EFFECTIVENESS OF MULTIMEDIA STRATEGIES IN LEARNING ZOOLOGY

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Abstract

Information communication technology have become most important part of our life. In the modern age, education technology has become a powerful pedagogical tool in Education. Multimedia based technology learning increasing for access to knowledge and promote learning. It is important that the development of education, the conventional teaching methods are not enough to stimulate interest for learning among students. These technologies were able to provide enhanced learning facility and with attention to the specific needs of individual users. Multimedia strategy learning are becoming most important of the educational systems. This multimedia strategies gives a perfect tool for student community for making flexible learning as well as to teachers for teaching and it provides an enjoyable environment for both the teachers and the students. It has new approach like Multimedia, E-tutoring, E-learning, and embedded learning, etc. Multimedia the most widely needed destination is a combination of many media

with interactive facilities. The multimedia strategy provides the multi-dimensional stimulus to listening pleasure to the learners. 'A traditional learning structure does not guarantee the delivery of a consistent message whereas consistency is assured in E-learning" (Albert Lewis, 2005). Multimedia provides immediate comprehensive feedback to the students; it enhances effectiveness of learning and as well as it improves quality of education. It develops student's activity as mastery learning; it stimulates the student's curiosity. Right now, in India, educational institutions are gearing up to provide information networks to give students access to digital resources. Thus, multimedia is to provide a credible reality and a challenge to our existing mental processes, to provide us with an appropriate level of cognitive conflict and to motivate. Thus, in this paper an attempt has been made to discuss the effectiveness of multimedia strategies in learning zoology in higher secondary schools.

__Key words__: multimedia, technology, learning, strategies.

Introduction

In the modern age, technology has become a powerful pedagogical tool in Education. Multimedia and internet-based teaching technologies increasing for access to knowledge and promote learning. It is important that the development of education, the conventional teaching methods are not enough to stimulate learning interest among students but information communication technology have become most important integral part of our life. These technologies were able to provide enhanced learning facility and with attention to the specific needs of individual users. Multimedia technology empowers the educational process by means of increased interaction between students and courseware in the classroom. Multimedia strategies are becoming most important of the educational systems. This multimedia strategies gives a perfect tool for student community for making flexible learning as well as to teachers for teaching. It provides an enjoyable environment for both the teachers and the students. It has new approach like Multimedia, E-tutoring, E-learning, and embedded learning, etc. Multimedia the most widely needed destination is a combination of many media with interactive facilities. The multimedia strategy provides the multi-dimensional stimulus to listening pleasure to the learners. Which is ensures flexible learning both teacher and learner, the pattern of multimedia strategies and its potential to improve all aspects of our life. 'A traditional learning structure does not guarantee the delivery of a consistent message whereas consistency is assured in E-learning" (Albert Lewis, 2005). Multimedia provides immediate comprehensive feedback to the students, It enhances

effectiveness of learning and as well as it improves quality of education. It develops student's activity as mastery learning; it stimulates the student's curiosity. Right now, in India, educational institutions are gearing up to provide information networks to give students access to digital resources. Thus, multimedia is to provide a credible reality and a challenge to our existing mental processes, to provide us with an appropriate level of cognitive conflict and to motivate.

Educational technology

The word technology is derived from the Greek word "techno" which means the willingness, skills, and knowledge. "Educational technology implies a behavioral approach to teaching and learning. It also attempts to incorporate the management principles of cost effectiveness and the efficient development and use of available resources in man and materials. It involves media, methods, equipment and resources. Educational technologies include not only the Internet, which provide access to resources around the world, but also innovations in recording, collaborating and responding technologies that offer enhanced environments for scholarly interaction and intellectual pursuit. These technologies are valuable, when they serve the larger educational goals i.e. to create active learners who not only master the content, but also develop techniques and modes of critical thought that will enable them to be informed about the latest technology used in education. Most students are immersed in information technology in their daily lives.

They expect that their academic lives will be similarly rich in technology, but crucially, the technology landscape now includes a rich mixture of new kinds of course materials, multimedia content, simulations and applications, as well as tools for communication, collaboration, writing and research. Educational technology holds the promise of creating more interactive classes, engaging students more deeply and more actively in the course content and contributing to a student's learning of complex concepts by adapting to the student's level and progression of understanding.

Media in education

In education different types of media and technologies are used to transfer education to the learners. Rumble (1995) said that four media namely print, audio, television and computer are available for teaching purposes, in one technological form or another. A medium is a generic form of communication associated with particular ways of presenting knowledge. According to Prof Bates (1995) there are five important media in education: Direct human contact, Text, Audio, Television and Computer, the use of each media gives both

the variety and the chance of accommodating different learning styles. Prof. Bates goes on to argue that it is better to use a limited range of technologies in order to reduce redundancy and wasteful expenditure and provided all the main media are covered. One medium may serve a teaching function better than another in a particular area.

Multimedia is an effective tool in education

The current educational system has been broadly using multimedia technologies as the functional teaching aids in school education. The school education is an amalgamation of the students with both psychological and physical disabilities. To equip the students with proper education, technologically familiarized instructional approaches would be implemented by the teacher to teach the subject matter in the school. Nowadays all the education would be conveyed through technology based instructional strategies to each and every student's in the school. On other side, the multimedia and e-learning tools can be used as an enhancement to customary classes. At present usage of interactive multimedia is increased which develop a proper teaching learning process. It plays a very considerable role in school education for teaching students to all subject matter.

Objectives

- ❖ To find out there is any significant difference between posttest and retention posttest score of experimental group with respect to learning of zoology.

- ❖ To find out there is any significant difference between posttest and retention posttest score of control group with respect to learning of zoology.

Sampling method and research design

The investigator has selected 70 sample of XIth standard students from population by adopting Simple Random Sampling Technique. 35 students in the experimental group of boys school and 35 students in the control group of girls school in government higher secondary school in Pudukkottai Dist. The sampling techniques adopted in this study is purposive sampling and the research design is Parallel group pre-test and post-test design.

Statistical techniques used

Investigator had taken the score obtained by the 70 sample and used the following statistical techniques for the data analysis.

Mean, Standard Deviation, and 't' test and Pearson product moment Correlation

Hypotheses

❖ There is no significant difference between posttest and retention posttest mean score of experimental group with respect to learning of zoology.

❖ There is no significant difference between posttest and retention posttest mean score of control group with respect to learning of zoology.

Methodology of the study

In this study, pretest and posttest equivalent group design (Best and Kahn,1995) was used. The study was carried out in the following stages.

Stage 1: Grouping the sample

At this stage the learners tested on intelligence. On the basis that the learners were divided into two equivalent groups like control group and experimental group. The scores in the test proved the homogeneity of the sample groups.

Stage 2: Conducting pre-test

In this stage, both control group and experimental group underwent pre-test and find out the previous knowledge of the groups.

Stage 3: Conducting the treatment

In this stage, the experimental treatment i.e. teaching with multimedia module was given to the experimental group and the traditional teaching method was given to the control group.

Stage 4: Conducting post test

In this stage, both experimental group and control group underwent posttest.

Stage 5: Conducting retention post test

In this stage, both experimental group and control group underwent retention posttest

Stage 6: The result of the treatment

The effectiveness of the multimedia module in learning on achievement was find out by the post test scores.

Finding of the study

Table :1

There is no significant difference between posttest and retention posttest mean score of experimental group with respect to learning of zoology.

Experimental Group	N	Mean	S. D	df	't'- value	Level of significance
Post test	35	38.03	3.22	68	1.089	Not Significant at 0.01 level
Retention posttest	35	37.17	3.36			

The calculated' 't' value (1.089) is less than the table value (2.72) with corresponding to the 0.01 level of significance. Hence the null hypothesis is accepted. Hence it is concluded that there is no significant difference in posttest and retention post-test of experimental group respect of with respect to their learning of zoology.

Table :2

There is no significant difference between posttest and retention posttest mean score of control group with respect to learning of zoology.

Control Group	N	Mean	S. D	df	't'- value	Level of significance
Post test	35	30.03	5.46	68	2.002	Significant at 0.01 level
Retention Post test	35	27.51	5.04			

The calculated' 't' value (2.002) is less than the table value (2.72) with corresponding to the 0.01 level of significance. Hence the null hypothesis is accepted. Hence it is concluded that there is no significant difference post-test and retention posttest of experimental group. Thus, the result reveals that the mean scores post-test (38.03) is greater than the retention posttest with respect to their learning of zoology.

Conclusion

Multimedia module can be utilized anywhere, anywhere in the world. Multimedia learning strategies ensures flexible learning and user friendly because the learners can learn on own speed. Which is very much useful to the average learners, below average learners and slow learners to use it again and again to develop their learning skill with own pace and multimedia-based learning would help to keep strength of retention for longer period than conventional method. This Multimedia strategies learning was exposed clearly the learning with multimedia module is an effective tool and promote academic achievement in zoology. It would be enriching the learner's attitude about learning and promote learning interest. Based on the results and findings of the study, it is concluded that the developing multimedia module help the student to understand the concept clearly, easily and would be retention, therefore it is highly effective tool for learning.

References

1. ***Agarwal Y. P & Manisha. M (1998).*** *Effectiveness of Multimedia, programmed learning and traditional methods of teaching, A meta-Analytical Study on Indian Researches. Indian Education Review.*

2. ***Anbalagan, S., & Jayachithra, J****. (2020). Satisfaction of Flipped Classroom Teaching Strategies Among B.Ed., Teacher Trainees. International Journal of Scientific & Technology Research, 9, 5196-5198.*

3. ***Arulsamy.S and Sivakumar.P (2009).*** *Application of ICT in Education", NeelKamal Publication, Hyderabad*

4. ***Jayachithra, J****. (2020). Information and communication technology in teaching and learning: perspectives on E-learning at higher education level. International Journal of Recent Technology and Engineering (IJRTE) ISSN, 2277-3878.*

5. ***Jayachithra, J****. (**March-2020**) "Cognitive Perspectives on Social and psychological Skills among Teacher Trainees in Relation to their Teaching Performance" Journal of Xi'an University of Architecture & Technology, Volume XII, Issue III,P.No. 17-22*

6. ***Monicka, M., & Jayachithra, J****. (2019). Information and Communication Technology Awareness among Prospective Teachers. Pramana Research Journal (ISSN No: 2249-2976) Volume, 9.*