

The effect of note-taking skills training on the achievement motivation in learning on B.A students in Shahid Bahonar University of Kerman and Kerman University of Medical Sciences (Iran)

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Abstract

Objective: To evaluate the effect of note-taking skills training on the achievement motivation in learning.

Methods: The experimental study comprised graduate students of the 2010-11 batch at Kerman's Bahonar University and Kerman's Medical Sciences University, Iran. The study sample included 110 people; 55 in the test group, and 55 in the control group. They were randomly selected and replaced through the single-stage cluster sampling. To collect the data, a questionnaire was used. Pre-test was performed before the training session in two groups. After training course, a post-test was taken. For data analysis, the independent t-test, was used.

Results: The average pre-test score of the test group was 182 ± 34.15 , while for the control group it was 191 ± 30.37 ($p < 0.089$). After the training, the post-test showed statistically significant change. The test group scored 220 ± 20.94 against the controls who scored 195 ± 27.26 ($p < 0.001$).

Conclusion: The findings showed that achievement motivation in learning increased significantly after imparting training in note-taking skills. Authorities in the educational system should invest more for promotion of such skills.

Keywords: Note-taking skills, Motivation, Achievement, Learning. (JPMA 63: 1230; 2013)

Introduction

Note-taking is a necessary skill for all persons who believe in studying like food and weather.¹ Studies have also shown that more than 99% students in universities take notes of the lectures,² and 94% believe that note-taking is an important part of the educational experience.³ Some researchers have demonstrated that this idea has been accepted widely by the instructors and teachers that note-taking is a valuable instrument to help increase information preservation.⁴ Additionally, it is believed that note-taking is one of the most important skills of students.²

Also, learning psychologists have frequently demonstrated that students listen to the lectures for about 80% of the class time, And they use their own learning strategy to take a note.⁵ According to studies, humans forget almost 40% of what they have heard or read after 20 minutes, and after 24 hours forget about 70% of the materials.⁶

Some researchers have demonstrated the different techniques of note-taking as well as various strategies.⁷ Some have explained that note-taking is one of the

several cognitive processes which the students need to facilitate their learning and improvement of academic performance.⁸

Some of the studies have reported that the improvement of note-taking skills help the students' comprehension and their short-term and long-term memory. Also taking notes while listening to lectures in the classroom influences the academic success of all students.^{9,10} In addition, some researchers have pointed out that the students' success in the classroom depends on their ability in note-taking.¹¹ Some believe that note-taking should be taught at the level of schools.¹² Others believe that the skill must be taught clearly.⁸

One study compared two methods of note-taking (cornell method and the guide notes) in English course on 29 students. The students were divided into two groups and each group was taught one of the methods. The guide notes provide a framework for the students to find appropriate information in the book text or in the materials provided in the lecture. The students had a better performance after the intervention. The results showed that the students who used the guide notes had a better performance compared to those who used the Cornell method. The rate of their correct responses increased from 51% to 84%.¹³

A study on 400 students and instructors of BooAli Sina University in Hamadan, Iran, showed that training these

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strategies resulted in the students' academic achievement. It also demonstrated that there was a positive, strong relationship between these trainings and the students' cognitive and super-cognitive strategies.¹

In Colombia University, a research showed that controlled note-taking predicts only the qualities of the notes and their qualities also predict a significant amount of the individual's performance. Controlling the skill resulted in the increase of performance in examinations.¹⁴

Students in Northern Carolina also showed post-intervention success.¹² Not much different was the result of a study which examined the effects of training note-taking on elementary students' ability to remember scientific information.¹⁵ The studies done in Turkey and the US state of Ohio also underlined the positive aspect of such a training.^{16,17}

Achievement motivation is the tendency to take lead on the others, and to attempt to succeed.^{18,19}

Some researchers believe that everyone who has the motivation of achievement has a tendency to do his/her work well and to evaluate his/her performance.²⁰ It also takes into account personal ability and attempt.²¹ Student's motivation often has a more desirable impact compared to intelligence. Also for the effect of motivation on learning, strong motivation results in stable learning and little motivation results in small learning.¹⁹ Motivation maximises the level of students' learning.²² The relationship between motivation and learning is not unilateral in nature.²³

Subjects and Methods

The randomised controlled trial comprised the 2010-11 batch of graduate students in the Faculty of Literature and Humanities, Shahid Bahonar University of Kerman, and the Faculty of Health, Kerman University of Medical Sciences, Iran. It comprised 110 students; 55 in the test group and 55 in the control group. The method of sample selection was single-stage cluster. Each of the classes in the two universities were considered to be a cluster. Two classes of students from each college — totally 4 classes — were selected as a cluster, and two classes were randomly allocated to the test group, and two classes to the control group. Before training, a pre-test were conducted on the two groups. Then the experimental group was trained in note-taking skills for seven sessions, for 2 hours once a week. After that, the post-test were conducted on the whole study population.

There is no such thing as the best note-taking method for universal application. The test group was, therefore,

trained on four different methods.

The concept map is a scientific method of note-taking that can show the general shape of the subject and the relationship between the different points. The materials are placed into the map so that their memorisation and review may become easy²⁴ (Figure-1).

the Cornell system, designed by Walter Pauk, a retired professor of Cornell University, involves a sheet on which

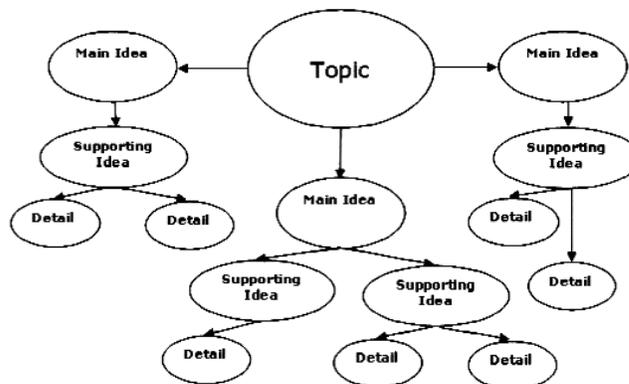


Figure-1: Example of the concept map.

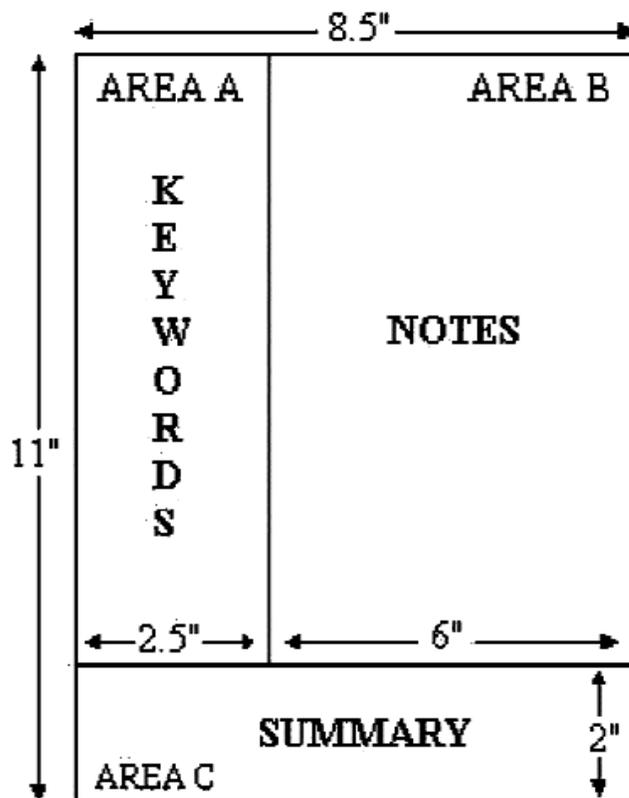


Figure-2: The Cornell method.

one takes notes. Mapping of the sheet includes a large margin in the right and bottom of the page. This method allows the students to arrange their notes, re-arrange them easily and delete a part of them or add a subject to them (Figure-2).²⁴

Area A) Cue column (keywords)

Area B) Note taking area (notes)

Area C) Summery Region

The outline format begins from the left of the page. Important subjects are placed at the left top of the page. The less important subjects that generally are the ideas supporting the main points, are written on the right side. Each subject with less importance is placed at the right with more distance. Due to the distance between partial and major subjects, the importance level of the different subjects are specified easily (Figure-3).²⁴

In the split plage method, the note page is divided longitudinally. A line is then drawn in the middle of page and the notes are placed on one side of the page and the major subjects of the text book are placed on the other side. In this case, both resources will be available when studying. The class notes and a set text are thus integrated. Some students like to add a third column for the questions they need ask the instructor.²⁰

The current study used the achievement motivation in learning questionnaire, which was given to the 110 students in two stages - pre-test and post-test - for a total of 220 questionnaires.

The questionnaire was designed by Hossein Rezaabakhsh in 1994, and includes 60 questions of 5 choices in Likert-type scale with choices of "completely disagree" to "completely agree," and has the scores 1-5.²⁵ The validity of the questionnaire²⁵ was checked by Masoume Vahabi who used this questionnaire for a sample of 276 students in Tehran high schools and subsequently reported its

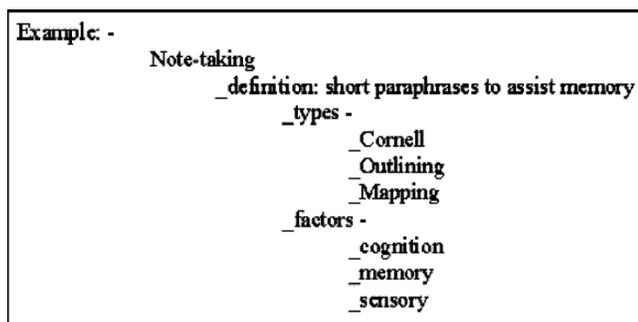


Figure-3: Example of the Outlining method.

validity by using Chronbach's alpha method for the students of the only-child families and multi-child families 0.88 and 0.85 respectively.

The responses of achievement motivation had five categories: <164 score very low; <189 score low; <215 score middle level; < 240 score strong; and >240 score very strong.

The study was approved by the Ethical Committee of Shahid Bahonar University, and informed written consent was obtained from all the subjects. For statistical analysis, independent t-test was used and for normality of data prior to applying the t-test Kolmogorov-Smirnov test was used.

Results

The average pre-test score of the test group was 182±34.15, while for the control group it was 191±30.37 (p<0.089). After the training, the post-test showed a statistically significant change. The test group scored 220±20.94 against the controls who scored 195±27.26 (p<0.001) (Table-1).

The median of the achievement motivation in learning in the post-test of the test group also significantly increased (Figure-4).

Also after analysis of the collected data from the questionnaire, the results showed that the achievement motivation in learning reduced in the 'very low' ranks from 17.2% to 0.9% , and in the 'low' ranks from 21% in pre-test to 13.6% in post-test (Table-2). The achievement motivation in learning on the 'middle' level didn't change (48.2%), but in the 'strong' and 'very strong' levels

Table-1: Averages, standard deviations and p values.

Test	Control group		Test group		P value
	Average	SD	Average	SD	
Pre-test	191	30.37	182	34.15	0.089
Post-test	195	27.26	220	20.94	0.001

Table-2: Difference in pre-test and post-test scores.

Ranks	Achievement motivation in learning (pre-test)		Achievement motivation in learning (post-test)	
	N	Percent	N	Percent
Very low <164	19	17.2	1	0.9
Low <189 <164	23	21	15	13.6
Middle level <215 <189	53	48.2	53	48.2
Strong < 240 <215	14	12.7	31	28.2
Very strong >240	1	0.9	13	11.8
Total	110	100	110	100

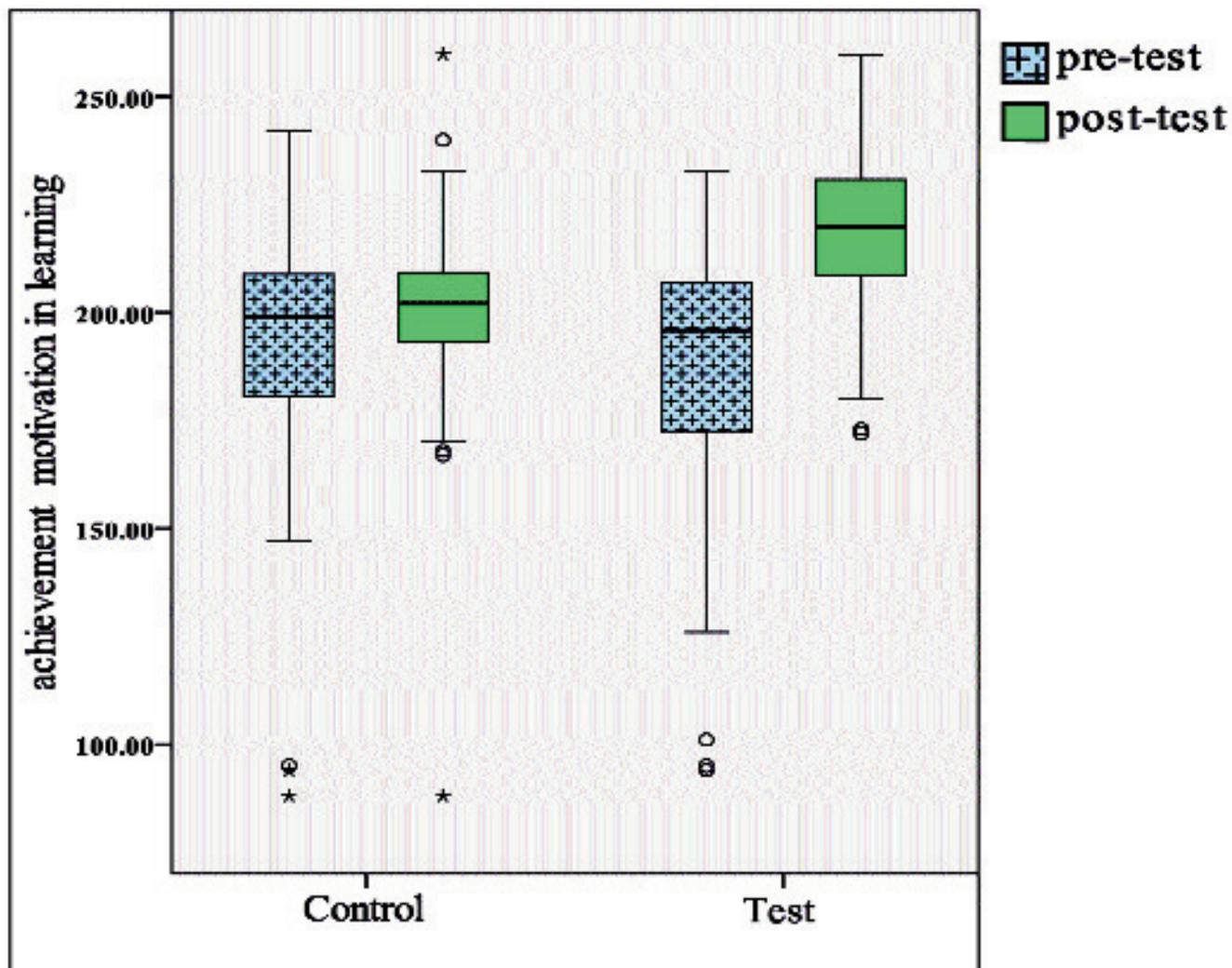


Figure-4: A box plot comparing the two groups for achievement motivation in learning.

respectively increased from 12.7 and 9% in the pre-test to 28.2% and 11.8% in the post-test.

Discussion

The results demonstrated that the achievement motivation in learning after training in the 'very strong' increased 10 times and in the 'strong' level it increased by more than twice. Additionally, after training the 'very low' rank saw a significant reduction of 19 times. The results are in line with those of other studies,^{1,7,9,12-17} but at learnt one research²⁶ has shown otherwise. It studied the advantages of training note-taking on the students' success for 43 male and 61 female students. There was no significant result in their research in "the effects of training note-taking and writing the notes on memorising and maintaining oral trainings."²⁵

Like any study, the current research had some limitations. The biggest limitation was the fact that the sample size was not statistically calculated, which affects the generalisability of the results.

Conclusion

The achievement motivation in learning increased significantly after training note-taking skills. Thus, It is necessary that the authorities in education should investment more for the promotion of training such skills.

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