

The Impact of End of Session Exam on Students' Learning

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Abstract

Educating professional doctors who are familiar with modern knowledge and up to date is of an utmost importance. In this research, the impact of an exam at the end of the class session has been used to evaluate students' learning.

This research took place at Islamic Azad University Tehran Medical Branch, between Medical , Dentistry and Laboratory science students. that were randomly assigned before into two groups, because of class capacity.

All subjects took part in an exam at the end of their regular class with the slight difference that group A, contrary to group B, was not aware of the end of class multiple choice exam. The data were recorded and analyzed. The results showed a significant difference between the mean scores of group A in comparison to group B with 95% confidence ($p \leq 0.001$). Therefore, this study shows that making students aware of the fact that they will be tested at the end of the teaching session has a significant effect on their learning during that session.

Keywords: student learning, exam, awareness, educating

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Introduction

Health care profession is in need of skillful and capable human resources to be able to perform effectively towards its goals. In this regard, educating medical, paramedical and dentistry students in a way that they must be familiar with the advanced skills and technologies is of utmost importance. Since, physicians, laboratory science specialist and dentists as the group which are responsible in the health care profession, have an undeniable role in the increase of the health of the society¹, therefore, having an effective educational program which can lead to students' capability in these fields seems essential. Education is a two way process between the instructor and the learner which works towards achieving favorable results and changing manners.² This process becomes even more important with the attention and awareness of the learner towards education, and a few studies have been performed on the impact of mental stimulation on improving the learner's skills.³⁻⁶ Challenging the current educational system and applying systems which motivate students and raise their attention will definitely cause educational improvement. In the present research taking a test at the end of each session, based on the taught subjects, is recommended and the goal of this research is to determine whether being aware of having to take a test at the end of each class session can cause mental stimulation in learners towards a better learning?

Design

The present experimental research was performed during 2012 at Islamic Azad University Medical and Dentistry branches. The subjects were either medicine, dentistry or laboratory science students participating in parasitology classes during the second educational term 2011-2012. The students were randomly divided among two groups (A and B) because of capacity of their class, and there was no connection and relation between two medicine classes, two dentistry classes, and two laboratory science students. , Even the mean of the past courses (scores) by the two groups was nearly the same.

The first groups took the multiple choice test without any prior awareness (A groups). But the second groups were aware (by their friends) ,while they changed their class. The instructor, taught material, and the multiple choice exam of the all groups were the same. The multiple choice test and the answer sheet were both made by the instructor. After test administration the items were corrected by the instructor's assistant who was not aware of the research and the division of the groups. All the answer sheets were corrected twice. Later, all the data was coded and entered into an SPSS with the version of 18 by an expert who was unaware of the research design. The research data was analyzed using t-test and chi-square test. Since after the exam the participants were told that their scores were only going to be used in a research. and they were allowed to ask for retrieving their data out of the research, ethics was considered. The name and personal information of all the participants was not revealed during the research. The results were organized in relation to the research hypothesis and question (the significance level $p < .005$ was considered).

Results:

In the present study, 329 participants took part. The number of participants along with the mean has been shown in table1.

Table 1. Various groups and their average means

GROUP	Mean	Increased	N	S.D
laboratory science students group A	12.0195		77	1.81676
laboratory science students group B	13.9286	1.9	70	1.43086
medicine students group A	11.5469		48	1.60589
medicine students group B	12.9115	1.3	65	1.58264
dentistry students group A	13.0588		34	1.64231
dentistry students group B	17.8	4.8	4.85	2.52982
Total	13.2553		329	2.47028

Discussion:

In this study, the impact of exam awareness (being tested at the end of the session) on the learning of university students is studied. The scores obtained by the students who were aware that they were going to be tested at the end of the session were significantly higher.

As far as we know, the present study is the first study concerning the effect of being tested at the end of the session **Between 3groups of aware and none aware** on the learning of Iranian students. The authors found that the scores achieved by medicine, paramedical and dentistry students can significantly improve if they listen carefully or being motivated by through awareness of being evaluated at the end of the session ($p < 0.001$).

In the present study, the mean of the medicine students' scores who were aware that they were going to be tested at the end of the session, had increased 1.3, dentistry students 4.7, and laboratory science students 1.9 scores compared to the group that did not know that they were going to be tested, and there was a significant difference among the three groups ($p < 0.001$).

In the last few decades, some educational systems have realized the need for replacing the current teaching methods with new effective learning strategies; therefore, the use of such strategies has become more popular in different branches of science including medical branches.⁷

Although learning usually happens through a two way interaction, in traditional or previous methods the learner had the least interaction in the learning process, and usually the university classes were held by the instructors' lectures.⁷ Performing a test after each class session can increase the students' attention. Instructor and learner interaction through a complex process such as asking questions, answering, explanation, research, communication, analysis, and evaluation becomes possible.⁸

In the present study, student motivation can lead to better listening and also challenging the new information. Increasing the motivation to learn has also been emphasized in other researches.⁹ The method mentioned in the present study has been used to increase motivation. The results of the present study show that learning through such a process, due to increase of learners' mental activity, can lead to students' achieving higher grades. Moreover, the present study has also other benefits such as examining whether the taught components by the instructor have been effective? Why aren't taught subjects or their components much effective? What are the effects and outcomes of the instructed subjects and how long do they last? What do the students think about it? Wester Holm mentions the effectiveness of evaluation as: analysis of effectiveness, finding opportunities, evaluation of priorities in source use, evaluation of student needs, and better decision making.

In order to understand and frame the mind, students need opportunities, and suitable stimuli to frame the logic of these definitions. Therefore, the role of the instructor and the used method for better understanding is of outmost importance. In the present manner, students are stimulated through test taking, and their desire and will for better learning is challenged and finally leads to the students' alertness in class. Use of evaluation strategies in active learning in medical branches has been previously recommended.¹⁰ According to the results of the present study, test taking at the end of each class session, can have a significant effect on students' learning during that session.

Conclusion

In the present study, students' higher grades showed that mental cooperation of the students with the subject matter in teaching has been increased and this can lead to a more effective and deeper learning in contrast to current methods. Therefore, in order to improve education and increase learners' interaction with the subject matter, gain feedback, increase motivation, and improve memorization a deeper interaction between learner and instructor is recommended.

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