

Teachers and Children's Play: Exploring Practices Through an Analysis of Vygotsky and Piaget Theories

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Abstract

Jean Piaget and Lev Vygotsky remain two of the most influential philosophers in educational practices, especially in the early childhood field. Both theorists share the belief about the importance of play for children's learning and development in early ages. Nevertheless, the two theorists do not share the same perspective regarding adult involvement in children's play. This paper provides a summary of an international review of literatures of current research from different discipline in regard to teaching with a play-based curriculum approach. Studies from Canada, Australia, Hong Kong, and Finland were examined and reflected under Piaget and Vygotsky theories. The views of early childhood stakeholders, such as policy-makers, educators, teachers, and families impact play practices in the early childhood field. In light of Piaget's cognitive development theory and Vygotsky's socio-cultural theory, a reflection on the current play practices in early childhood is considered to support educators and policymakers in rethinking through their decisions and practices regarding the adult role in children's play.

Keywords

Play-based learning, pedagogy, assessments, standards, play and curriculum, Vygotsky and Piaget

1. Introduction

Play-based learning is foundational in the education of young children. While various pedagogical practices are used by teachers in early childhood settings, examining the role of play is integral toward teachers' instruction and children's learning. One point of view is that children lead and control their own learning through play and teachers only prepare the play environment; another point of view is that teachers pursue some control of the children's learning during play.

Nevertheless, there is a current shift toward a more direct-learning or mutual-learning approach in the teachers' pedagogical practices due to the increased demand of academic and standards outcomes. Additionally, political, economic, and international tests, such as, the program of international student assessment [PISA], has a role in this shift in which give teachers a stronger support to lead children's learning and caused play to be passive.

Initially, this paper provides a summary of different qualitative, quantitative, and mixed-methods studies representing an international education field concerning the importance of play-based learning for children's education and development. As well, the role of teachers in play-based learning is examined. Piaget's cognitive theory (1962) and Vygotsky's sociocultural theory (1978) are explored to provide perspective to the differing roles adults use to accommodate children's learning through play.

1.1 Background: Vygotskian and Piagetian Theories

1.1.1 Lev Vygotsky's Sociocultural Theory

Vygotsky's sociocultural theory (1978) is one of the most powerful theories in the field of education due to its influences and implications in teaching and learning. Vygotsky (1978) stated that to understand the psychological analysis of teaching and learning, the relationship between children's development and learning is essential. Developmentally, children are originally considered independent learners, and the learning process children receive is considered as an external factor (Vygotsky, 1978). Bodrova and Leong (2015) said Vygotsky's sociocultural theory is one of the historical human developmental theories in the field due to its complexity in relation to the biological and cultural development created by growing individuals with others' communications and interactions, called Vygotsky's Zone of Proximal Development. Vygotsky (1978) believed that knowledge is constructed by each person through social interactions. "A child at this age is conscious of his relationships with adults, and reacts to them affectively" (Vygotsky, 1967, p. 2).

In his theory, Vygotsky aimed to show the capacity of children's performances when moving from being dependent to independent learners, that is, making children an active agent in their learning process with the assistance of another, possibly their teachers. Teachers use Vygotsky's thinking to apply it to their role in scaffolding children's learning in play by providing the appropriate assistance and withdrawing slowly from children's play to make children complete the task independently. Vygotsky viewed play as a transitional stage where children use their imagination and practice their higher mental functions (Bodrova & Leong, 2015). Additionally, and as Vygotsky believed, play is the leading source for children's learning and development. Hakkarainen and Bredikyte (2008) illustrated the notion of the Zone of Proximal Development (ZPD) described by Vygotsky. The authors state that the child's ZPD is where they move from being dependent to independent, that is, moving from being a dependent learner and through the scaffolding the other/teacher provides, to become an independent. Play in early years supports children's ZPD (Hakkarainen & Bredikyte, 2008).

1.1.2 Jean Piaget's Cognitive Development Theory

Piaget's cognitive theory (1962) is one of the most influential theories in the fields of psychology and education (Huitt & Hummel, 2003). The responses and children's wrong answers grabbed Piaget's attention, in which he assumed that these phenomena have a relation with children's age. Piaget's observations directed his hypothesis about the differences between young children's thinking with that of adults and older children (Ahmad et al., 2016). Cognitive development theory focuses on the changes in relation to the age and with the system of what we already know, and what we will learn while interacting with other factors and behaviors (Joubish & Khurram, 2011). According to Ahmad et al. (2016), Joubish and Khurram (2011), and Huitt and Hummel (2003), Piaget's stages of cognitive development are: sensorimotor (0-2 years), pre-operational (2-7 years), concrete operational (7-11 years), and formal operational (11 years old and older). Each stage represents intrinsic value. However, for the purposes of this review and the age of early childhood children, only two stages will be reflected on:

- 1) Pre-operational/toddler and early childhood (2-7 years): In this stage, intelligence is shown by the performance of symbols, mature language, intuitive thought, inability to reason, development of imagination and memorization, and how thinking is still irreversible and not logically fully developed.

According to Piaget (1967), most children in this stage like to play in a free-play environment where they play and explore independently. Children are able to develop their cognitive thinking by the types of play they perform, such as imaginary play. In this stage, children like to explore, interact, and communicate with their peers. In this type of free play, children could enhance their language and communication skills.

- 2) Concrete operational/elementary and early adolescence (7-11 years): In this stage, intelligence is demonstrated and performed by the logical manipulation of symbols and existing objects (e.g., colors, weight, mass, length, liquid, and etc.), and how thinking is reversible and reasoning thinking is developed.

According to Piaget (1967), the majority of children in this stage are ready for academic learning skills. However, usually children in this stage show a high-level of performance in their play, such as in science, mathematics, language, and more. It is a type of play that makes children play and academically learn simultaneously without adult intervention.

2. International Examination of Literatures Across Disciplines

2.1 Hong Kong

A mixed-methods study titled *Towards Holistic Supporting of Play-Based Learning Implementation in Kindergartens: A Mixed Method Study* by Keung and Cheung (2019) sought to investigate how kindergarten teachers in Hong Kong

perceived the influence of play-based learning on children's learning and development. As the authors illustrated, play-based pedagogy has been viewed as a developmentally appropriate practice in relation to children's whole development, thus it is a promising learning approach. Keung and Cheung (2019) stated that in recent years, educators have widely examined play-based learning. On one side, some believe in the free play on children's development in which teachers play a passive role and only prepare the stage. On the other side, some believe in the teacher-child guided play for children's learning and development in which teachers play an active role and intervene with children's play to extend the learning. Generally, the authors clarified that families, teachers, and decision-makers have a great influence on implementing play-based pedagogy and its leverage on constructing children's learning.

Study. The authors conducted a mixed-methods study for two years (quantitative and qualitative) in 2017-2018 in Hong Kong, including kindergarten teachers. The authors started first with the quantitative method. A questionnaire was conducted with 73 principals with head teachers and 211 teachers with assistant teachers for a total of 286 participants. Then in-depth qualitative interviews were conducted with seven principals, eight head teachers, and 14 teachers for a total of 29 participants. The authors aimed to start with the questionnaire method to collect teachers' conceptions about play-based learning and its effect on children's development, and then the authors did an in-depth interview to collect the teachers' perceptions.

The authors analyzed the quantitative data by using SPSS 23.0 to come up with descriptive results, and used Mplus 8.0 for the reliability test. For the qualitative data analysis, the authors transcribed the interview scripts, read them multiple times, listened to the recording repeatedly, made notes for the essential concepts, identified themes, and reviewed the determined themes.

Findings. The results from the quantitative approach were that school and family culture impacted children's development. Teachers' mediation of their process about play-based learning and school-family culture impacted children's learning and teachers' implementations. The qualitative approach results illustrated that the roles of teachers, schools, and families influence the practices of play-based pedagogy in school settings. Teachers' belief on play for children's learning and development, nevertheless, their practices show less play (Keung & Cheung, 2019).

2.2 Finland

It is known that the way teachers are taught, can influence their future teaching techniques. Past experiences and the quality of educational programs also impact the construct of future teachers. The more pre-service teachers exposed to a variety of learning approaches, the more knowledge should be constructed which could assist them in building and adopting positive learning and teaching strategies when they become in-service teachers.

Play in the School Context? The Perspectives of Finnish Teachers by Hyvonen (2011), the author aimed to explore kindergarten and elementary Finland teachers' perspectives and experiences about play and how they use play in their teaching. In the article, the author illustrated a trend in education concerning teachers' views of play activities that stimulate and provoke children in the school context. Teachers' views and school policies related to teaching through play varied. Indeed, the author illustrated that play provides opportunities for teachers to notice and see what their children need and play helps teachers in learning from the children as well. Also, play provides children opportunities to practice their learning strategies such as reasoning, negotiation skill, problem solving, and feeling like an expert.

In Finland, children aged six are considered to be in preprimary education, that is, kindergarten. In Finland, early childhood educational system is based on learning through play where children play, explore, and imagine as well as learn through stories. Finnish children in basic school (elementary school) start their elementary year at age seven where one teacher teaches almost all the subjects. The national curriculum in Finland supports schools' implementations of creative activities and play. Nevertheless, the author illustrated that even in a successful education, there are some children or students who do not perform well academically. Thus, her study aimed to explore teachers' practices and views of play in teaching and learning.

Study. Hyvonen (2011) used a qualitative approach in her study to investigate teachers' perceptions of using different types of play activities, roles teachers perform during play, and their views about the importance of play in education. She conducted and analyzed in-depth interviews using grounded theory. The study participants were four male teachers and ten female teachers, between twenty-five to fifty-three years of age and who work with kindergarten through fourth grade young children. After gathering data, the author conducted thematic analysis searching for differences and similarities between teachers' answers.

The author used three phases of coding: open coding, axial coding, and selective coding. The author finalized her coding process with eight codes about the types of play driven from the teachers' perspectives. Open coding play types were educational play, cheering play, physical play, pretend play, authentic play, traditional play, free play, and process play. After that, the author conducted axial coding and selective coding, which represented the following teachers'

roles:

Leader: In this role teachers lead the play activity, provide instruction, and children follow. Usually this role seen at physical and educational play.

Allower: In this role teachers be like an observer whom ensure safety and do not intervene unless they are being asked. Usually this role seen at pretend-play.

Afforder: In this role teachers be like a facilitator, motivator, or advisor whom provide learning through play. Usually this role seen at educational play where teachers scaffold and facilitate learning by challenging and questioning children.

Findings. The author concluded the study by clarifying that teachers believe on play and its educational benefits to children learning, however, the most role performed was a play-leader in which teachers have more control and it is more connected to curriculum. Also, teacher educational programs need to enhance teachers' pedagogical practices and views under a theoretical understanding of learning and play. Also, they should discuss the act of play and play in teaching in the teacher education programs to come up with a clear image of the differences as well as the similarities of these two approaches.

2.3 Australia

The Australian study *Play-Based Learning and Intentional Teaching in Early Childhood Contexts* by Thomas et al. (2011) discusses the pre-prep program and how the pre-prep teachers' intervene in children's play and become intentional in their teaching, specifically in teaching mathematics concepts. In Australian education, pre-prep is the level before the formal year of school, referring to kindergarten level (5-year olds). In their investigation, the authors aim to clarify how teacher-directed play and play-based learning can sit together in the Australian early childhood curriculum by exploring teachers' practices and beliefs. The authors sought to clarify teachers' perspectives of play and teaching mathematics concepts through a play-based learning environment. Thomas et al. (2011) mentioned how Vygotsky's sociocultural theory emphasizes the relationships between children and teachers due to its influences on children's learning and development. The active role taken by teachers in children's play, can support children's educational learning goals through their intentional engagement.

Study. The authors conducted their study with two early childhood teachers where they used a post structural perspective to reflect on teachers' construction of being an early childhood teacher. The way teachers talk, think, and act reflects how social, economic, and political stances have impacted them. The authors used conversational interviews and stimulated recalls to collect data. Then the authors transcribed the interview and reviewed the recorded audio with the teachers to give them a chance to review their answers and add to the transcript's content. In addition, the authors later video recorded teachers while facilitating mathematics learning in children's play. The authors transcribed the recorded videos then viewed the videos and listened to the audios with the teachers to identify their actions to their word explanations and their roles during children's play.

Findings. Two themes emerged from the analysis of the gathered data, a pedagogy of play and intentional teaching and play. The authors concluded their study by clarifying that these teachers believed in the benefits of play-based learning for children's learning and development. Also, the teachers acknowledged their active roles in children's play and being intentional in their teaching. For instance, scaffolding, modeling, challenging, cooperating, co-constructing, and more.

2.4 Canada

The increase demand of academic achievement has created a misunderstanding about play, learning, and teaching in early childhood teachers. Many teachers illustrate that standards and assessment have created a dilemma for them in teaching and working with young children through play. A balance could be created in teaching practices in order to align between standards, curriculum, and play. Teachers need to be educated in this pedagogy of teaching academic curricula through play and assessment.

Pyle and DeLuca (2017), in their Canadian study *Assessment in Play-Based Kindergarten Classrooms: An Empirical Study of Teacher Perspectives and Practices*, sought to describe the current trend in early childhood education to change the play-based kindergarten teaching approach. Currently, there is an increased demand on teachers to integrate assessments in their teaching practices to promote academic learning more than ever before. The authors explore the approaches kindergarten teachers take in assessing play-based learning in kindergarten and examined how these assessments differ depending on how they perceive the purpose of play in learning. Indeed, the authors mention how the kindergarten level is now included with elementary school levels. This change demands that an appropriate assessment be developed in academic learning in relation to these levels of moving from kindergarten to first grade.

The authors also mentioned the possible negative impact in which some assessments or standards could affect children or student learning, meaning that the over use of instructional implementations could be leverage to children learning more than the curriculum standards. Hence, the requirement for proper educational implementations, which are developmentally appropriate for young children, is much needed.

Study. In their empirical study conducted in Ontario, Canada, Pyle & DeLuca (2017) gathered data from kindergarten teachers using electronic surveys, observations, and in-depth interviews. The survey was conducted with 67 teachers to discover their approaches within the standards in a play-based learning context. Classroom observations and interviews were conducted with 10 teachers to capture the assessment implementations in a play-based pedagogy context.

The authors analyzed the data, the survey questions, and the interview questions all together by implementing a qualitative content analysis. They established three categories: the academic approach, social-emotional approach, and blended approach. Furthermore, the observation data were analyzed by an open-coding process to provide evidence on the practices of the teachers' assessments within the pedagogy of play-based learning (Pyle & DeLuca, 2017).

Findings. The authors concluded their study by illustrating the challenges kindergarten teachers encounter with integrating assessments with play to meet and target academic learning. The results also reported that teachers have a misconception in their perspectives about the goal of play and what they can do to assist during the play.

2.5 Canada

Pyle and Bigelow (2015), in their research *Play in Kindergarten: An Interview and Observational Study in Three Canadian Classrooms* explored the contemporary discussion about play-based pedagogy in early childhood education. The authors state that much research has been conducted on the benefit of free play for children's social, emotional, and physical development where children play freely and construct their own benefits with less teacher intervention. This position was compared to the play where teachers have more involvement in children's play, targeting their academic learning more and by asking high-level questions in relation to their academic learning. In this type of play, teachers are guiding the play and trying to balance play with the standards.

Study. In this paper, the authors investigate the role of the play-based learning approach by three Canadian kindergarten teachers, how they performed and perceived play and its purpose, and the roles they played in children's play. The authors conducted the study during four months in 2012 in one Canadian public school, with three kindergarten teachers in three different classrooms. The authors completed 70 hours of observations and interviews in each classroom, and also collected field notes, photographs, and recorded video. 60-minute interviews with each teacher were completed to capture their perspectives about the goal of play and the integration of play in their school.

The authors analyzed the observation data through constructing an individual narrative for each teacher. Additionally, they analyzed the interviews using the inductive methods approach where they did coding, categorized the codes, and then developed themes. The themes were: purposes of play, enactments of play, and educational purposes (Pyle & Bigelow, 2015).

Findings. The results from the study, as the authors reported, showed that teachers were anxious about facing the challenges in balancing between academic learning, play, and developmentally appropriate practices. These challenges came from the increased demand of academic achievement over the play approach. Moreover, the authors noted more studies are needed in relation to the approach of play-based learning in which it is an approach that promotes children's academic learning, social-emotional, and physical competencies simultaneously.

Early childhood stakeholders, such as policymakers, families, and school systems impact early childhood teachers' pedagogical practices about play-based learning. Decision-makers put much emphasis on the academic achievement and standards. In addition, understanding of play-based learning has also affected the thoughts about of play in children's learning and development. Usually, parents want their children to learn academically, thinking that play might not promote academic learning. This misconception from parents impacts early childhood teachers' implementations of play due to parental demands.

3. Summary

In relation to the above studies extensively examined and summarized in this paper, and due to their goals, methodologies, and findings, Piaget's cognitive development theory considered a well-fitted theory in relation to the topic of play-based learning and teachers' pedagogy. Piaget's theory has been widely used in supporting children's free-play, learning, and development. Analyzing the results of the above studies under Piaget's theory, and in which they overlap to each other, strengthens and support children's free play and development, and teachers' passive role in children's play. As indicated by Piaget regarding play: "Children should be able to do their own experimenting and their own research. Teachers, of course, can guide them by providing appropriate materials, but the essential thing is that in order

for a child to understand something, he must construct it himself, he must re-invent it. Every time we teach a child something, we keep him from re-inventing it for himself. On the other hand, that which we allow him to discover by himself will remain with him visibly, for the rest of his life” (in Piets, 1972, p. 27). As well, Piaget (1962) perceived play as "play has always been considered, in traditional education, as a kind of mental waste-matter, or at least as a pseudo-activity, without functional significance, and even harmful to children, keeping them from their homework” (p. 6).

Play-based pedagogy has been extensively examined and argued in the field of early childhood education. Many educators question the teachers’ role in children’s play in terms of how much they should intervene. Piaget supported teachers’ passive role in children’s play. Play, from Piaget’s point of view, should be free of adult intervention and children should construct their own learning based on their own stage. Therefore, Piaget’s stages of development could assist teachers in their role in how they prepare the play activities for children without intervention. Teachers transfer the knowledge to the children, build on it, and extend on their prior knowledge through only preparing the play activities, thus allowing children to freely construct their learning. In Piaget’s theory, teachers play the role of stage manager where they only prepare the play for the children and do not intervene in the play. Teacher educators and policy makers need to know and understand children’s stages of development and the nature of their growth in the context of their learning success (Joubish & Khurram, 2011). Piaget’s theory supports educators who believe in free play.

On the other side, and as well, based on the examined studies mentioned earlier, Vygotsky’s theoretical approach is also considered another well-fitted theory in the area of play-based learning and teachers’ pedagogical practices. In this view, teachers need to understand children’s ZPD to be able to provide the proper scaffolding during the play. Children are naturally scientists, like to explore, have wide imaginations, can move beyond the play, can perform high-task orders, and more. Teachers and educators who understand child development, what children can do independently and what children can do with assistance of their teachers, would support building a curriculum in the context of play. In this age, children learn through play, thus understanding and knowing children’s abilities and extending on children’s prior knowledge can be reached under Vygotsky’s sociocultural theoretical lens.

The above studies support teacher-child interaction in a play-based learning context which Vygotsky supports. Additionally, despite all the various views and results about the amount of teachers’ involvement in children’s play, children’s ZPD should be understood by all: teachers, teacher educators, policy makers, curriculum designers, and families. Moreover, what teachers believe about children’s play and the learning that occurs during play could be reflected in their teaching facilitations. Teachers must be aware of themselves while facilitating the children’s learning, knowing when they should intervene and when to withdraw. In addition, teachers should be aware of the language they use with children while supporting their play; a language that challenges and provokes children’s curiosity in their own ZPD should be used.

3.1 Implications and Conclusion

In sum, the field of early childhood education is currently in a situation where enormous changes are occurring. Policy makers need to consider child developmental theories in their decisions of reconceptualizing young children’s learning and not disregard them. The teacher’s role has also been a long-term debate among educators is also affected by the policy makers’ decisions. Teaching pedagogy needs to be constructed in relation to teachers’ teaching and children’s learning. Mutual play could be a possible solution where teachers and children play together, construct learning, and most important, teachers ensure that children reach their learning objectives in a play-based learning environment. In mutual play, children still have control on their play as well as teachers have an educational input.

Piaget’s cognitive development theory and Vygotsky’s sociocultural theory can assist the reform or the building of educational programs. University undergraduate programs highly use these two theories in preparing preservice teachers. Understanding these two theories is important for the choices future teachers will make in considering protecting children’s free play or using play as a tool for external objectives. Nevertheless, preservice teachers, besides studying theories, need to see these theories in real settings as performed by in-service teachers. This step could assist with understanding children’s learning and development from a Piaget and Vygotsky point of view, the difference between free play and guided play, and the ways in which each theory supports play differently. Preservice teachers may need to personally decide which view they will embrace for their own classrooms. Play is the language of children’s learning and their expression of needs. Play is essential for children’s learning and development, and the reviewed studies illustrate the importance of play in early childhood education.

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