

**Appropriate school starting age:
A focus on the cognitive and social development of a child**

Mahwish Ali Baber
Independent Researcher
mahwish_baber@yahoo.com

Abstract

The early years are the most important in the emotional, social, physical and cognitive development of a child.. A child's early experiences have an immense impact on the development of his/her physical, emotional and cognitive skills. Therefore, it is very important to understand the kind of environment children need in the early years for their healthy development and also to understand when it is appropriate to begin their schooling in order to optimize their social, cognitive and emotional well-being. It is observed that the number of formal pre-schools have increased drastically in the past few years. Children between the ages of one to five are attending these pre-schools. This paper attempts to look into the various researches conducted to find out how early childhood experiences affect children; how their emotional and cognitive development occurs; and most importantly, whether or not starting school at an age earlier than seven years, benefits their academic achievement in the long run. The findings of the various researches indicate that children in the early years need to spend time in free play rather than in structured and scheduled school environments. This will also help them in their future academic success. Thus, starting school earlier than seven years of age is not beneficial socially or academically in the long run.

Keywords: Academic performance, cognitive development theory, early childhood education

Introduction

To start formal school at an age as early as 1.8 or 1.10 years has become a generally accepted trend in Pakistan. This trend not only robs the children of their fundamental right to spend time in free play, but also takes away from them a wonderful opportunity to develop cognitively, socially, physically and emotionally in an anxiety-free environment. However, starting school early seems to be popular among parents globally and is not restricted to Pakistan alone. A survey of parents who moved their children from pre-school playgroups to school at four, found that most were happy with this decision (Blake, 2000). However, Jean Piaget in his developmental theory, gives distinct stages of cognitive development in children and emphasizes that these stages are mostly universal across all cultures. According to Piaget's stages of cognitive development, the thinking process of a child goes through different transitions from birth to eleven years of age. Therefore, children do not have the ability to understand certain things, in a certain way, before a certain age.

Another important factor in the cognitive development of children is thought to be play. Experts believe that play is the foundation for future academic success (Lockhart, 2010). Therefore, it seems logical that children need to spend more time in play before they begin their formal schooling. Nonetheless, critics of starting school late argue that playful activities are incorporated in early childhood school lessons and these are beneficial for children's cognitive development. The Early Childhood (ECD) and Montessori model of schooling for children are examples of playful learning. However, experts define play as being child-initiated and child-directed.

Ouellette (2007) refers to play as "activity that is unencumbered by adult direction and does not depend on manufactured items or rules imposed by someone other than the kids themselves"(p. 13). Schools offering playful activities also teach literacy and numeracy lessons and research suggests that when children are burdened with literacy and numeracy lessons at a tender age, they lose their love for learning hence most countries in the world favor a school starting age of six (Bertram, 2002).

It is observed that when children are involved in self-directed play, they feel confident in their abilities and are willing to try again even if they fail. Such skills are highly important for their future success though they are not found to be taught in formal classrooms. There is no doubt in the importance of formal schooling to gain knowledge; however, it seems probable that starting school at an age earlier than seven years may not give the child any academic benefit in the long run.

As discussed by Gray (2011), there are several studies that show the adverse effects of formal early childhood schooling on mental and emotional well-being of children. These studies suggest that the increasing stress, mental and emotional health problems in children are directly related to the loss of playful activities and increased academic pressures in early childhood.

Various researches have been carried out internationally to find out whether there is a difference in the academic performance of early and late school starters in higher grades. Many researchers have examined the effects of playful activities on a child's cognitive development. These researches are reviewed in this paper to search

for evidence to support or reject the notion of starting school at seven years of age.

Jean Piaget's Theory of cognitive development

Piaget (1936) gave the theory of cognitive development, describing the nature and the developmental process of human intelligence. According to Piaget, a person's early childhood plays a significant role in his/her development. He believed that cognitive development takes place primarily as a result of biological maturation as well as environmental factors (McLeod, 2015). In his theory, also called developmental stage theory, Piaget explains how humans acquire, construct and make use of knowledge in a step by step process. Piaget proposed four distinct stages of cognitive development in humans; the sensorimotor, preoperational, concrete operational and formal operational period. He defines the first stage that is the sensorimotor stage to be extending from birth to two years of age when a child acquires language. In this stage, a child moves from simple reflexes to internalization of schemas. Next comes the pre-occupational stage which is from two years to seven years of age. According to Piaget, this is the stage where a child involves in playing and pretending. In this stage, children cannot understand concrete logic and cannot manipulate information either (McLeod, 2015). It is in the third stage that is the concrete operational stage where children's thought processes become more mature and they can make appropriate use of logic. This stage is between seven to eleven years. Therefore, every stage has its own developmental needs and expected outcomes (McLeod, 2015).

Atherton (2016) supports and reinforces Piaget's stages of development. He states that Piaget's particular interest was in the role of maturation (growing up) in children's ability to

understand the world: they cannot perform certain tasks till they are psychologically mature enough to do so. If we apply Piaget's developmental theories to the preschoolers today, they would fall in the second stage that is the pre-occupational stage. Since Piaget suggests that at this stage, children are neither capable of understanding concrete logic nor are they able to comprehend other people's viewpoints (Atherton, 2016), the question then arises whether the pre-schoolers exposed to literacy and numeracy lessons would really be comprehending these lessons fully and if so, would such early exposure really give them any academic or developmental benefit in later years.

Play and cognitive development

It is a common observation that whenever children are free, they tend to play. It not only comes naturally to them, but also seems to be their fundamental need. Young people fail to develop the emotional skills required for healthy psychological development if they do not spend time in play in the early years (Gray, 2011). Play is crucial for the cognitive, social, physical and emotional well-being of children and adolescents (Ginsburg, 2007).

Research suggests that child-initiated play, as opposed to school or adult-directed play enhances the language and literacy skill development in children due to the many opportunities to practice language in play. Such play that is rich in language enhances the development of higher mental functions (Bodrova, 2007). Four types of child-initiated play have been identified by developmental psychologists; dramatic play (pretending situations, role play), constructive play (making things), exploratory play (discovering various properties of things) and the play with rules that older

children involve themselves in (Lockhart, 2010). When children engage in dramatic play, they develop the cognitive skills of executive function which include recall, controlling emotions and internalizing language etc (Lockhart, 2010). Constructive play develops inquiry skills and concept building in children (Drew, Christie, Johnson, Meckley, & Nell, 2008); likewise, exploratory play also helps in cognitive development especially in creativity, problem-solving and basic math and technology skills (White, 2013).

When children engage in play, they are involved in developing new skills and making use of those newly acquired skills, practicing language, collaborating and making friends. They also learn to regulate their emotions and behave as the situation demands. Therefore, it is very important that young children spend a significant part of their day in play (Copple & Bredekamp, 2009).

Experts believe that for a child's cognitive development, the time spent on the playground is more important than the time spent in the classroom. According to Pellis (2007), play changes the neural connections in the brain which in turn help to wire up the executive control center of the brain. The executive control center is responsible for making plans, regulating emotions and solving problems. Therefore, play prepares a young child for life, love and school work as well (Pellis & Pellis, 2007).

Thus, it is evident that children in the early years need to be provided with a structure free environment; an environment where they are free to play whenever and however they like to, as opposed to being sent to school, even if it incorporates playful activities. This is necessary not only for their emotional stability in future but also for the cognitive development necessary for their future academic endeavors.

Academic performance and early schooling

A research was carried out by Suggate, Schaughency, and Reese (2013) in which two samples of English speaking adolescents from New Zealand were studied to find out whether the later reading ability of children who learnt to read earlier differed from those who learnt to read later. Children who started formal learning to read at age five and those who started at seven were selected. In the first study, the first six school years of three groups were examined across a two year design. This analysis included the parental income and their education, classroom environment, school-community affluence, home environment, age and self-percept. The earlier Reading Instruction Age (RIA) group in the beginning years had superior reading ability, word, non-word and passage reading, but later on, this superiority in reading skill disappeared by age eleven. In the second study, the fluency in reading, comprehension and the decoding ability of an additional 83 students were compared. Both groups displayed similar reading fluency however, the later RIA group generally showed superior reading comprehension but this difference in reading skill disappeared by age 11. In the second study, the fluency in reading, comprehension and the decoding ability of an additional 83 students were compared. Both groups displayed similar reading fluency however, the later RIA group generally showed superior reading comprehension. (Suggate, Schaughency, & Reese, 2013, p. 33)

According to Benezet (1936), early introduction of math lessons hampers the child's reasoning facilities and separates the concept of numbers and arithmetic from common sense. Benezet believed that if arithmetic was taught later on, children would

develop a much better understanding and would be able to apply these concepts to real life situations. However, some studies suggest that children from the underprivileged families benefit from early childhood education programs. In several studies done on people living in poverty, it was found that the group of people who had attended the early childhood program had a considerably higher school graduation rate than those who had not attended the program (Fuerst & Fuerst, 1993).

According to Katz (2010), early formal instructions may seem to be beneficial at first, in terms of the test results, but in the long term, studies show that such children do not have any advantage; in fact, in case of boys, early formal instructions not only distance them from the objectives of school but also make them drop out at least mentally if not physically. (Katz, 2010)

Hence, from the various studies carried out, it may be suggested that early schooling hampers the development of comprehension and reasoning ability in children. It builds a passive attitude towards studies and demotivates the students later on. However, it may give children from the under-privileged areas the required motivation and confidence boost for the school years ahead.

Conclusion

Keeping in mind all the above mentioned studies, certain references can be made regarding how the early years of childhood should be spent and how this is related to children's future academic success. First, it can safely be stated that Piaget's stages of cognitive development suggest that trying to teach children something, like literacy or numeracy, before they are cognitively ready to learn

it, would not benefit them in any way, academically or otherwise. These skills will be acquired by children easily and much more comprehensively if taught at the right developmental time. Moreover, children in the early years need to spend time in free play rather than in structured and scheduled playful activities at school. This will also help them in their future academic success.

Thus, research evidence suggests that starting school earlier than seven years of age is not beneficial academically in the long run. However, in case of children coming from underprivileged families, early years education may be directly related to their future academic success initially and later on indirectly, in terms of providing children the necessary confidence for the continuation of their education.

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