With widespread use of multimedia in higher education, it has become increasingly important to examine the effect of teaching on students' achievement. There is considerable body of evidence to suggest that different teaching methods can have different degree of success.

The present experimental study was undertaken to compare the effect of lecture method and multimedia teaching on students' achievement and their satisfaction in a selected Nursing colleges, Bhopal (MP).

**Objectives**

The study had two broad objectives:

1. To assess and compare the effects of lecture method and multimedia teaching on students' achievement.
2. To compare the satisfaction level of students between lecture method and multimedia teaching.

**Hypothesis**

$H_0$: There is significant difference in the effectiveness of lecture method and multimedia teaching on students' achievement at 0.05 level.

**Conceptual framework**

The conceptual framework was modified from “Framework for designing, implementing and evaluating teaching strategies in Nursing” by Jeffrie (2005). Components of the framework include best practices in education, student factors, teacher factors, design characteristics and outcomes. Variables are identified for each of the framework components.

**Review of Literature**

Papanis E (2010) carried out an experiment to investigate the effectiveness of traditional teaching as compared to e-learning. Fifty students of various departments were divided into two subgroups – in-vivo instruction and e-learning and were taught negotiation skills. Knowledge and application of knowledge were assessed and evaluation forms and self report questionnaires were used. Result showed statistically significant difference in all measurements in favour of traditional teaching.

Michael Norbert et al (2009) compared the impact of an active teaching approach and a traditional teaching style on students' cognitive outcomes. One class was taught in an active or non-traditional manner with a variety of active learning exercises, the second class was taught in a passive manner emphasising daily lectures. Although the active learner approach does not appear to have improved overall mastery of the subject, the study concluded that active learning can lead to improved cognitive outcomes within a class.

**Methodology**

The research approach adopted was evaluative type with pre-test - post-test research design. For sampling, Stratified Random sampling was used. Independent variables were lecture method and multimedia teaching; dependent variable being the effect on students' achievement. The study population consisted of 60 BSc (N) III year students from a selected college of nursing in Bhopal (30 for lecture method and 30 for multimedia teaching).

**Development and description of tool**

The tool was developed through extensive literature review of books, journals, published and unpublished articles and reports. The following sections were prepared for the tool.

A. Demographic data of students.
B. Structured knowledge questionnaire was developed on the topic, Evolution of mental health (20 items).
C. Lesson plan and lesson content separately for lecture method and multimedia teaching.
D. Opinionnaire regarding students' satisfaction on lecture method and multimedia teaching.
Data collection procedure

Formal administrative approval was taken from concerned authorities. The researcher gave pre-test to all 60 students of BSc (N) III year. The students were divided into two groups of 30 each. Group I was taught using lecture method and Group II by multimedia method by researcher herself. A post-test was conducted on day 5.

Results

The data was analysed using descriptive and inferential statistics.

Table 1 shows that mean post-test score of multimedia teaching (71.76) was apparently higher than mean post-test score of lecture method (54.6). It is clear that t-value (6.19) is more than the table value for 0.05 level of significance. Hence we can conclude that there was significant difference between “lecture method” and “multimedia teaching” on students’ achievement. Hence hypothesis is accepted.

Table 2 shows that most of the students were fully satisfied with multimedia teaching (11, 36.67%) as compared to lecture method (5, 16.66%). About 43.33 percent of students expressed partial satisfaction with multimedia teaching in comparison to lecture method (20). Majority of students felt dissatisfaction with lecture method (19, 63.34%).

Discussion

The present study revealed that mean post-test knowledge score after administration of multimedia teaching (71.76) is significantly higher than mean post-test score after administration of lecture method (54.6).

These findings are consistent with those of Ahmad M (2010) who studied effectiveness of innovative and traditional methods of teaching biology in junior college. Results showed that multimedia teaching was very effective.

However, the findings of study are contrary to findings of Papanis E (2010) who investigated the effectiveness of traditional teaching and e-learning and found traditional teaching statistically significant in all measurements.

Conclusion

The findings of the present study revealed that there is a highly significant difference between the student’s achievement in post-test of multimedia teaching and lecture method. Also, students were more satisfied with the multimedia approach of instruction in terms of topic clarity.

The concept of paperless and pen less classroom teaching are emerging as an alternative to old teaching learning methods. Change in education delivery by the teacher are inevitable with the introduction of multimedia technology and the spawning of a technologically savvy generation of our age.

Recommendations

1. As various multimedia teaching devices are available, the teacher should weigh the advantages and disadvantage of each type before implementing it in classroom teaching.
2. Combination of traditional and non-traditional teaching strategies must be inculcated for effective student achievement and satisfaction.
3. For effective teaching, the teacher should have the mastery of the content as well as expertise and adaptability on methods.
4. TNAI publication department should consider taking initiative to develop multimedia content and software programmes for various nursing topics.
5. INC should make a mandatory requirement for availability of multimedia contents as a pre-requisite of AV aids lab.

References