

# EFFECT OF SELF-TALKING AND DETERMINATION ON PERFORMANCE IN STUDENTS

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## ABSTRACT

We are guided by our thoughts and determination. The problem of the present study was to investigate whether there is any effect of self-talking and determination on enhancing performance. The current study aimed to ascertain whether future performance is impacted by self-talking and determination. We hypothesized that in order to improve performance, self-talking and determination are beneficial. We selected 28 students from class VI and then randomly divided them into experimental and control groups. We taught the experimental participants how to apply self-talking and determination positively. Then both groups were given some tasks such as handwriting, drawing, and talking about themselves. We found that the mean scores of times spent in performance for experimental and control groups were 631.50 seconds and 521.50 seconds, respectively, which differed significantly at the .046 ( $\alpha=.05$ ) level with a  $t$ -value of 2.09 ( $df=26$ ). We came to the conclusion that self-talking and determination have a favorable impact on improving performance because the experimental group performed for a significantly longer time than the control group.

**KEYWORDS:** self-talking, determination, performance, handwriting, drawing

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## Introduction

Self-talking is an internal talking process that guides an individual's thinking, perceptions and beliefs. It is the way individuals talk to themselves facing any problems or doing usual tasks. For example, you lost your bicycle you forgot to lock up. You can talk to yourself in two ways: one, positively, "I should be more careful; losing a bicycle is so common; I can buy another one because I have enough money"; another, negatively, "why it's me; this world is full of bad people, etc." As adults we are at least partially aware of the effects of our thinking on performance. But the elementary students are usually not aware of this. Determination indicates the planning process that we adopt before doing a task (Wikipedia). Again, as adults we are expert in making plans to solve problems. If we can teach the elementary students about how to apply these two strategies when they learn, it may enhance their performance in learning. This was the concern of the present study.

The primary source of the present study was curiosity. Later we searched for the related articles and founded the followings. Yannis Theodorakis, Nikos Zourbanos, and Antonis Hatzigeorgiadis (2004) conducted a study titled "Self-Talk in the Swimming Pool: The Effects of Self-Talk on Thought Content and Performance on Water-Polo Tasks." The study wanted to find out the impact of positive and

constructive self-talk on the occurrence of disruptive thoughts and performance on two water polo tasks with comparable requirements carried out in the same setting. Two tests, one of which included a power task (throwing a ball to a long distance) and the other requiring a precision job (throwing a ball at a target), were carried out in the pool. Both self-talk groups increased their performance in the first experiment's precision test compared to the baseline measure. Only the motivating self-talk group significantly improved on the power task in the second experiment. This research found a positive effect of self-talk on Water-Polo Tasks. Kim, J. et al. (2021) conducted a similar study titled, 'The effects of positive or negative self-talk on the alteration of brain functional connectivity by performing cognitive tasks' and found self-talking can affect cognitive tasks.

We were actually concerned with the following question, "Is there any effect of self-talking and determination on enhancing performance?" The purpose of the present study was to determine whether self-talking and determination would affect performance. We hypothesized that self-talking and determination would have a positive effect on performance. Maintaining a strong sense of determination would help one to stay focused on goals, ultimately enhancing overall performance. There is a dearth of knowledge regarding

elementary students on this context. Elementary students are sharp in memory but lack in strategy. If we find that effective self-talking and determination enhance learning, we can apply it practically. We can teach them the strategy of effective self-talking and determination of which they are usually unaware and they may find learning more effective and enjoying.

## Materials and Methods

Our target population was elementary level students whose age ranges from 5 to 13 years, which is equivalent up to class VI. A between group design was used for this study. We randomly selected 28 students of class VI from Charlakshya Union Govt. High School, Karnaphuli, Chattogram. They were then randomly assigned into two groups, namely, experimental and control groups. Each group consists of 14 students. Since participants were randomly assigned, they were most probably matched in terms of gender, intelligence, and other relevant factors. It was necessary to match participants of two groups to retain the assumption of homogeneity of variance which claims the two groups to be equal before intervention. The following materials were used here: A4 size papers, handwriting papers, stopwatch, pen and pencils. Two research assistants helped us conducting the experiment.

Since the data collection process did not harm anyone, we simply collected the verbal consent from the participants and guardians; we did not take any ethical permission from the relevant authority. Later we debriefed the purposes and processes to the participants and guardians.

Control and experimental groups were kept in separate rooms. Both groups of participants were provided with written and verbal instructions. They were informed that they would be given some tasks to do and they had free will to participate in the experiment. They might withdraw themselves any time they wanted. For example, if they felt it was not beneficial to them or was causing them irritation or a waste of time, they could feel free to say they wanted to leave. However, the distinctive feature of the experimental group was that they were taught how to apply self-talking process and determination before performing a task.

How did we ensure that we were successful at applying self-talking and determination process in experimental group? As adults, we apply self-talking and determination in our daily life consciously. But younger students usually don't know its positive effects and can't apply them effectively. We assumed that if we can simply apprise them about these, they can apply them to solve their problems. We instructed the experimental group in the following way: Suppose, your mother is forcing you to take you with them for visiting your uncle's house which you are trying to avoid because you don't want to leave your friends here. But you are sure that your mother will take you with them. What do you usually do in this situation? You cry but are forced to go. Instead of crying, you can say to yourself, "Since I have to go with my mother, I will go by myself. Yet I don't have to live there forever. I will get back home again and can play with my friends. Moreover, I will have some rest from studying and I have a few friends there too. So, I will not cry, I will go." We asked different students to mention irritating situations they faced and told them how they could apply self-talking process. All of the experimental group's participants were instructed collectively in a room. But the

control group's participants were not given this special intervention. We also told them that you can apply the same process when you are faced with problems in your academic activity. Suppose, 'You have been given homework to submit the next day. You may feel disgusting because you want to play with your friends. You can talk to yourself; as a student, I must study; if I don't study, I will not be successful in life, my parents, teachers won't like me; it will take a little time, then I can play with my friends, etc.' We apprised the experimental group with this self-talking technique and assumed that it would create an associated determination in students. Like, 'I will do the homework first, and then I will play with my friends'. As a result, these two mechanisms will enhance the quality of their performance which we hypothesized.

After applying the instruction mentioned above, both groups were asked to do some tasks. This part was same for both groups although they were in separate rooms. Even a constant order of the tasks was maintained. They were entered into the room one by one. Firstly, we asked each of them to write something on a handwriting paper for two minutes. We didn't fix the topic. They fixed it for themselves. Then there was a break for one minute. Secondly, they were asked to draw something on a paper. Then there was again a one-minute break. Thirdly, they were asked to say something about themselves for three minutes. In every break, they were reminded that they had freedom to leave. It should be noted that during these tasks we didn't handle them warmly. And notice there was a frequent change between tasks. All of these were specially designed to create an unsupportive environment. Moreover, the tasks were not so meaningful; recall, we asked a sixth-grade student to overwrite something on a paper which is usually solved by a first-grade student. Tasks were designed to feel them somewhat uncomfortable. We assumed that the experimental group would apply self-talking process and handle this uncomfortable situation better than the control group. The amount of time each participant spent in the conduction setting was the dependent variable here. We hypothesized that participants who used self-talking process would spend more time than who didn't. It should be noted that a well-controlled environment was maintained where the two groups of participants could not meet each other during conduction. Even the participant who had just participated in the experiment could not communicate with others in his/her respective group members who didn't participate yet.

Critics may raise the question, "How did we confirm that the participants of experimental group applied the self-talking process during conduction?" To ensure this we asked each participant from both groups the following question; 'Did you feel irritating when doing those tasks?' Both groups replied, 'Yes'. Then the second question followed, 'Did you talk to yourself about spending more time when you feel irritated?' Almost all of the experimental group participants replied that they did but the control group were not aware of this.

## Results and Discussion

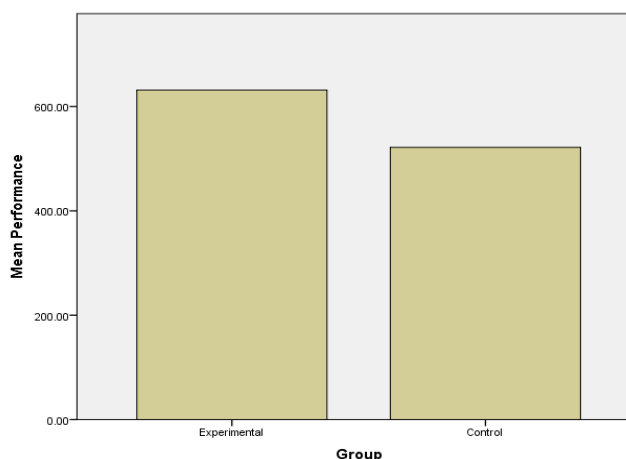
We analyzed the data using an independent group t-test which investigates whether there is any difference between two groups. Table 1 displays descriptive information regarding the difference between experimental and control groups and subsequently Table 2 indicates their associated significance level.

**Table 1.** Descriptive statistics of differences on performance (seconds spent on tasks) between control and experimental groups.

Group	N	M	SD	SE
<b>Control</b>	<b>14</b>	<b>521.50</b>	<b>138.36</b>	<b>36.97</b>
<b>Experimental</b>	<b>14</b>	<b>631.50</b>	<b>139.95</b>	<b>37.40</b>

From Table 1 we find that the mean score for the control and experimental groups are 521.50 and 631.50, respectively. In other words, on average the control group spent 521.50 seconds (8.69 minutes) and the experimental group spent

631.50 seconds (10.5 minutes) doing the tasks. Here we notice a difference between the two averages. To ensure whether the difference between these averages is statistically significant or not we need to run a t-test mentioned below.

**Figure 1.** Graphical comparison of experimental and control groups in terms of performance.**Table 2.** t-test results; comparing the control and experimental groups on performance.

Group	Levene's Test F	Levene's Test Sig.	M	t	df	Sig.
<b>Control</b>			<b>521.50</b>			
<b>Experimental</b>	<b>.394</b>	<b>.536</b>	<b>631.50</b>	<b>2.09</b>	<b>26</b>	<b>.046</b>

We checked the assumption of homogeneity of variance by using Levene's test. Here p-value (.536) is greater than .05 which indicates that this assumption has been maintained. The t-test result clarifies that the difference between the groups is significant at the .046 level ( $p < .05$ ). From the mean values, it is clear that the experimental group spent more time doing the assigned tasks than the control group. That means whatever input we provided to the experimental group increased their motivation to perform better and for a longer time.

We assumed that elementary level students are weak at applying self-talking technique. So, we divided some students randomly into two groups. Then one group received knowledge about self-talking while another group didn't. As

we found in the result that the group which received treatment performed for a longer time than those who didn't receive, we conclude that the special treatment enhanced their performance. The tasks were somewhat meaningless; yet the students from the experimental group were motivated enough to spend longer time. We expect that if they apply the self-talking process in the way we taught them they will find their academic and daily life problems more interesting and manageable to solve. We can apprise teachers with the effectiveness of this technique so that they can teach students accordingly. It would be more effective if the curriculum development committee include a chapter regarding self-talking technique in their book.

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