

COMPARATIVE STUDY TO ASSESS THE EFFECTIVENESS OF LECTURE METHOD OF LEARNING VERSUS COMPUTER ASSISTED LEARNING

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Abstract— Primary objective of teaching activities is the flow of information between teacher and students. Direct and indirect methods of instruction are the advantages of delivering very specific learning targets, where students are explained the importance of a subject with examples, logical reasons can be stressed upon to provide experiences that can inspire learning processes. Quasi experimental study was chosen to compare the level of knowledge of lecture method of learning versus Computer assisted learning among B.Sc(N) III year students. A total of 25 samples in each group were selected by using convenient sampling technique. Self administered questionnaire was used to collect the data by using structured Multiple Choice Questions after obtaining consent from participants. Collected data were analyzed by using descriptive and inferential statistics. The finding of the study revealed that there was a improvement in the knowledge gained in both groups however difference between the two groups were statistically insignificant.

Keywords— *Computer Assisted Learning, Lecture method, Myocardial Infarction, Nursing.*

I. INTRODUCTION

Primary objective of teaching activities is the flow of information between teacher and students. Direct and indirect methods of instruction are the advantages of delivering very specific learning targets, where students are explained the importance of a subject with examples, logical reasons can be stressed upon to provide experiences that can inspire learning processes.

However lecture method of learning is highly dependent on knowledge base and skill of the teacher requiring well organized content preparation and good communication skill of the teacher. Computer assisted learning is a form of self instruction in which material can be presented via text, visual, sound and motion digital files, providing a multimedia approach to learning. In lecture method students may receive the content by the instructor reading selected particular traditional books, attending class and taking notes. Whereas in computer assisted learning make students to be active by active learning, enrichment of collaborative learning, encouragement of greater students independence, and task based teaching. Jose Louis Fernanadez Aleman (2011) had conducted a study to assess the most innovative aspect of the proposal is the design of nursing assignments as on-line competitions. The effects of competitive e-learning versus

conventional teaching methods on the acquisition and retention of knowledge were compared in a course on medical–surgical nursing. Significant benefits were found following our approach. The work of the students could be evaluated along the course, the workload of instructors was reduced and students received immediate feedback by the on-line judge, which promoted both independent learning and reflective thinking. The approach is applicable to any other nursing educational institution.

II. NEED FOR THE STUDY

Lecture method is a teaching method. A lecture is a oral presentation intended to present information or teach student about a particular subject. Lectures are used to convey critical information, background, theories and nursing procedures. Though the lectures are much criticized as pedagogical method, educational institutions have not yet found practical alternative teaching methods for large majority of their courses. A critic point out of which is lecture method is mainly a one - way method of communication that does not involve the students' participation. Therefore lecturing is contrasted to active learning but it is cheap, quick and can cover large number of students at a time.

Today's students are maturing with visual devices like television, video, computer and Internet. It is not possible to draw these students' interest by using traditional methods that were used in the past. As a result of technological developments that appeared in the last quarter of the 20th century, a big difference occurred between the ways of introduction of knowledge at schools and the ways of getting knowledge in the society. Students get a lot of information by visually enriched resources like computers and television that are mostly used in our daily life.

The way of gaining knowledge of students and so it becomes difficult to teach them with traditional methods (Cepni et al., 2004; London, 2005). Rachele (2009) had conducted this study to compare knowledge acquisition and retention, modification in clinical practice and learner satisfaction when using computer-assisted (CAI) and traditional classroom instruction to teach positioning and pushing guidelines during the second stage of labor.

A randomized, post-test only, two-group design was used. The sample included 104 intra partum nurses employed in a women's specialty hospital. No difference was found with reports of changes in clinical practice between the two groups. Results indicated that nurses completing the module using the computer exhibited higher knowledge scores, retained more knowledge and reported greater satisfaction with CAI. However, the method of instruction made no difference in changing clinical practices during the second stage of labor.

Sherman H, et.al (2012) had conducted a comparative study between blended versus lecture method on Critical care pharmacology education for the nurses orienting to specialized areas. The findings determined no significant differences in cognitive learning outcomes or learner satisfaction between blended versus lecture format.

Magda Abdelaziz et.al (2011) The study recommended that it is better to use and tune a “blended learning environment” that integrates the strengths of both e-learning and lecture into nursing education to provide the most efficient and effective instruction and overcome the deficiency of limited skills and resources.

Objectives of the Study:

- To assess the level of knowledge among B.Sc(N) III Year students in two groups
- To compare the level of knowledge of lecture method of learning versus Computer assisted learning among B.Sc(N) III year students

Hypotheses:

- There is a significant increase in the level of knowledge among Lecture method of learning group of B.Sc(N) III year students
- There is a increase in the level of knowledge among computer assisted learning group of B.Sc(N) III year student
- There is a difference in the level of knowledge in between Lecture method of learning and computer assisted learning among B.Sc(N) III year students.

III. RESEARCH METHODOLOGY

Research Design:

Quantitative approach - Quasi experimental post test only design was chosen to compare the level of knowledge of lecture method of learning versus Computer assisted learning among B.Sc(N) III year students.

Setting:

The study was conducted at Saveetha College of Nursing, Chennai

Population:

All the B.Sc (Nursing) III year students

Sample:

B.Sc(Nursing) III Year students of Saveetha College of Nursing

Sample Size:

The sample size consists of 25 in each group. 25 samples in lecture method of learning group and 25 in computer assisted learning group.

Sampling Technique:

Simple Random sampling technique by lottery method

Criteria for selection of samples

Inclusion Criteria:

- Both male and female students of B.Sc(N) III year students
- All B.Sc(N) III year students who are willing to participate the study

Exclusion Criteria:

- Students those who are on long absent
- Students who are absent on the day of data collection

IV. DEVELOPMENT AND DESCRIPTION OF THE TOOL

Tool I: Demographic variables

Tool II: Structured Multiple Choice questionnaire used to assess the knowledge on Myocardial infarction

Data Collection Procedure

Formal permission was obtained from the authority. The participants were informed about the purpose of the study and their informed verbal consent was taken. They were assured about their confidentiality and anonymity.

Lecture method of learning group students were received the knowledge on myocardial infarction by the lecture method. The content was delivered for 45minutes by using black board and chart. After the class the students were permitted to discuss and clarify their doubt.

Computer Assisted learning group students were assigned to learn by themselves about the Myocardial infarction through the computer accessing internet. One day time was given to learn.

Post test was assessed for the both the group on the same day by using Structured Multiple Choice questionnaire.

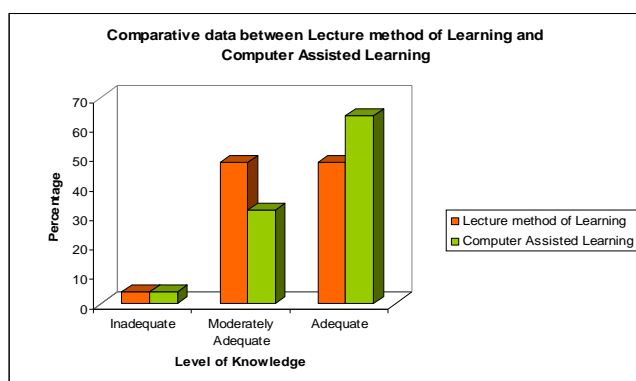
Statistical Methods Used

- Descriptive Statistics
- Mean and Standard Deviation.
- Inferential Statistics
- Student 't' test to compare the level of knowledge between the lecture method of learning versus Computer assisted learning

V. RESULTS

Comparison of level of knowledge on Myocardial Infarction among B.Sc (N) III year students between Lecture method of learning and computer assisted learning

Level of Knowledge	Lecture Method of Learning n = 25		Computer assisted learning n = 25	
	Frequency	Percentage	Frequency	Percentage
Inadequate	1	4%	1	4%
Moderately adequate	12	48%	8	32%
Adequate	12	48%	16	64%



This table and figure shows the comparison of level of knowledge on Myocardial Infarction among B.Sc (N) III year students between Lecture method of learning and computer assisted learning. In Lecture method of learning group, out of 25 samples, one(4%) had inadequate knowledge and 12(48%) of them had moderately adequate and adequate knowledge. In Computer assisted learning group, out of 25 samples, one (4%) had inadequate knowledge and Eight (32%) of them had moderately adequate and 16 (64%) adequate knowledge.

GROUP	Mean (X)	Standard Deviation (σ)	Students 't' Value
Lecture method of learning	17.9	19.04	1.63 (P>0.05) NS
Computer Assisted Learning	19.04	2.48	

Data on effectiveness of knowledge between Lecture method of learning and Computer assisted learning

This table shows that Lecture method of learning mean score was 17.9 with 19.04 standard deviation and Computer Assisted Learning mean score was 19.04 with 2.48 standard

deviation. But there was no significant difference between the Lecture method of and Computer Assisted Learning.

VI. DISCUSSION

The primary objective of the study was to compare the level of knowledge of lecture method of learning versus Computer assisted learning. Both the groups have gained in knowledge but there was not a significant difference between these two groups. Each method of teaching has its own advantage and disadvantage. Lecture method of learning group students had direct interaction with the instructor.

Computer assisted learning group had more exposure to learn about the Myocardial infarction but did get the exposure o clarify the doubt. If lecture method is complemented with computer assisted method students may understand better and retain the knowledge for longer period.

These results were consistent with Magda Abdelaziz et.al (2011)The study recommended that it is better to use and tune a “blended learning environment” that integrates the strengths of both e-learning and lecture into nursing education to provide the most efficient and effective instruction and overcome the deficiency of limited skills and resources

VII. CONCLUSION

There was an improvement in the knowledge gained in both groups however difference between the two groups were statistically insignificant immediately after the teaching process. It was concluded that CAL can be an effective teaching aid and should be seen as complimentary to other contact teaching methods more suited for knowledge, clinical skills and attitudes.

Recommendations:

- The same study can be replicated on a larger sample to generalize the findings.
- The same study can be done in long term to see retention of knowledge.
- Comparative study can be done between any two different methods of teaching to assess the knowledge and skill of the students

Conflict Of Interest:

- There was no conflict of interest found

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