Construction and Tryout of Multimedia Package in English Subject For The Students of Standard XI

Anjali Solanki, Dr. Sonal Sevak

School of Doctoral Research And Innovation, GLS University, Ahmedabad, Gujarat, India

Abstract- People's understanding of what computers can do has shifted dramatically as the size and cost of these devices has decreased while their power has grown. First, computers were seen as number- crunching machines, then came data processing, now we live in the age of tools that manipulate symbols and information. This research is based on the growing certainty that the next evolutionary stage is computers and telecommunications fusing into virtual environments. "Cyberspace" is not simply a channel within which content flows, but a virtual place to live that competes directly with reality for the attention of many, especially new generation of students. For this reason, charting the strengths and limits of computer based multimedia package is vital for educational technology. In this research, researcher has constructed a multimedia software in english subject and examined effect on the achievement of students in english subject.

Keywords - Multimedia, Students, English.

I. INTRODUCTION

The world in which we live is changing rapidly and the field of education is experiencing these changes in particular as it applies to Media Services. The old days of an educational institution having an isolated audio-visual department are long gone! The growth in use of multimedia within the education sector has accelerated in recent years, and looks set for continued expansion in the future.

Teachers primarily require access to learning resources, which can support concept development by learners in a variety of ways to meet individual learning needs. The development of multimedia technologies for learning offers new ways in which learning can take place in schools and the home. Enabling teachers to have access to multimedia learning resources, which support constructive concept development, allows the teacher to focus more on being a facilitator of learning while working with individual students. Extending the use of multimedia learning resources to the home represents an educational opportunity with the potential to improve student learning.

The elements used in multimedia have all existed before. Multimedia simply combines these elements into a powerful new tool, especially in the hands of teachers and students. Interactive multimedia weaves five basic types of media into the learning environment: text, video, sound, graphics and animation. Since the mode of learning is interactive and not linear, a student or teacher can choose what to investigate next. For example, one does not start on the first page of a linear document and read to the end. Interactive multimedia learning mode is more like constructing a spider's web, with one idea linked to another, allowing choices in the learner's path.

One of the techniques to improving the students' meets the academic needs and helps them developing English language skills is providing multimedia during the process of teaching and learning in the classroom. Multimedia classroom provide the students chances for interacting with diverse texts that give them a solid background in the tasks and content of mainstream School courses.

II. INTRODUCTION TO MULTIMEDIA PACKAGE

The researcher has created a multimedia package based in English grammar for the types of sentences. In this multimedia package researcher has added animated text, pictures, sound, animated video, etc to make multimedia package very attractive. The package containing a whole teaching material through which teachers can teach very effectively.

A Multimedia Learning environment involves a number of components or elements in order to enable learning to take place. Hardware and software are only part of the requirement. As mentioned earlier, multimedia learning integrates five types of media to provide flexibility in expressing the creativity of a student and in exchanging ideas.

Text

Out of all of the elements, text has the most impact on the quality of the multimedia interaction. Generally, text provides the important information. Text acts as the keystone tying all of the other media elements together. It is well written text that makes a multimedia communication wonderful.

- **Sound**

Sound is used to provide emphasis or highlight a transition from one page to another. Sound synchronized to screen display, enables teachers to present lots of information at once. This approach is used in a variety of ways, all based on visual display of a complex image paired with a spoken explanation. Sound used creatively, becomes a stimulus to the imagination; used inappropriately it becomes a hindrance or an annoyance

- **Video**

The representation of information by using the visualization capabilities of video can be immediate and powerful. While this is not in doubt, it is the ability to choose how we view, and interact, with the content of digital video that provides new and exciting possibilities for the use of digital video in education. There are many instances where students, studying particular processes, may find themselves faced with a scenario that seems highly complex when conveyed in purely text form, or by the use of diagrams and images. In such situations the representational qualities of video help in placing a theoretical concept into context.

- **Animation**

Animation is used to show changes in state over time, or to present information slowly to students so they have time to assimilate it in smaller chunks. Animations, when combined with user input, enable students to view different versions of change over time depending on different variables.

- **Graphics**

Graphics provide the most creative possibilities for a learning session. They can be photographs, drawings, graphs from a spreadsheet, pictures from CD-ROM, or something pulled from the Internet. With a scanner, hand-drawn work can be included. Standing commented that, "the capacity of recognition memory for pictures is almost limitless". The reason for this is that images make use of a massive range of cortical skills: color, form, line, dimension, texture, visual rhythm, and especially imagination.

III. OBJECTIVE OF STUDY

- To study the effect of multimedia package on achievement in English subject of students of experimental group.
- To compare the achievement in English subject of students experimental group and controlled group.

Hypothesis

There will be no significant difference between mean score of achievement test of students of Experimental group and controlled group.

Delimitations of study :-

1. The present study was conducted in a higher secondary school of Ahmedabad city.
2. The students of standard XI were involved in this study.

Significance of study :-

The researcher has multimedia package in English subject of standard XI. To create this package researcher has used the latest techniques. So the software is ultramodern. This type of package can be used as a teaching material as well as learning material. So this study is very important to understand how much these type of software useful to teachers.

Sample of Study :-

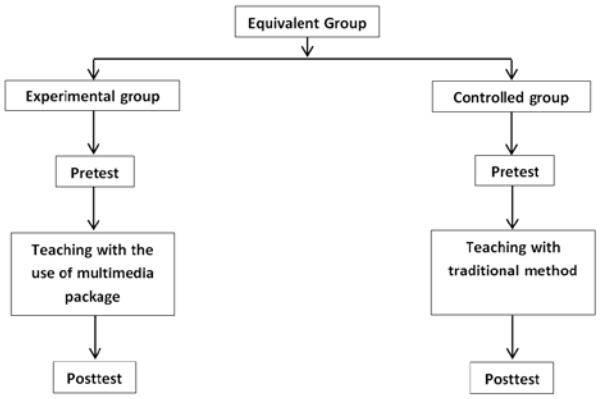
The researcher selected 86 students out of which there were 56 boys and 30 girls. The researcher has distributed these students in two groups each have 44 students. In each group there were 28 boys and 15 girls.

Method of study :-

The researcher had to check effect of new teaching method, so he has selected experimental method for study.

IV. EXPERIMENTAL DESIGN

Pretest – posttest equivalent group experimental design was selected by researcher to conduct this study. Both the groups were given pretest before experiment and a posttest after experiment. Experimental group was treated with multimedia package as a teaching material and researcher explain all contents of English subject with the use of this package. Controlled gorup was treated traditional teaching method.



Collection of data :-

The researcher administrated pretest before conducted experiment, and posttest after conducted experiment.

Data analysis :- To analyze the data different statistical methods were used by researcher.

1. To check equivalency between two groups t-test was performed.
2. To prove hypothesis ANCOVA was performed by researcher.

V. RESULTS

To perform different types of tests Microsoft Excel program was used. The results of different tests are as below :

Testing of equivalency between groups :-

To check equivalency between groups t-test was performed. The results of t-test are as below.

Table 5: Result of t-test

Group	N	M	SD	SED	t	Remark
1	43	34.53	12.35	2.99	0.064	NS
2	43	34.72	11.052			

Df	0.05	0.01
84	1.99	2.64

From above table it seems that the calculated value of t is 0.064. For df = 84 table value of t are 1.99 at 0.05 level and 2.64 at 0.01 level. Therefore calculated value of t is smaller than table value at both the levels. So it is concluded that two groups are equivalent according to their educational achievement.

Testing of Hypothesis :-

To check hypothesis ANCOVA is performed in which marks of pretest and posttest are used. The results of ANCOVA are as below.

There will not be any significant difference between the mean score in posttest of students of experimental group 1 and experimental group 2.

Table 7 : details of N, ∑X, Mean, SD

Students	Experimental group			Controlled group		
	X_1	Y_1	$X1Y_1$	X_2	Y_2	X_2Y_2
N	43	43	43	43	43	43
∑X	1325	1524	110673	1354	1365	102024
Mean	30.81	35.44	2573.79	31.48	31.74	2372.65
SD	11.21	10.41		11.23	10.54	

According to above results the values of mean and standard deviation of experimental group for pretest are 30.81 and 11.21 respectively. While mean and standard deviation of the same group for posttest are 35.44 and 10.41 respectively. The values of mean and standard deviation of controlled group for pretest are 31.48 and 11.23 respectively. While mean and standard deviation of the same group for posttest are 31.74 and 10.54 respectively. So it is concluded that the effect of experiment on experimental group is positive than controlled group.

Table 8 : Results of ANCOVA

Variable	SSx	SSy	SSxy	df	SSyx	MSyx	F	Conclusion
SSbt	1.23	345.45	15.35	1	352.71	352.71	20.21	**
SSwg	7586	5346	5219.65	81	1356.31	17.45		
SSt	7587.23	5691.45	5234.35	82	1709.02			

According to above table the calculated value of F is 20.21. For degree of freedom df1 = 1 and df2 = 81 the table value of F at 0.05 level and 0.01 level are 3.96 and 6.96 respectively. So the calculated value of F is higher than table value for both the levels. Therefore it is concluded that the above null hypothesis is rejected and there is significant difference between the achievement of students of experimental group controlled group. The achievement of experimental group is higher than the achievement of controlled group.

VI. CONCLUSIONS

So from above analysis it is concluded that effect of multimedia package is much more on achievement of students of experimental group.

REFERENCES :-

[1] Felder , R. M. and L. K. Silverman, 1988, "Learning and Teaching Styles in Engineering Education", Journal of Engineering Education, 78(7), 674-681, April, 1988.

[2] Pantelidis, Veronica S., "Virtual Reality and Education: Information Sources", ftp://ftp.hitl.washington.edu/pub/scivw/citations/VR-ED.html.

[3] Sense8 Corporation, 100 Shoreline Highway Suite 282, Mill Valley, CA 94941, (415) 331-6318, http://www.sense8.com.

[4] Bridges A.H. (1986). Any progress in systematic design? Computer-aided architectural design futures CAAD Futures Conference Proceedings, Delft (The Netherlands), p. 5-15. http://cumincad.scix.net/data/works/att/a6f1.content.pdf visited 2005, 07 30).

[5] Frank A. (2005). What do students value in built environment education? CEBE Transactions, 2 (3), p. 21-29.

[6] Gates B. (2002). A Vision for life long learning-Year 2020-introduction by Bill Gates, Vision 2020: Transforming Education and Training through Advanced Technologies, http://www.technology.gov/reports/TechPolicy/2020Visions.pdf (visited 2006, 07 03).

[7] Horne M. and Hamza N. (2006). Integration of virtual reality within the built environment curriculum, ITCon, 11, 311-324. URL: http://www.itcon.org/2006/23.

[8] Horne M. and Thompson E.M. (2006). Extending the palette, eCAADe 24, Proceedings of the 24th Conference on Education in Computer Aided Architectural Design in Europe, Volos, Greece. p. 444-453.

[9] Knight P. (2006). Lessons learnt from the evaluation of large scale innovation, Leading and embedding innovations

in Higher Education Institutions, Higher Education Academy, London.

[10] Mantovani F. (2003). VR learning: potential challenges for the use of 3D environments in education and training, Towards Cyber Psychology: Mind Cognition and Society in the Internet Age, Riva G and Galimberti C (Eds), Amsterdam IOS Press, http://www.vepsy.com/communication/book2/2SECTIO_12.PDF (visited 2006, 06 30).

[11] Messner J.I. and Horman J.M. (2003). Using advance visualisation tools to improve construction education, Proceedings of CONVR 2003 Conference, Virginia Tech.

[12] Pandelidis V.S. (1997). Virtual reality and engineering education, Computer Applications in Engineering Education Journal, 5 (1), 3-12. John Wiley and Sons, Inc.