

Internet based teacher guided self study versus conventional didactic lecture

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Abstract

There has been a shift from the teacher oriented teaching learning (TL) methods to learner oriented teaching learning methods. The traditional didactic lecture is frowned upon by many. The internet is looked up to, as a source of unlimited information by both the teaching as well as student fraternity. In this comparative study the knowledge retention immediately after instruction by internet based teacher guided self-study and conventional didactic lecture is assessed.

Objectives: To evaluate and assess the knowledge gained by the two teaching methodology.

Materials and Methods: Interventional study done with sixty students, an informed consent was taken and divided into two groups of 30 each. Pre test was done. Conventional didactic lecture was used as the method of TL in one group and Internet based teacher guided self-study (IBGSS) was used as the TL method for other. Post test was done after the session.

Results: 1. The post test scores after traditional didactic lecture and internet based teacher guided self-study methods were significantly more than pre test, paired t test showed $p = 0$ and $p = 0$ respectively; 2. The post test scores of traditional lecture were significantly higher than IBGSS, unpaired t test showed $p < 0.003$.

The study shows that traditional lecture is better than internet based guided self-study for knowledge assimilation and retention.

Keywords: Didactic lecture, Self-study, Medical education.

Introduction

There has been a shift from the teacher oriented teaching learning methods to learner oriented teaching learning methods. Various teaching learning (TL) methods are advocated, the traditional didactic lecture is frowned upon by many. Numerous articles have been published on the merits of active learning, and collectively they present a body of compelling evidence that these methods do enhance learning.¹

In presenting arguments for active learning, it is often suggested that the traditional didactic lecture is more passive in nature and less effective as a teaching tool. The theory of didactic learning methods focuses on the baseline knowledge students possess and seeks to improve upon and convey this information.² It also refers to the foundation or starting point in a lesson plan, where the overall goal is knowledge. A teacher or educator functions in this role as an authoritative figure, but also as both a guide and a resource for students the didactic lecture is only effective when the learner is attentive. The lecture should be in such a way that it should engage the students. Delivering an effective didactic lecture is an art which cannot be perfected; it can only be made better.²

This understanding has led educationists to look for other teaching learning methods which can be more effective than didactic lecture. The concept of interactive lecture has come up, where the learner actively participates in the learning process and the teacher is the facilitator of this learning process.³

The internet is looked up to, as a source of unlimited information by both the teaching as well as student fraternity. The vast amount of information can be utilized in achieving the goal of active learning process. The information on the internet is not all authentic but a teacher

can help the learners by guiding them in the right track and thus reach the set objectives.

The internet is widely used by learners for self-study. The internet as active TL method is not fully utilized. The study is an attempt to use the information from the internet, and the teacher guides the learner in compiling the useful information and thus promote active learning. Similar studies are few hence the attempt.⁴

This comparative study of learning activity examines the knowledge retention immediately after instruction in two groups of students who were exposed to topics by internet based teacher guided self-study and conventional didactic lecture. This study is an attempt to verify the claims of orthodoxy and the modernists among medical educationists.

Objective of the Study

1. To evaluate the knowledge gained by the two different teaching methodology
2. To assess acceptance of internet based teacher guided self-study (IBGSS) over traditional didactic lectures.

Materials and Methods

Type of Study: Interventional study

The study was done in Sree Narayana institute of medical sciences, Ernakulam. Sixty students of third semester (2nd MBBS) in the department of microbiology were chosen for the study.

The students were briefed on the study. An informed consent was taken from each of the sixty students. They were divided into two groups. Each group consisted of thirty students. The even roll numbers were grouped in one group and the odd roll numbers were grouped in the second group. The first group was named Group A and the second group was called Group B.

A naïve topic in microbiology was selected. The topic selected was rabies.

Pre test was done for both groups. This was to assess the basic knowledge on the selected topic.

The group A was exposed to the topic by the conventional didactic lecture as the method of teaching learning. Immediately after the lecture a post test was done.

The group B was taken to the internet facility in the library. Each student had access to the internet. The students were asked to look up the topic of discussion on the internet and collect information. The students were guided by the teacher in the right track on what are the relevant information which are important as far as a 2nd year MBBS student is concerned. At the end of the session important points were discussed by the group with teacher asking questions pertaining to relevant information compiled from the internet.

At the end of the session a post test was done. A feedback was taken from group B because this was the group which was subjected to the newer teaching learning method.

The pretest and post test were multiple choice questions.

The pre and post test scores were tabulated and statistically analyzed.

SPSS was used for data entry and analysis.

Results

The pre test scores of group A who were given didactic lecture as the teaching learning method was compared with the post test score of the same group after the lecture. It showed that there was significant increase in the mean post test score after the didactic lecture. The paired t test value was 0(p=0).

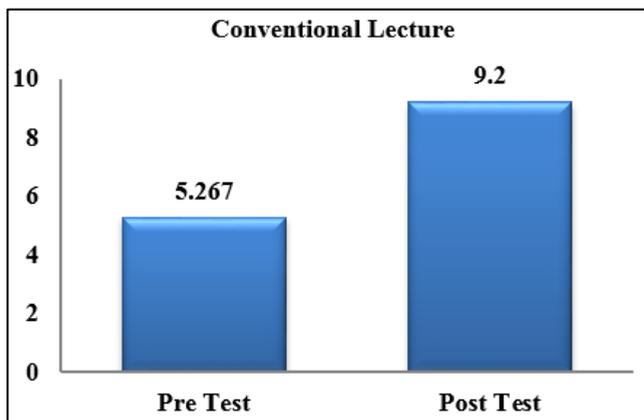


Fig. 1: Comparison of pre and post test scores after conventional lecture

The post test scores of group B for whom the teaching learning method was the internet based guided self study (IBGSS) is significantly more than their pre test scores. The paired t test showed p=0

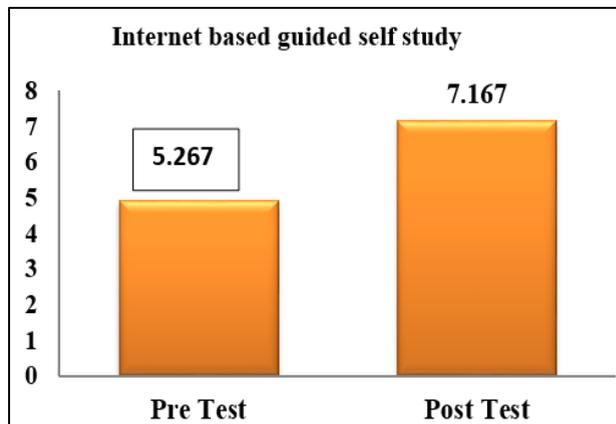


Fig. 2: Comparison of pre and post test score after IBGSS

The post test scores of traditional lecture group (Group A) were significantly higher than group B, who attended the internet based guided self-study of the topic. The unpaired t test was done and it showed a p value greater than 0.003

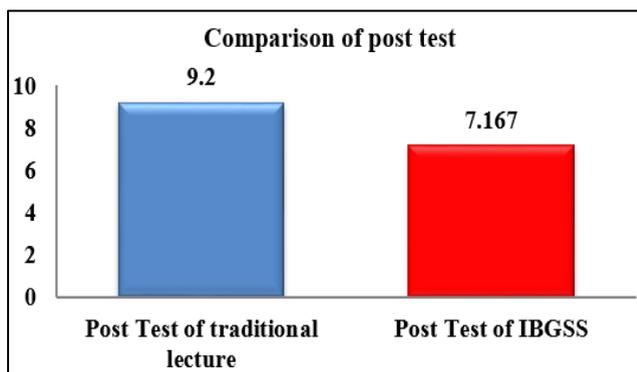


Fig. 3: Comparison of post test scores of Traditional lecture group and IBGSS group

A feedback was taken from the group which was subjected to internet based guided self-study. This was done because this was the new teaching learning method. The feedback was to know the attitude of the group to the new teaching learning method. The feedback was analyzed and plotted.

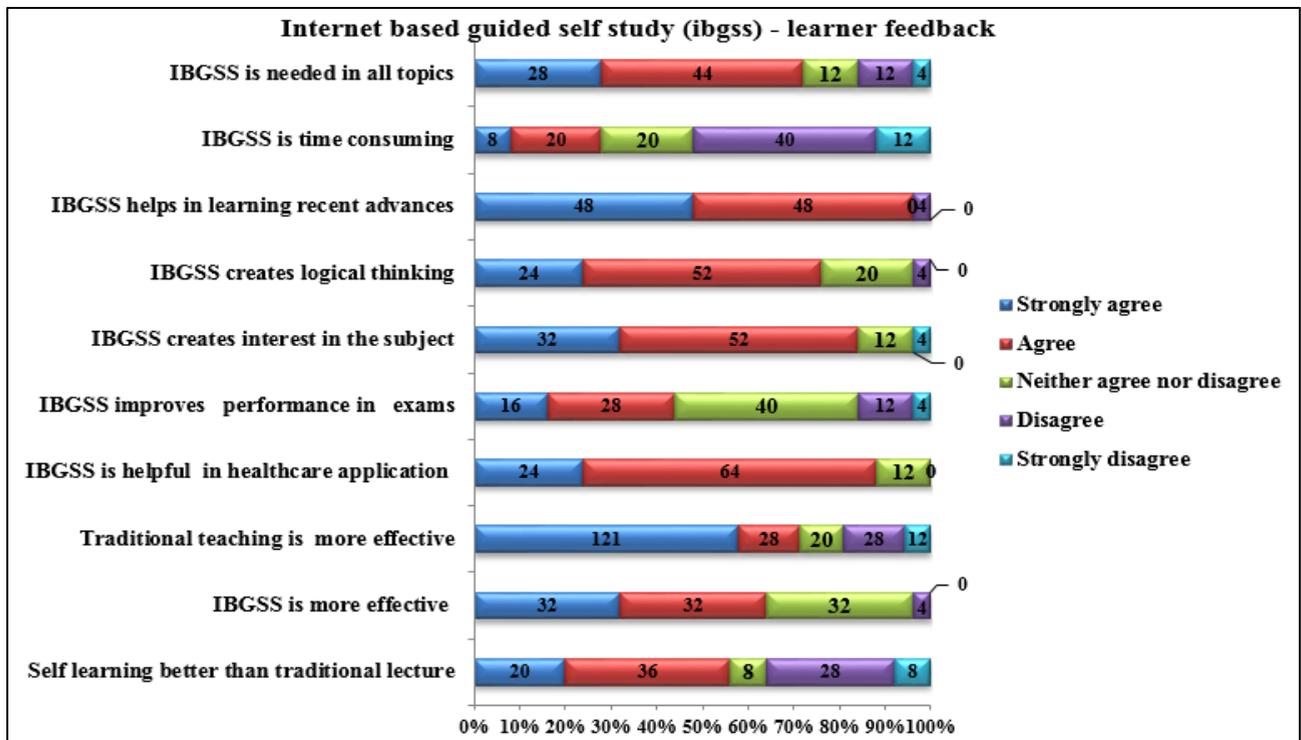


Fig. 4

Discussion

Pedagogy is a time tested mode of teaching. Teaching has been a one sided affair till recently. The shift from a teacher oriented learning approach to a learner oriented learning approach is relatively new. Now universities world over has shifted from a teacher oriented learning approach to a more learner oriented approach. Teacher has taken up the role of a felicitator in the learning process.⁵ The availability of information is vast now. It is made possible with the advent of the internet. Now information, whether authentic or otherwise is available in plenty. The teacher just has to guide the learner in the right path in assimilating the relevant information and help the learner from getting lost in the vast sea of less useful information on a concerned subject. The use of internet in self-study is now accepted globally. Even top universities have started online courses. This has helped adults in continued education and also to acquire new skills and knowledge. Even when this is the case the traditional lectures are still used in most centres of learning.^{6,7} Students still appreciate a good lecture. Combining both the benefits of the traditional and newer internet based learning is more beneficial to the student in a way. The present study shows that traditional lectures have not lost their charm even in this online era.

1. The post test scores after traditional didactic lecture and internet based teacher guided self-study methods were significantly more than pre test, paired t test showed $p = 0$ and $p = 0$ respectively. This implies the effectiveness of teaching and learning in both the methods.

The effectiveness of the teaching learning by both didactic lecture and internet based guided self-study is in accordance with a previous study (1, 2)

2. The post test scores of traditional lecture were significantly higher than IBGSS, unpaired t test showed $p < 0.003$.

The traditional lecture group showed increased post test score because of the importance given to important aspects of the topic by the teacher

This study has supported the claims of orthodoxy over modernists among medical educationists.

3. The learners in the interventional group who attended the IBGSS gave a favourable positive feedback. This feedback is probably due to the active participation on the learner’s part and also the novelty in using the internet as a mode of TL.

The reason for continued interest in traditional lecture may be because the teacher knowingly or unknowingly stress on certain points useful for the post test. The group which attended the IBGSS felt that they were left out from the passive learning process. This feeling, even when they enjoyed the guided self-study using internet might have effected their assimilation of knowledge. The other group which received the didactic lecture paid keen interest in the points stressed during the lecture and made use of it in the post test. This might explain the increased performance they exhibited in the post test. Learning is probably still considered an active work from the teacher’s side. This attitude has to change in the present era of the availability of information by the click of a button.

Limitation

1. The number of topics discussed is less, so the results may be biased.
2. Feedback could be collected only from the interventional group as cross study was not done.

Conclusion

The study shows that traditional lecture is better than internet based guided self-study for knowledge assimilation and retention. Positive favourable feedback after IBGSS shows this new method of teaching learning is acceptable to the learners, though not reflected in the test scores, this calls for further study.

Conflict of Interest: None.

Reference

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