmann & Dieter Schmalstieg tried to design a high-tech software aiming to aid mathematics and geometry education based on the mobile collaborative augmented reality system "Studierstube" [27]. In particular, the method used in this study can show readers a more detailed way of designing an appropriate 'toy' to develop specific skills of children [28].

Pedagogists in China can specifically learn from the experiences in the Western world regarding how skill-development toys can be a partner with appropriate toys/games to promote children's development in various skills. In addition, Pedagogists in China can learn from more recent experiences in the Western world that focus on designing digital toys/games to supplement the traditional, lecture-heaving teaching in classrooms. Skill-development toys have already been practiced in many middle schools and high schools in China but not with the young population, such as children at preschool and early elementary. Thus, schools and teachers could learn from the Western experience in implementing skill-development toys into early childhood education in China. More systematic studies are needed on the relevant topic to understand how skill-development toys could promote children's learning in China.

4.3 Creative Play

Creative plays are generally defined as a type of play that involves arts and crafts, musical instruments, or audio-visual equipment [29]. Creative plays were generally considered beneficial to the development of children's visual imagination, understanding of the pictorial medium, and artistic thinking. For example, Ms. O'Brien introduced the concept of self-portraits to her group of 4-year-olds at circle time. Specifically, she showed examples of famous artworks worldwide, such as the self-portraits of Frieda Kahlo, Vincent Van Gogh, Gustave Caillebotte, Pablo Picasso, and Rembrandt. She explored the artists' interpretations with her children. The purpose of involving arts in this particular study was to build the children's understanding of the unique features of self-portraits. Ms. O'Brien specifically asked children to create self-portraits using materials—paint, markers, crayons, pencils, watercolor, chalk, paper, and mirrors afterward. This self-portrait activity involving creative play is one of many standard opportunities children have to engage in the creative arts. These activities with creative arts are essential to foster young children's cognition, imagination, and overall development [30].

Generally speaking, most studies on creative play focused on how such playful activity influences children's development. For example, Hannah Mills studied the importance of creative arts in early childhood classrooms and concluded that creative arts are activities that actively engage children's imagination through art, dance, dramatic play or theater, puppetry, and music. The creative arts engage children across all domains—cognitive, language, social, emotional, and physical. Activities involving creative arts are usually deliberately open-ended instead of not prescriptive, which can foster children's divergent thinking and support the process without particular attention to the product. Specifically, Mayesky [31] offered teachers seven ways to help children express their natural creativity through the

creation of arts that aimed to help children accept changes, fear, and anxiety that are the enemies of creativity: 1) help children realize that some problems have no easy answers; 2) help children recognize that many problems have many possible answers; 3) help children monitor and accept their feelings; 4) value children's creativity, even when it's messy; 5) recognize and acknowledge children's joy in all creative endeavors; 6) help children appreciate their own unique characteristics and expressions and help children persevere, and 7) encourage them to explore, discover, and explore again.

More studies were found to focus on how creative plays could be used to stimulate children's communication skills in recent years. For example, a school-based action research intervention on children with autism spectrum disorders investigated whether sand-play could be used as a medium to stimulate the language development of children with autism spectrum disorders. Also, an intervention involving twenty-five elementary school children from four separate special education classes within the regular school system participating in sand-play workshops once a week for 10 sessions demonstrated that sand-play increased children's verbal expression, engaged and sustained children's social interactions, and increased children's symbolic, spontaneous, and novel play. The study suggested that creativity play-based interventions provided a complementary approach to the behavior/social skills-based intervention models currently prevalent in schools working with children with autism spectrum disorders. As the central tool and the creative medium in this study, Sand-play was particularly adaptive and beneficial to many different populations and settings. Inspired by Margaret Lowenfeld's World Technique, Dora Kalf, a Jungian therapist, developed Sand-play in the 1940s into a non-verbal therapeutic modality to work with children [32] to create a concrete manifestation of their imaginal world using sand, water, and miniatures objects. Thus, sand-play illuminates children's internal symbolic world and provides a place for their expression within a safe container, the sand tray.

To sum up, the creative play offers abundant opportunities for children to express special ideas and purposes with flexibility and control. In China, there is more and more teacher willing to using creative play to achieve teaching goals. But the attention should be put on children, like attracting their interest and building their confidence.

4.4 Symbolic Play

Symbolic play, also known as pretend play, "requires the ability to transform certain objects and actions symbolically; it is furthered by interactive social dialogue and negotiation; and it involves role-taking, script knowledge, and improvisation" ([33], p. 2). Two

important benefits of symbolic play for preschool and primary school-aged children include developing literacy ability and cognitive strategies (e.g., divergent problem solving, rule understanding; [33, 34]).

Children can develop categorization concepts and construct their own categories through symbolic plays. Curran [35] observed 3-, 4-, and 5-year-olds to investigate the rule structure in their pretend play. Curran [35] classified rules structured during their pretend play into two categories: explicit and implicit. Explicit rules are rules that children articulate as the common ground and have to be followed to continue the play (e.g., a director, take a role, play fairly). Implicit rules are observed and usually not articulate (e.g., fantasy/reality distinction, engage each other, accept others' proposals). Children with fewer experiences often can only learn implicit rules gradually via practicing pretend plays over time. The introduction of rules from children with more experiences also helps children with fewer experiences acquire the rules over time. Curran's [35] study suggested that the development of the implicit rules, in particular, required both divergent thinking and comprehension of rule structure.

Children are also able to develop their literacy skills during symbolic play. Schrader [36] investigated how teachers applied symbolic play as a curricular tool for early literacy development. Schrader [36] found out that teachers and children were mostly involved in the following three scenes regarding symbolic play: pretending play in the post office, pretending play in the office, and pretending play at the house. Through participating in these different pretend-to-play situations closely related to their real-life, children practiced and improved their reading and writing skills. In addition, teachers' interactions with children helped children develop their reading and writing better than when they involve in pretend play independently. This illustrated Vygotsky's theory of Zone of Proximal Development, which Berk and Winsler [37] defined as "the distance between what an individual can accomplish during independent problem solving and what he or she can accomplish with the help of an adult or more competent member of the culture" (p. 171).

Symbolic play often involves settings that simulate real-life situations. For example, teachers in China can use symbolic play as a curricular tool to enhance students' literacy ability, problem-solving and other cognitive strategies, creativity and imagination, and social and linguistic competence. More specifically, as Nourot & Van Hoorn [34] suggested, "teachers can support play in preschool and primary classrooms by preparing the environment and scheduling blocks of time for play, intervening as matchmakers, peacekeepers, or coaches" (p. 46). Additionally, scholars such as Kaiser [38] recommended early childhood educators to do the

following to make full use of symbolic play as a tool for literacy development:

- 1) provide time and space for spontaneous, symbolic play;
- 2) enrich their dramatic play centers with literacy materials and involve themselves in symbolic play to encourage the incorporation of these materials;
- 3) limit teachers' control and exercise flexibility when participating in children's symbolic play, and
- 4) provide more teacher training programs to equip teachers with new knowledge and strategies concerning facilitation of literacy through symbolic play.

5. CONCLUSION

In contrast to the rich and dense discussion on play in Western countries, the discussion on playful learning in China started out relatively late. It is only gaining popularity among Chinese scholars in recent decades. However, even though playful learning has gained its popularity, limited research discussions on how playful learning was and/or should be used in the new context in China were found. Our literature review found that the conceptualization and the development of play in China and in the Western world are very different due to the unique historical development of the Chinese education system. More recently, with the abandonment of the one-child policy, the concept of play has become more and more popular. However, despite its popularity, plays should be implemented carefully, and implementing play in Chinese classrooms should consider the unique China context. Thus, this paper reviewed how typical plays, construction play, skill-development play, and creative play were implemented in the Western world to provide useful insights for teachers and scholars to adopt characteristics of these plays that deem appropriate and useful in their classrooms.

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The title "ACKNOWLEDGMENTS" should be in all caps and should be placed above the references. The references should be consistent within the article and follow the same style. List all the references with full details.

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