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Education: Words and Meanings
Exploring Piaget and Vygotsky: Two sides of the Same Coin

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The Words and Meanings: Piaget and Vygotsky

The words, thus the names of *Piaget* and *Vygotsky,* elicit strong beliefs, impressions, and thoughts regarding two men who have greatly influenced educators in their understandings of child development as well as impacting educational practices. Interestingly, both were born the same year, 1896. Piaget (1896-1980), was born in Switzerland and lived 84 years, whereas Vygotsky (1896-1934) was born in Russia and lived 37 years. Both were creative and important thinkers in the realm of understanding child development. The individuals, Piaget and Vygotsky, brought meaning to understanding how children cognitively develop.

Piaget developed the constructivist theory which describes how children build or construct their own knowledge based on their own experiences with the world and with people. Piaget (1962) outlined a theory of children's intellectual development which is listed as four stages of cognitive development: sensorimotor (birth – 2 years), preoperational (2-7 years), concrete operational (7-11 years) and formal operational (11-15). Piaget noted how these patterns for thinking varied by ages: Sensorimotor and preoperational were prelogical stages, and concrete operational and formal operational were logical stages (Labinowicz, 1985). Piaget proposed that all children go through stages of intellectual development in the same sequence, but every child is unique in his/her rate of development, therefore there are differences in children's time and speed of development.

Piaget presents children's learning as a 'constructing' process, which is a process of 'adaptation' (Johnson et al., 1999; Labinowicz, 1985; Piaget, 1952, 1962). Accordingly, a child's learning is an *adaptation* in the learning process which the child balances between complementary processes of *assimilation* and *accommodation* (Johnson et al., 1999). In assimilation, the child takes in new information from the real world and may change or 'bend' reality to fit his/her own understanding or cognitive structures; the accommodation process is the child changing, modifying, or conforming his/her cognitive structures to what he/she has observed in the real

world (Piaget 1962). As Labinowicz (1985) notes regarding Piaget's view of cognitive development, "Rather than passively copying knowledge that exists 'out there,' we actively construct our knowledge of the world internally through continuous interaction with the environment" (p. 5). The construction of knowledge is personal, a person's own interpretation and understanding as he/she constructs and reorganizes his/her thoughts (Piaget & Inhelder, 1971).

Piaget's stages of cognitive development are aligned with children's play. Piaget asserts that not only does play reflect a child's cognitive development level, but play also contributes to the child's development (Johnson et al., 1999). Children *practice* through symbolic play the assimilative process to use objects to stand for other objects, a process of abstract or representational thought (Pellegrini, 1985; Piaget & Inhelder, 1971; Stone & Burriss, 2016; Stone & Stone, 2015). According to Piaget, play is an important factor in children 'practicing' and 'consolidating' new skills or understandings.

Vygotsky (1976) also believes that play has a critical role in a child's cognitive development. Particularly, Vygotsky considers symbolic play a crucial and essential role in a child's development of abstract thought. Stone & Burriss (2016) note how "symbolic play initiates the development of representational thought" (p. 60). Young children are not born with the ability to symbolize; this means they are unable to hold thoughts and the meanings of objects within their minds. Symbolic play facilitates a child to gradually represent objects and events in his/her mind. For example, a child can represent a car in his/her mind by using a block during play. The block becomes a 'symbol' for the car (Stone & Burriss, 2016; Stone & Stone, 2015). As Stone & Stone (2015) note, "the key importance of representational thought is that the child is now able to represent objects and events symbolically in his or her mind" (p. 4). The child's brain is developing *abstract thought* through the process of symbolic play.

Both Vygotsky and Piaget consider how children engage in the *personal* process of developing abstract thought through play. However, Vygotsky (1976) expands and explains the process by offering a more in depth understanding of what is happening within the child during the accommodation process.

Vygotsky suggests that abstract thought cannot occur in a child's early years because the child must have sight of a horse to think about a horse, because meaning and objects are fused together (Johnson et al., 1999; Vygotsky, 1976). However, engaging in make-believe play, the child is able to use objects to stand for other things such as a stick can now stand for a horse. This process supports the child in separating meaning from the object. Vygotsky sees the stick as a substitute object for the horse, "separating the meaning of 'horse' from the horse itself" (Johnson et al., 1999, p. 10).

The commonalities between Piaget and Vygotsky are complementary in their understanding of how children develop cognitively. Both see the child as an active participant in the process of making sense of the world. Both see play and symbolic play as critically important for a child's cognitive development. Making sense of the world would be impossible without symbolic representation with or without language. Symbolic play is essential for a child to develop cognitively for without symbolic play a child would be limited to the sensorimotor stage of

Piaget's cognitive development organization. Without symbolic play, a child would be limited to simply interacting with objects, but would not be able to use objects as symbols to stand for other things such as a block for a car, or a piece of toast, or a house, or a stick standing for a horse. Vygotsky, thus, expands on Piaget's important understanding of how children develop cognitively by developing a framework for children's development of abstract thought through symbolic play.

Piaget and Vygotsky also agree on how language plays an important role as a medium for children to make sense, not only to one's self but to others as well (Bohannon & Warren-Leubecker, 1989; Stone & Burriss, 2016). Language is a symbolic system for representing one's thoughts, ideas, and intentions. As Stone and Burriss (2016) note, "Cognitively, the knowledge is not in the symbols, but rather the knowledge capacity produces the symbols. Symbolic representation through symbolic play, is the enabling factor for language to represent objects and actions" (p. 64).

Symbolism beyond language progresses, according to Vygotsky, from first-order symbolism through play and drawings, which then leads to second-order symbolism in writing (Dyson, 1983, 1990; Stone & Burriss, 2016; Vygotsky, 1976). As Schrader (1990) explains, one can see the "process of development of written language as one which leads from oral language through symbolic play to written language (p. 81). As Piaget (1962) emphasizes, play is the means, the primary vehicle, for thought within the child. The role of symbolic play cannot be disregarded; it is the action that "paves the way for representational thought" (Stone & Burriss, 2016, p. 64).

From Piaget's perspective, children acquire meaning from their *sensorimotor* interactions with the environment where the meaning of the object or event is bonded with the object/event through the process of assimilation. As children play, understanding through *accommodation* eventually proceeds. Play, particularly symbolic play, provides the opportunities for children to go through these stages of representational development which is the essential precursor for children to develop not only language, but literacy (Stone & Stone, 2015). Children are learning how to 'think' within the process of playing.

Another important contribution by Vygotsky is his expansion of Piaget's inclusion of 'others' as part of the child constructing or building his/her knowledge of the world through active participation in the world and with others (Stone & Burriss, 2019). Vygotsky (1978) puts forward his social learning theory called the *Zone of Proximal Development*. In this theory, Vygotsky explores how adults and more capable peers can enhance a child's level of potential development, especially, in the case where children learn from other children who differ in ability as one sees in mixed-age groupings (Feldman & Gray, 1999).

Vygotsky described this process as a space like a "bud" or "flower" that eventually develops into fruit and likened this process to the space or zone where a child's learning is in this "embryonic state" that can be nurtured or enhanced by other such as adults or more capable peers (Vygotsky, 1978, p. 86). For example, in mixed-age social interactions such as in play, "expert children can encourage novice children to use more sophisticated approaches to tasks through the process of scaffolding" (Stone & Burriss, 2019). Capitalizing on Piaget's "with others" understanding of cognitive development, Vygotsky provides a framework for how children, particularly mixed-

age children, provide a social context, where expert children provide prompts, such as advanced solutions and leading questions, to novice children which cause novice children to think and, in the thinking, to defend or alter their own understandings (Gray & Feldman, 2004; Katz et al., 1993). As Stone (2004) notes, "The process of constructing knowledge of the world is not done in isolation but rather within a social context" and the child as a social being when interacting with expert and novice children has a natural framework for interpreting experiences (p. 15).

Both Piaget (1962) and Vygotsky (1976) understand that play, and play with other children, provides all children the social dynamics for each child to develop cognitively, not to mention the social and emotional learning as well. Piaget emphasizes how for a child to gain *understanding*, the child must construct the *understanding* himself/herself. In doing so, what he/she discovers will stay with the child for a lifetime (Piaget, 1950). As a child interacts with the environment *and people*, the child constructs his/her own knowledge of the world. Piaget emphasizes how no one can give knowledge to the child, rather, the child must construct it for himself/herself and this construction is personal and unique (Stone, 2004).

Vygotsky (1976) does not disagree with Piaget's views, but simply adds more concrete description to how children construct their own knowledge when socially interacting *with others*. Learning, construction of knowledge, can be enhanced, particularly with mixed-age children (experts and novices), as the range of possible enhancement is more in line with where novice children are understanding (Stone & Burriss, 2019). Scaffolding learning within Vygotsky's 'zone of proximal development' in mixed-age groupings is a naturally occurring temporary framework or support. As Gray (2013) describes in "mixed-age play, where abilities differ considerably, scaffolding occurs continuously and naturally, often unconsciously, as a way of pulling the younger children up to a level that makes the game fun for all" (p. 186).

Johnson et al. (1999) share how "research on play and cognitive development in the 1970s and 1980s was quantitative in nature and influenced by Piagetian theory (linear and analytical) . . . and tend to emphasize child's play and other symbolic behaviors independent of the social context. In the 1990s, there has been a trend toward qualitative research, inspired by Vygotsky's sociocultural theory (interactive and holistic)" (p. 29). Thus, Vygotsky explored the *social* component of children's interactions on cognition during play. He saw the importance of an *interpersonal* scope for cognitive development stimulated during the *Zone of Proximal Development* as children socially interact with each other. The *interpersonal* experiences advance the *intrapersonal* where the child's personal thinking is set in motion (Johnson et al., 1999; Johnson et al., 2005). The *Zone of Proximal Development* is created when children are engaged in experiences whether with adults or children that they normally would not do on their own. Play with others affords children with many opportunities for the *Zone of Proximal Development* to unfold.

Vygotsky provides a setting during play where children engage socially with others in interpersonal experiences which can advance the process of personal thinking. Hence, a child's construction of knowledge is initiated in personal interaction with the world and *with people*, as understood by both Piaget and Vygotsky.

Play sets the stage, a condition for learning to occur, according to Piaget. For Vygotsky, play also provides a natural context for children to socially scaffold learning for each other. Piaget and Vygotsky complement each other in their understanding of how children think and learn.

In essence, both Vygotsky and Piaget are constructivists (Jaramillo, 1996). Piaget sees the value of both the individual learning from his/her interaction with the environment and with people, whereas Vygotsky, while embracing experiential learning, focuses on the nature of learning in the *Zone of Proximal Development* with others in a social setting such as when children play together to "socially negotiate meaning" (Jaramillo, 1996, p. 136).

Conclusion

Both Piaget and Vygotsky pursued an understanding of child development; both valued children's play as contributing to this process. Piaget focused more for understanding what the child is cognitively thinking inside and how that thinking develops, while Vygotsky focused more on the nature of social engagement for what is happening cognitively inside the child and how others contribute to that inward process. Although Piaget acknowledges that children pull from the environment and from others, both Piaget and Vygotsky would agree about the importance for children to engage actively within a rich environment and with a diverse grouping of children and others which will provide the productive environment for them to actively construct their own knowledge – direct experiences with the real world and with people. Together they are a powerful team for understanding the learning that takes place in a child's personal, cognitive development -two sides of the same coin, so to speak. Piaget and Vygotsky constructed two influential theories which provide an extensive foundation for educators to create enriched, enhanced, and social environments for children's dynamic, productive learning.

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