

A COMPARATIVE STUDY FOR EFFECTIVENESS OF USE OF AUDIO-VISUAL AIDS IN AMPHIBIAN LABORATORY

Dr. Puneet Aggarwal, Dr. Neeraj Mahajan
Dept. of Physiology, Smt. NHL Municipal Medical College,
Ahmedabad
drpuneetagg@gmail.com neeraj.mahajan@gmail.com

ABSTRACT: It was observed that the students attending the practicals of amphibian and mammalian laboratory find difficulty in understanding the concept with usual lectures. The efficacy of regular lecture delivery was challenged with the introduction of audio-visual aids with lecture. This led to the present study in which the efficacy of lecture was determined by scoring performance of students on the basis of pre-designed test which was taken after the lectures with and without audio-visual aids.

RESULT: The study revealed significant ($p < .005$) increase in understanding and performance of the students who were given lecture along with audio-visual aids.

Index Terms: amphibian and mammalian laboratory, audio-visual aids



1 INTRODUCTION

It has been proved earlier in various studies that use of multimedia and audio visual aids in teaching methodology is effective over the regular lecture delivery system. During the practicals of amphibian laboratory, the usual lecture delivery is widely used. Since there is a ban on live demonstration of amphibian practical, it has been observed that students either lose their concentration very quickly or it is very hard for them to understand the concept. To increase the efficacy of teaching a pre designed audio-video was used in the study group against the control group. The effectiveness of teaching method was then evaluated by a set of questionnaire after the completion of lecture.

2 AIMS AND OBJECTIVE:

1. To study the effect of audio visual aids on teaching pattern.
2. To establish the effectiveness of introducing alternative teaching methodology.

INCLUSION CRITERIA

Students of first year MBBS were taken as subjects for study. The study and control was a random group of students having both average and above average students. The age group was 17 -19years. In both groups, teacher was same and same set of information was delivered.

Exclusion criteria

Students were excluded who had already read the topic to be taken in lecture during the study.

3 MATERIAL AND METHOD

The present study was carried out among 50 healthy students of first year MBBS students.

A pre designed audio video was used as alternative method along with the lecture in the study group while the control group was taken for lecture only. The information set for lecture was common to both. The lecture was taken in amphibian laboratory on effect of two successive stimuli on frog's skeletal muscle for forty minutes. Post lecture, the analysis was done with the help of pre designed questionnaire based on the information delivered. Post lecture, the analysis was done with the help of pre designed questionnaire based on the information delivered. Students were scored on their performance in the test.

For statistical analysis, SSPS software was used.

4 RESULTS

The mean age of students was 17 ± 1.5 years. As shown in the Table, the test score of students of study group was more than the control group.

Table: Analysis of performance on the basis of scores given

	GROUP A Mean \pm SD	GROUP B Mean \pm SD	P value, .005
Test scores	7.5 \pm 2.6	5.5 \pm 1.32	Significant

Group A: students of study group with audio-visual aids

Group B: students of control group.

The table clearly shows that study group scored well than the control group. Statistical analysis proves that the students of study group with audio visual aids out performed those of control group with no availability of audio visual aids.

5 DISCUSSION

Discussion with the advances of newer technologies in the every field of life, time is here when we should incorporate the alternative methods of teaching in our regular lecture delivery system. Earlier in various studies it has been proven that use of technology in lectures, improves the efficacy of lecture delivery.

With the ban on animal dissection by government of India, practicals in amphibian laboratory of physiology, (live demonstration) are not possible these days. It is very cumbersome for a student to understand and orally visualize the dissection of animal and recording of graphs. An audio video was taken as an alternative approach to demonstrate how practical is conducted and the information was delivered as usually done.

The present study shows that the efficacy of teaching and delivering information was easier and effective in terms of recollecting facts by students. These can be attributed to the fact that Wernick's area of brain can integrate the information received via auditory and visual pathway. This information is better understood and registered for a longer time.

The present study was conducted to evaluate the effectiveness of using alternate method with regular lectures. The probable use of this study can be by incorporating audio-visual aids with lectures during amphibian and mammalian practicals in medical teaching.

6 LIMITATIONS

This study is a convenience based study. A bigger study group can be taken.

Other tests like cognitive function analysis, viva voice, micro teaching can also be done to increase the effectiveness of study

REFERENCES:

- [1] Bates A.W (1984) – Broadcasting in Education – An evaluation constable & company , Candon.
- [2] Berger, Arthur Asa (1982), "Media Analysis Techniques", Sage publications, New Delhi.
- [3] Green T.L (1963)- "The Visual Approach in Teaching" oxford university press, London.
- [4] Hackman, M. Z. and Walker, K. B. (1990) Instructional Communication in the Televised Classroom: the Effects of System Design and Teacher Immediacy on Student Learning
- [5] and Satisfaction, Communication Education, 39, 196 – 206
- [6] Brophy, K.A. : (1999). Is computer-assisted instruction effective in the science
- [7] classroom? Masters Abstracts International, 37(5), 1302. (UMI No.1393859)
- [8] Brown, K.G. : (2001). Using computers to deliver training : Which employees learn and
- [9] why? Personal Psychology, 54, 271-296.
- [10] Brown, Johnes, Lewis, Richard, B. Harclerod, Fred N. : (1983), "Instructional
- [11] Technology Media and Methods" New York; Mac Graw Hill Book Co.
- [12] Bruce Joyce,: (1997), Models of Teaching, 5th Edition

Address for Correspondence :

Dr Puneet Aggarwal

Author is pursuing post graduation in physiology as well work as a Jr. Lecturer in Smt NHL Medical College

Email: drpuneetagg@gmail.com

Addr: C7, Tulsi Apts, Tulsi Row Houses, Jodhpur Gam Road, Satellite, Ahmedabad

Mobile: 09924185429.