

# The Role of Competitive Activities on Preschool Children Performance.

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## Abstract

It is well recognized the importance of preschool children understanding of a product goal or a process goal in a school activity and in which way the kind of the goal could affect children's performance in this activity. As known, product goals determine the outcome of learning and lead students' attention to the outcome rather than to the strategy or method that can lead to the result. Instead, the process goal refers to methods and strategies that lead students learn handling a specific task. Herein, 30 preschool children, at a mean age of 5 ½ years, participated in two different games, twice each with different goal each time (product goal/process goal). The results showed that preschool children exhibited better performance in both games when the goal was of product type. Moreover, in the case of a process goal, it was observed that children encouraged their classmate who played the game, while in case of a product goal they did not encourage their classmate, but they only counted his successful efforts. The results show that children understand the difference between process goal and product goal, enhancing their performance in case of product goals aiming to win. Nevertheless, previous studies which contacted in older children, under competitive learning environment where the goal of an activity emphasize to the outcome, showed that children brake their efforts, when they feel that they cannot win. According the obtained results, preschool teachers should avoid the product goals and emphasize to the process goals.

**Keywords:** education, childhood, competition, kindergarten, learning environment

## 1. Introduction

In education framework, the goal of an activity defines the purpose of this activity and is distinguished between product and process goals (Schunk & Swartz, 1993; Zimmerman & Kitsantas, 1996). Product goals determine the outcome of learning and lead students' attention to the outcome rather than to the strategy or method that can lead to the result. Instead, process goals refer to the methods and strategies that can help students learn to handle a specific task. In this case, students focus on imitating previously validated learning strategies (Weinstein & Mayer, 1986).

Studies showed that process goals positively correlated with achievement outcomes and high motivation in educational environments. For example, Schunk (1996) asked students to solve problems under two deferent conditions. The one condition involved a learning (or process) goal of how to solve problems and the other condition involved a performance (or

outcome) goal of merely solving them. The results showed that students showed higher motivation and achievement outcomes when they used the learning goal in order to solve the

problems than they used the performance goal. Similar results were showed by Zimmerman and Kitsantas (1996), they taught the children a new motor skill of how to throw darts at a target, using product and process goals. The results showed that students who adopted process goals acquired new motor skills more successfully than students who adopted product goals.

A learning environment which emphasize to the outcome of learning creates a competitive atmosphere among students, and each try to overpass the other, but according to Kohn (1986) and Johnson & Johnson (1994) competition may be counterproductive for learning. One of the main causes for this is stress. A moderated amount of stress can be beneficial but competition cause high levels of stress which are affect the performance negatively. Furthermore, competition focuses on winning and not on good performance, individuals try to outperform others rather than achieve the task with the best of their ability (Kohn, 1986). Study which conducted with older students (e.g. junior high school students) showed that competition leads to less motivation for learning in educational settings and increasing anxiety (Papaioannou & Kouli, 1999).

## 2. Methods

### Participants

The sample consisted of 30 preschool children (16 boys, 14 girls) with a mean age of 5 years and 5 months. Children were coming from two different kindergarten schools from one city in Central Greece.

### Procedure

Children played two different games, twice each with different goal each time. The games took place in the classrooms of kindergarten. A hoop and ten small beans bags were used for the one game. The aim of this game was the child to throw a bean bag in the hoop which was placed on the floor, from a standing position and from distance 2.5m. This game was used by Tsiakara & Digelidis (2015) in their research which applied in preschool children. A basket and ten small balls were used for the other game. The aim of this game was the child to throw a ball in the basket which was placed on the floor, from a standing position and from distance 2.5m. Children played each game two times in two different days. In each kindergarten classroom the conditions under which the game took place was implemented with a different order so as to avoid an ‘order effect’.

### Game 1

#### First condition

In the first condition, each child had to throw a bean bag 10 times in the hoop, which was placed on the floor, by having a process goal. More specifically before the start of the trials, the following instructions were given by the researcher: “I want you to throw ten bean bags in the hoop. I want you to try to do your best you can.” Finally, when the child had finished

his/her trial the researcher recorded the number of the bags he/she manage to throw in the hoop.

## Second condition

In the second condition, each child had to throw a bean bag 10 times in the hoop, similar to first condition, but now by having a product goal. More specifically, before the start of the trials, the following instructions were given by the researcher: “I want you to throw ten bean bags in the hoop. I want you to throw as many bags in the hoop as possible, because the winner will be the one who will be able to succeed the most.” Finally, when the child had finished his/her trial the researcher recorded the number of the bags he/she manage to throw in the hoop.

## Game 2

### First condition

In the first condition, each child should throw a small ball 10 times in the basket, which was placed on the floor, by having a process goal. More specifically before the start of the trials, the following instructions were given by the researcher: “I want you to throw ten balls in the basket. I want you to try to do your best you can.” Finally, when the child had finished his/her trial the researcher recorded the number of the balls he/she manage to throw in the basket.

### Second condition:

In the second condition, each child should throw a small ball 10 times in the basket, similar to first condition, but now by having a product goal. More specifically, before the start of the trials, the following instructions were given by the researcher: “I want you to throw ten balls in the basket. I want you to throw as many balls in the basket as possible, because the winner will be the one who will reach the maximum number of successful shoots.” Finally, when the child had finished his/her trial the researcher recorded the number of the balls he/she manage to throw in the basket.

## 3. Results

A paired samples t-test was applied two times in order to determine if there are differences in children’s performance between the first and second condition. The results showed that significant differences were found in children’s performance in the game, where each child had to throw a bean bag 10 times in the hoop, between the two condition  $t(29) = -3.026$ ,  $p < .05$ . Children had better performance in the second condition, where the goal of the game was product ( $M = 4.73$ ,  $SD = 2.3$ ) than in first condition where the goal of the game was process ( $M = 3.53$ ,  $SD = 1.4$ ).

Moreover, similar results found and in the other game, where each child had to throw a small ball 10 times in the basket. The results showed that significant differences were found in children’s performance between the two condition  $t(29) = -3.307$ ,  $p < .005$ . Children had better performance in the second condition, where the goal of the game was product ( $M = 2.57$ ,  $SD = 1.5$ ) than in first condition where the goal of the game was process ( $M = 1.53$ ,  $SD = .8$ ).

## 4. Conclusion

The results of this study showed that preschool children had better performance in both games when the goal of the game was product than when the goal was process. These results show that preschool children understand competitive conditions and express a desire to excel. Previous studies supported that children from the age of 4 years old perceive the concept of competition and express competitive behavior. In previous works (2012; 2014) we found that preschool children in kindergarten classes exhibit a variety of competitive behaviors, both verbally and physically. Moreover, under competitive conditions preschool children well perceive that only one of them can be the winner and try to excel from other children (Greenberg, 1932; Leuba, 1933; Kimiyoshi, 1951).

Preschool children seem to better perform under competitive condition, where the goal was product and emphasize to the outcome of learning and not to the methods and strategies that can help students learn to handle a specific task. Nevertheless, according to Kohn (1986) and Johnson & Johnson (1994) competition may be counterproductive for learning.

According the obtained results, preschool teachers should avoid the product goals and emphasize the process goals. Because the latter consists the best possible strategy for helping preschool children to develop their skills, enhancing their performance in an activity and have positive educational experiences.

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