



EFFECTIVENESS OF MULTIMEDIA- LEARNING PACKAGE ON LEARNING EXPERIENCE OF STUDENTS IN GUJARATI METHOD

DR. HARDIK MEHTA

Ph.D. Guide in Education

Hemchandracharya North Gujarat University

Patan (GJ) INDIA

ABSTRACT

As with any technological development the use of computers has the possibility of dehumanizing the learning process. Hwang(2003) investigated whether there is evidence to prove that the effect of computers on the personality of students is significant, espically for the more nervous Students. However Letterie (2003) has observed that typically only a small percentage of students from the both the upper and lower ends of the education stream receive any personal attention from the teacher, and direct interaction between teacher and many students up to secondary level, and in some cases beyond that level, is limited or non-existent. In addition, learners within higher education are progressively expected to be independent and autonomous learners. Therefore, there is a supportive role that e-learning, if properly integrated, can play to enhance the mutual benefit of all stakeholders.

1. Measuring quality in an E- learning system

Webbs(2001) suggests that quality in higher Education comprises three main elements: Value for money ; quality defined as fit for purpose of the institution; and quality as transformational. Reed & singh (2002) suggest that education in general should be measured on outcomes rather than modes of delivery. Oliver (2002) also supports this notion but from a specific learning perspective where the focus should be on the learning outcomes and learning experiences of the student rather than on the actual teaching performances, “*Providing the best possible forms of online learning is a critical compenent of the quality assurance process.*” Oliver (2002)

1.1 Criteria for evaluated quality



There are numerous ways of evaluating the quality of a Multimedia-learning packages facility in higher education. This paper focuses on criteria to judge the quality of the Multimedia-learning Packages Material :

- ▶ The Multimedia-learning Packages should have an easy navigation system
- ▶ Scope and range of the Multimedia-learning Packages coverage of a topic
- ▶ The information made available should be accurate and up to date
- ▶ Completeness represented at of Multimedia-learning Packages
- ▶ The Look and feel of the Multimedia-learning Packages should appeal to the Students

1.2 Multimedia-learning

Multimedia “ *is the combination of various digital media types such as text, images, sound and video, into a sage multi-sensory interactive application or presentation to convey a message or information to an audience*” Tolhurst (1995). Multimedia can be seen as an effective instructional tool for delivering information to users. This is because it allows information to be illustrated using various media and including sound, text, and animation hence creating a more stimulating learning experience. Lindstrom summarizes multimedia as “ *providing a means to supplement a presenter’s efforts to garner attention, increase retention, improve comprehension, and to bring an audience into agreement*” (Lindstrom, 1994). As technology advances and becomes ever more sophisticated the use of multimedia as a platform for teaching, especially in an e-learning environment, become more feasible. This is due to the availability of multimedia personal computer(MPCs) which are fast, powerful and which are able to process all media elements quite effortlessly and more quickly with the aid of multimedia software that is user-friendly, Peled(2000).

Tse-Kian and Mai (2004) discuss the incorporation of multimedia into the instructional process which should result in a union between the educational content and the multimedia technology. The combination of content and technology are targeted to create multimedia content applications that will be multi-sensory, visually challenging to the students and above all promote interaction. This means that students can have an interactive experience within the topic being discussed, and the impact of this experience would exceed the conventional textbook-type learning experience. Hence multimedia can help establish a greater level of comprehension and retention of the topic, Browell(1996).

Bradshaw (2005) explains that books and computers screens differ in many ways and that there are several downsides to electronic texts. Conventional textbooks do not require any power supply or network connection and hence can be used anywhere. Electronic text will require a computer screen for display which may not be as compact as a traditional textbook where you can take a book out whilst on the bus(but may store more information). Laptops



will require a power supply after a small number of hours and the screens of PDAs are small for reading texts and moving through larger content. These drawbacks have slowed down the uptake of electronic texts according to Bradshaw (2005) however there are factors that outweigh these disadvantages. Electronic texts also have strong and unique strengths in meeting the needs of the students-the learners. An electronic text has the capability to incorporate simulations and employs a style well-suited to a learner's needs.

2. Research Methodology

This study consisted of three research activities which included questionnaires, semi structured interviews and pre-test as well as post-test. The first phase consisted of the questionnaire which was distributed amongst the taught class-9 students; the second phase conducted semi-structured interviews amongst a sample of the teachers who teaches on the taught in Gujarati Subject of Class-9 courses; the third phase consisted of pre-test and post-test conducted amongst a sample of Multimedia-Learning content for the students of Class-9. For the 1st Phase the questionnaire was distributed among 200 class-9 students. The class-9 students were selected from the Schools from Visnagar Taluka from Mehsana District. Out of the 200 questionnaires that were distributed, 150 were returned which amounted to a response rate of 75%. The Second phase involved the Teachers from the Class-9, who teaches Gujarati Subject from the Visnagar Taluka from Mehsana District. Pre-test and Post-test was also applied for the selected topic in Gujarati Subject. The sample of the test given and Questionnaire given to the students.

The aim of this study was to gain an understanding of how the Multimedia-Learning is used by teachers and students and how its use may impact the quality of the students learning experience. The main focus is on Multimedia tools and their incorporation into selected topic in Gujarati Subject in order to support the Multimedia-Learning environment. In its simple form it is an electronic tool but it is used as a Multimedia-Learning Packages facility for students where Learning experiences can be shared between teachers and students and also shared between peers.

3. Statement of the study:

**Effectiveness of Multimedia-Learning Package on learning experience of students
In Gujarati Subject**

4. Objectives of the Study:

1. To study the effectiveness of multimedia-learning Package on learning experience of Students in Gujarati Subject.



2. To study the effectiveness of multimedia-learning Package on learning experience of Students in Gujarati Subject with reference to gender and Habitat.
3. To study the Opinions students towards multimedia-learning Package on learning experience.

5. Operational Definition Of Multimedia-Learning:

Operational Definition of Multimedia-learning is as follows.

Multimedia “*is the combination of various digital media types such as text, images, sound and video, into a sage multi-sensory interactive application or presentation to convey a message or information to an audience*”.

6. Sample of the study:

In this present study total 175 students for the objectives of the quality effectiveness of Multimedia-learning packages, 150 students were selected for the experimental design prepared by the investigator during the year of 2016-17. Total 40 teachers were interview who teaches Gujarati Subject in Visnagar Taluka from Mehsana District.

7. Tools Used fir the study

In this present research tools used for the study are given as follows.

- Questionnaires
- Semi structured interviews and
- Pre-test as well as Post-test.

8. Data Analysis and Interpretation

- Gender-wise and habitat-wise Significance of the study
- Qualitative Analysis of the Questionnaire and Semi-structured Interview

8.1 Gender-wise and Habitat-wise Significance of the study

Gender-wise and habitat-wise Significance of the study are as follows.

Table : 1

Mean,SD and t-Value score Pre-test and Post-test of Male Students Of Standard-9 on Multimedia-Learning Package

	Male	N	MEAN	SD	Sed	t Value	
1	Pre-test	70	36.32	18.86	3.1493	2.867	0.01
	Post-test	70	45.35	18.4			

Ho1 There will be no significant difference between mean score Pre-test and Post-test of Male Students of Standard-9 on Multimedia-Learning Package.

Result: From the above Table 1, it is evident that the mean and S.D. mean score Pre-test of Male Students of Standard-9 are 36.32 and 18.86 While the mean and S.D. of mean score Post-test of Male Students of Standard-9 are 45.35 and 18.4 on total score of on Multimedia-Learning Package. The obtained t-value is 2.86(2.86>2.58) with 3.14 standard error of mean which is significant at 0.01 level of significance. (45.35>36.32) Thus, mean score of male students of class-9 on post-test are significantly higher than the mean score on pre-test on multimedia-Learning Package. So, **Ho1** is rejected. Thus it can be said that the on effect of learning through Multimedia- Learning on post-test were found significantly higher than Pre-test Multimedia-Learning Package.

Table : 2

Mean,SD and t-Value score Pre-test and Post-test of Female Students Of Standard-9 on Multimedia-Learning Package

	Male	N	MEAN	SD	Sed	t Value	
2	Pre-test	80	36.98	19.86	2.95	2.832	0.01
	Post-test	80	45.34	17.4			

Ho2 There will be no significant difference between mean score Pre-test and Post-test of Female Students of Standard-9 on Multimedia-Learning Package.

Result: From the above Table 2, it is evident that the mean and S.D. mean score Pre-test of Female Students of Standard-9 are 36.98 and 19.86 While the mean and S.D. of mean score Post-test of Female Students of Standard-9 are 45.34 and 17.4 on total score of on Multimedia-Learning Package. The obtained t-value is 2.83(2.83>2.58) with 2.95 standard error of mean which is significant at 0.01 level of significance. Thus, mean score of Female students of class-9 on post-test are significantly higher than the mean score on pre-test on multimedia-Learning Package. So, **Ho1** is rejected. Thus it can be said that the on effect of learning through Multimedia- Learning on post-test were found significantly higher than Pre-test Multimedia-Learning Package.

Table : 3

Mean,SD and t-Value score Pre-test and Post-test of Rural Students Of Standard-9 on Multimedia-Learning Package

	Male	N	MEAN	SD	Sed	t Value	
3	Pre-test	56	35.45	18.19	3.39	2.159	0.01
	Post-test	56	42.78	17.73			

Ho3 There will be no significant difference between mean score Pre-test and Post-test of Rural Students of Standard-9 on Multimedia-Learning Package.

Result: From the above Table 3, it is evident that the mean and S.D. mean score Pre-test of Rural Students of Standard-9 are 35.45 and 18.19 While the mean and S.D. of mean score Post-test of Rural Students of Standard-9 are 42.78 and 17.73 on total score of on Multimedia-Learning Package. The obtained t-value is 2.159($2.15 > 1.96$) with 3.39 standard error of mean which is significant at 0.05 level of significance. Thus, mean score of Rural students of class-9 on post-test are significantly higher than the mean score on pre-test on multimedia-Learning Package. So, **Ho3** is rejected. Thus it can be said that the on effect of learning through Multimedia- Learning on post-test were found significantly higher than Pre-test Multimedia-Learning Package.

Table : 4

Mean,SD and t-Value score Pre-test and Post-test of Urban Students Of Standard-9 on Multimedia-Learning Package

	Male	N	MEAN	SD	Sed	T Value	
4	Pre-test	94	37.33	19.19	2.62	2.315	0.01
	Post-test	94	43.41	16.73			

Ho4 There will be no significant difference between mean score Pre-test and Post-test of Urban Students of Standard-9 on Multimedia-Learning Package.

Result: From the above Table 4, it is evident that the mean and S.D. mean score Pre-test of Urban Students of Standard-9 are 37.33 and 19.19. While the mean and S.D. of mean score Post-test of Urban Students of Standard-9 are 43.41 and 16.73 on total score of on Multimedia-Learning Package. The obtained t-value is 2.31($2.31 > 1.96$) with 2.62 standard error of mean which is significant at 0.05 level of significance. Thus, mean score of Urban students of class-9 on post-test are significantly higher than the mean score on pre-test on multimedia-Learning Package. So, **Ho4** is rejected. Thus it can be said that the on effect of



learning through Multimedia- Learning on post-test were found significantly higher than Pre-test Multimedia-Learning Package.

8.2 Qualitative Analysis of the questionnaire and semi-structured Interview

It can be seen that most of the 150 students, 77%, Consider the Virtual learning environment Multimedia-Learning Packages facility as a tool for Multimedia-Learning Packages facility. Average consensus 60% rated Multimedia-Learning Packages facility to be good, the remaining 40% considered Multimedia-Learning Packages facility to be “Not Good” whilst no one rated it to be “Very Good”. In general the students questioned were happy with the Multimedia-Learning Packages facility system. Students tend to use Multimedia-Learning Packages facility for course documents-downloading lecture materials, assignment briefs and the like. To use E-Learning as a portal to others areas of the website (external links) does not seem to be a facility which the students. Only 7% considers it to be a link for “students and students”. Multimedia-Learning Packages facility is a tool that enables Multimedia-Learning Packages facility to take place between both “students and teachers” and “students and students”.

9 Conclusion

Effect of learning through Multimedia-Learning on post-test were found significantly higher than Pre-test Multimedia-Learning Packages on the sample of the Male, Female, Rural and Habitat students of Class-9 in selected topic of Gujarati. Most of the 150 students, 77%, Consider the Virtual learning environment Multimedia-Learning Packages facility which is being considered. 13% did not consider Multimedia-Learning Packages facility as a tool for Multimedia-Learning Packages facility.

REFERENCES

- Anderson, P (2007). “What is web 2.0? Ideas, technologies and implications for Education”, JISC, Technology & Standards
- Hameed, S. Mellor, J and Badii A. (2006): “The Impact of the increasing use of Instant Messaging (IM) on user’s real social communication and integration.” International Journal on Transactions on Internet Research, Vol 2. No 2, pp 38-44, ISSN: 1820-4511
- Harrison, L. (2002) Access to online learning: use role of the course ware authoring Tool developer. Library Hi Tech. 20(4), 433-440
- Inglis, A. (1999) is online delivery less costly than print and is it meaningful to ask?. Distance education. 20(2), 220-231

DR. HARDIK MEHTA

7 Page



http://www.aishe.org/readings/2005-1/oneili-mcmahon-tues_19th_oct_SCL.html

Peled, Alon. (2000) Bringing the Internet and Multimedia revolution to the classroom.

Campus-wide Information systems. 17(1), 16-22

Reed, C. Singh, H (2002) Demystifying e-learning standards. Industrial and

Commercial training. 34 (2), 62-65

Shirky, C (2003), “ Power Laws, Weblogs and Inequality”, Networks, Economics,

And Culture available at: http://www.shirky.com/writings/powerlaw_weblog.html

Webb, J. P. (2001) Technology: a tool for the learning environment.

Campus-wide Information Systems. 18 (2), 73-78

Saunders, M et al, (2000) Research Methods for Business Students. 2nd Edition.

Financial Times. Prentice Hall.

<http://www.apitudemedia.com/elearning.html>