

Effects of Types of Board Games on Spatial Abilities and Social Skills of Young Children

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Abstract

This study examined the differences in spatial abilities and social skills of young children using two different types of board games. Subjects consisted of 57 four year old children and 60 five year old children. Fifty eight were assigned to strategy-based board games, and 59 were assigned to chance-based board games. The same type of board game was given to each group. Each child played the board game 30 times. The results show that strategy-based board games have positive effects on spatial abilities, as well as on social skills in young children; there are age differences but no gender differences in both abilities. The findings of this study suggest that the spatial ability and social skills of young children can be increased using strategy-based games. This study proposes that early childhood educators need to consider the use of chance-based board games with a dice and spinner in preschool settings.

The board game is a type of game all adults and young children have been enjoying since prehistoric times. An Egyptian wall painting in a tomb dated as early as 2500 B.C. shows evidence of the use of board games (Campbell, Campbell, & Dickinson, 1999). Traditional board games, such as dominoes, chess, go, and checkers, have long histories and have been popular for generations. These types of cooperative games evolved when there was a need for people to band together for survival, whereas competitive games

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emerged in societies that emphasized dominance over others as a means of survival (Casbergue & Kieff, 1998).

In addition to focusing on the enjoyment and functional uses of board games, theorists and educators have focused on the possible role in children's development and learning. Early childhood educators began to pay attention to the educational value of board games, in terms of cognitive, social, and moral development after Kamii and DeVries published, *Group Games in Early Education: Implications of Piaget's Theory*, in 1980. Children have opportunities to follow the rules, to collaborate with others, and to think about other points of view by playing these games. This is especially true for board games, such as Tic-Tac-Toe or Checkers, which involve logico-mathematical reasoning. These games might help children learn numerical, spatial, and logical relationships (DeVries & Fernie, 1990; Fernie & DeVries, 1990). Therefore, these games offer a motivating context in which children can develop social, moral, and intellectual skills (DeVries, Zan, Hildebrandt, Edmiaston, & Sales, 2002; Fernie & DeVries, 1990; Kamii & DeVries, 1980).

Some other literature suggests thoughtful guidelines for using board games as instructional tools for learning math in young children (Barta & Schaelling, 1998; Blum & Yocom, 1996). In recent years, most early educators have accepted the benefits of group games, including board games, in the intellectual development of young children. Early childhood educators who want to avoid direct and formal instruction to support child learning are especially conscious of this. Many board game materials for learning math are found in preschool classrooms. For example, board games make up 43% of game materials in Korea for learning math and most use a dice for the movement of markers (Choi, 1996; Kang, 2001; Hong, 1992).

Other studies have focused on the developmental progress and the behaviors of children's play or reasoning in the games of mathematical logic and social logic (Choi, 2000; DeVries & Fernie, 1990; Fernie & DeVries, 1990). Although this literature provides us with valuable and reasonable implications for practice, there is still a lack of empirical evidence to support the value in specific areas of learning. Hildebrandt and Zan (2002) pointed out that not all games are equally beneficial in the promotion of children's social and intellectual development. According to the types of group games, including board games, children may have learning experiences, which offer different opportunities to explore mathematical and social relationships during play. Therefore, rather than focus on the general bene-