

The impact of Classroom Activity in Enhancing Working Memory Development in Preschoolers

Nouf M. Alhakami
University of Dayton

Introduction

Working Memory develops during toddlerhood and continues through adolescence and early adulthood. The primary factors determining the level of brain development in pediatrics are genetics and the environment (Basset, Denham, Wyatt, & Warren-Khot, 2012). Although the genetic factor cannot be manipulated, research shows that the environmental component can be substantially changed (Lillard, 2012). The environment involves the interactions that a child is exposed to. Such research suggests that the children who exhibit delayed in the level of working memory could be helped with adequate ways of specialized training. The proficiency of working memory is dictated by how fast and efficient information travels between different areas of the brain. How well a child performs academically, socially, and emotionally is defined by the working memory level he or she has (NSCDC, n.d.).

The study will focus on how classroom activities will benefit preschoolers' social and working memory development. According to a working paper of Building the Brain's Air Traffic Control System, "Large individual differences in working memory at kindergarten entry can have important implications for children's adjustment and success in and out of school as well as in their relationships with others". Scientists have emphasized the importance of social domain; playing and activities with peers or adults can be an effective practice for improving children's brain development.

The significance of children's interacting in preschool groups is to carry out prosocial behaviors in the social development (Evangelou, 1989). Preschool group's interaction among young children can have several advantages for preschoolers' critical development, such as offering instruction, involving in collaboration activities, promoting socialization, and being aware of peers' roles in different social positions (Evangelou, 1989). Preschool classrooms increase social development in order to improve working memory in preschoolers.

Since these brain faculties develop from early childhood to post-puberty, it is arguably true that older children have better working memory skills compared to younger ones. The research question: Is classroom activities helpful for preschoolers' social and working memory development?

Literature Review

Classroom activity in Preschoolers

Classroom activities among preschools implies that young children and toddlers are put together when undergoing their daily activities in daycare. The children are of various ages, for instance, a few-months-old babies through preschool children aged five. The grouping can be done in a classroom environment or playroom as exemplified by Youhne's study. The children are different, but the teachers always keep a close look on them to avoid any possible mishap. The different activities among the preschoolers is thought to confer an advantage to the younger children as far as working memory skills development is concerned. The positive aspect of grouping children with different ages emphasizes what happens in the human evolutionary process. According to the author, the birth of a child only occurred once in four seasons in the past few centuries. Also, the observation that babies who have siblings tend to achieve the developmental milestones earlier than those who do not have them strongly supports the theory that improves the development of working memory development for younger children.

Also, it resulted in the chronical grading of students' learning institutions. Infact, the evolutionary brain wiring of young children learning from their older counterparts was disrupted. The disruption of this natural selectivity mechanism is a major contributor to the fact that the brain skills of children now is slower compared to the past (Gray, 2011).

Researchers, teachers, parents, and children were mixed in the classroom and the playground. An additional two groups of similar age groups were selected as control groups. The teachers collected the data and analyzed the results. The researchers also discussed and then analyzed the collected data. The conclusions were that mixed grouping of preschool children conferred younger ones an advantage of enhanced development of their working memory.

Classroom activities enable the younger children to engage in direct activities that they would not do alone or with their age mates. As a result, they acquire skills faster when with older children. As far as the emotional aspect among the children is concerned, classroom activities provide the younger children with emotional support as exemplified by the class in which older children shook the toys and gave them to the young ones to comfort them when they cried.

Social Development for Children

Any species must learn how to interact with the environment for it to harmoniously coexist with the members of his or her species. Babies and young children are no different. The social development is learned from either adults or older children. Young children at various ages learn from their parents or caretakers the essential means of communication. For instance, a baby learns to smile or coo when it is happy and to cry when angry. As the child achieves the milestones of language, she or he learns to communicate his or her satisfaction or disappointment explicitly rather than generally crying or smiling. The environment that is, the people and the material things surrounding him or her significantly influence the pace at which a baby develops socially. Therefore, a stimulating environment fastens social development while a child who is socially deprived exhibits a slower pace in this aspect of growth (NSCDC, n.d.).

Although the capacity to develop essential social skills begins in childhood, it continues through early adulthood. Therefore, social development pace is directly proportional to the age of an individual if other factors are kept constant. After the first year of life, a child acquires these basic social survival mechanisms. At the age of four, the skills develop further enabling a child to follow rules of role play (Lillard, 2012). However, how well a child is able to concentrate during social interactions is determined by the frequency in which he or she gets exposure so such exchanges.

Since social interaction is one of the key factors driving the development of working function capacity, a child with adequate interaction is more likely to control their impulses by respecting adult's rules. Children with proper social interaction are capable of avoiding distractions, which increases their concentration span.

Studies show that children who were exposed to adverse early conditions such as abuse or neglect demonstrated impaired working memory skills. As a result, these children show diminished memory capacity, reduced ability to consciously suppress negative urges and poor concentration ability (Ghassabian et al., 2014). Including the school, home, and socioeconomic status affect a child's ability to develop working memory skills. For example, children from lower socioeconomic backgrounds show poor development of brain skills compared to those from well-to-do families. Such research results further support the importance of social environment in the development of a child's brain.

Scientific studies have disproved some misconceptions about the development of a child's working memory. Research shows such children are not being unruly but have a problem with development. Early identification of problems can support children development there working memory.

Working memory for preschoolers is influenced by many factors such as social and physical environments as well as genetics. Research shows that the three aspects of development skills. Can be enhanced when the child is still young and the brain circuits are still developing. Studies show that classrooms activity and playgrounds in preschool children can improve the working memory development.

Research Methodology

Based on the literature review, the author will conduct this research on a significant question: Is classroom activities helpful for preschoolers' social and working memory development? A case study research methodology will be employed to gain insight into the effects of learning activities development. The social interaction between children will reflect preschoolers' working memory requiring understanding a relative relationship between these domains.

Observations will be scheduled to see how children communicate in the classrooms with peers. The study will involve observations of preschool in classrooms with a focus on young children to five years old. The structured observation will be used to record examples of children who are engaging in communication and indirect play. Observations will take place on 6 different days over a period of month.

Setting:

The intended audience for this research is teachers and curriculum leaders who wish to develop curriculum that supports brain development skills. The children will be in rich activities that have abilities and skills of preschoolers' levels. The setting is the Preschool Learning Center, which is a university-based childcare school.

Data:

The Early Learning Assessment will be scheduled observations, with written notes, audio and video recording. Percentages and examples of children working memory domain development will be compared, and graphs will be developed to show the relationship.

Limitations of the study:

Because of the small size of the classroom group, the identified observation domains may be limited. Also, it may be possible that children have other factors that affect the study results because the author will have only known them for a short period of time.

Results:

The study provide a better understanding of the positive relationship between classroom activities, and the effective of those practices on the opportunities for children to engage in working memory development by 75% increased than children who are not explore to effective classroom activities.

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