EFFECT OF MULTIMEDIA ON LEARNING HISTORY AT SECONDARY LEVEL

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ABSTRACT:
Technology can be imperative for individualized instruction in order to bridge the gaps between teaching and learning. The Kothari commission report asserts that if history subject is poorly taught and badly learned, it is a little more than burdening the mind with dead information. It could even degenerate into new superstitions. In India, history teaching needs overhauling. To understand the real concept of history, classical face-to-face teaching methods may have to be supplemented by innovative methods. Developing Multimedia is emerging to be an innovative method which could help the learners visualizes the materials so as to make them be creative and productive learners. The multimedia are developed with the integration of Multimedia components such as text, audio, video, animation and image which are set to ensure a better understanding of history by the students. In that way, multimedia on cloning was developed for finding its impact on learners. 60 ninth standard students from both genders were taken as a sample. Results revealed that the multimedia package has a positive impact on history learning among students irrespective of gender.

KEYWORDS*: multimedia, history learning, secondary level, animation, ninth standard.*

INTRODUCTION:
Technological advances and the significance of usability, accessibility, and individualization have created a less hierarchical knowledge society where individuals, as well as organizations, are creating knowledge using Web 2.0 tools. By engaging students in these practices early on, they are being prepared and equipped for later life as knowledge workers in a global information society. There are some underlying principles in explaining any process in History with different components. To understand the principles and process, learners need to integrate all properties and functions of each individual component. Indeed, Multimedia was providing multi-sensory experiences to the learners and it helps to mastery of the Botany unit at the secondary level (Nachimuthu, 2018). A multimedia package provides a wide range of sensory stimuli. The animations, simulations, software packages, speech, music, multimedia networks, image enhancements, etc. create virtual realities and experience for the learners, which in turn, help in making learning a more direct, useful, and joyful experience and in retaining knowledge for a longer time (Vijayakumari, 2011).

DESIGN OF THE STUDY
Experimental research method with a control design was adopted in this study. Investigator selected 60 ninth standard students as a sample from three secondary schools in Salem District of Tamil Nadu State of India. Multimedia on 'Cultural Traditions of Tamil Nadu' was developed by the investigator. Based on the material incorporated in the multimedia, an achievement test was developed

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on the basis of guidelines of Bloom (1956) which was validated by the experts. The pre-test was conducted initially for 60 students. The students were divided into two groups namely, control and experimental groups. The experimental group was treated with multimedia and traditional approach was adopted for the control group. The investigator clarified their queries if any, raised by the students during the experimentation phase. Learners were provided a congenial atmosphere for the experimentation. Soon after the experiment was over, the post-test was conducted for all the 60 students.

DEVELOPMENT OF MULTIMEDIA

Considering the objectives and hypotheses, and having the exposure to Educational Technology, has developed and validated multimedia for learning History based on the ninth standard syllabus and the unit of 'Cultural Traditions of Tamil Nadu'. In order to prepare the multimedia, the investigator followed the five phases of analysis, design, development, implementation, and evaluation.

The multimedia will present multimedia in multiple formats. The multimedia is explained with suitable graphics, animations. The instructional strategies will be chalked out in such a way that learner never lose interest. It presents the multimedia in a simple text with visuals and with relevant supportive headings (Homepage). It will have its own reference materials which generally do not burden the learners and those can appear on demand with optional frames. Multimedia is developed with the integration of components such as text, audio, video, animation and image which will give multi-sensory experience to the learners.

In the present study, the investigator decided to develop the multimedia in Adobe Premiere Software based on the objectives. At this stage, the subtopics were formed and appropriate images, animations, and videos were collected. The topic "Early Tamil Society and Culture" form the Lesson III and that units covered in Quarterly Portions of Tamil Nadu State Board in English Medium p.no 44- 65) was selected the topic and it is relevant to the ninth standard students and it suitable time in their curriculum.

According to Wang et al., 2003, model the Multimedia was developed in such a way by using the above software which contains the following Menus: Homepage, Introduction, Key concepts, Examples, and Assignment. The script was carefully planned and prepared to adhere to the norms. The audio part of the script contains the matter that has to be orally explained as the sound effect. The visual part of the script shows all shot that will explain the processes involved in the selected topic. Storyboard is a script with visuals and explanations which actualizes the development of multimedia. The investigator used three column formats for storyboard writing. In this format the first column contains objectives part, the second one was the 'Cultural Traditions of Tamil Nadu' concepts with its videos, and the third one was the interactive questioning part which contains MCQ with 'right' or wrong responses of branched programming.

The good designing of multimedia is necessary to follow the steps of multimedia development. The steps involved in developing the script are, mastering the subject, arrangement of the sentences, rearranging the work, drafting the full script with visual illustrations and added voice. Editing was done by the investigators with the help of technical experts in the Computer Center. The video coverage of the topic 'Cultural Traditions of Tamil Nadu' was done by the programmer. The multimedia package contains text, images, video, and animations. The investigator prepared the video and animation to explain the concept according to the instructional objectives and carefully edited.

RESULTS AND DISCUSSION

An achievement questionnaire was also prepared by the investigator related to the learning unit part and that was found out with face validity and reliability (0.82). It consists of 50 questions with Yes or No type in learning History. There are also multimedia package was prepared and stored in a single file as 'Cultural Traditions of Tamil Nadu'. The collected data were analyzed and interpreted with mean, standard deviation and 't' test. The statistical treatment was given to test the hypothesis and to find out that, there is no significant mean difference in the achievement of History between the group taught

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through multimedia package material and the group taught through lecture method of teaching. The table-1, illustrates the analysis on pre and post-tests of control and experimental groups.

Table 1. Analysis on pre and post-tests of control and experimental group

Analysis	Group	N	Mean	S.D	't' value	p- value
Control	Pre-test	30	5.16	1.66	0.832 @	0.40871
	Post-test	30	5.46	1.07		
Experimental	Pre-test	30	5.40	2.63	2.970 *	0.00428
	Post-test	30	3.53	2.23		
Pre-Test	Control	30	5.16	1.66	0.423 @	0.67381
	Experimental	30	5.40	2.63		
Post-Test	Control	30	5.46	1.07	4.274 *	0.00007
	Experimental	30	3.53	2.23		

(@=No significant level, * =Significant at 0.05 level)

It can be found from the table-1, for the pre and post-tests of the control group mean scores of multimedia are 5.16 and 5.46 respectively. Likewise the tests control group standard deviations are 1.66 and 1.07 respectively. The table concluded that the calculated 't' value 0.83 is lesser than the table value indicates the acceptance of the hypothesis. For the pre and post-tests of experimental group mean scores of multimedia are 5.40 and 3.53 respectively. Likewise, the experimental group standard deviations are 2.63 and 2.23 respectively. The table concluded that the calculated 't' value 2.97 is greater than the table value indicates the rejection of the hypothesis.

As per the table-1, that students in both control and experimental group do not differ in their pre-test performance which shows the equivalence of both the groups in their entry behavior as far as their performance in history learning was concerned. For the post-tests of control and an experimental group of multimedia package learning in history, concluded that the calculated 't' value 4.27 is greater than the table value indicates the rejection of the hypothesis-1. Hence it is concluded that there is a significant difference between post-tests of control and experimental group. It is heartening to note that the experimental group which was given treatment on multimedia along with classroom discussion outperformed their counterparts as per the second part. From these two results, it is inferred that multimedia package integration into history learning was found effective.

As per the hypothesis-2, 'There is no significant difference between the multimedia package learning in history in relation to their experimental and retention tests wise' analyzed in the following table-2.

Table 2. Analysis on Experimental Group Post-test Score and Retention Test Score

Exptl. Group	N	Mean	S.D	't' value	p- value
Experimental score	30	3.53	2.23	2.423 *	0.01843
Retention score	30	4.96	2.34		

(* =Significant at 0.05 level)

For the post-tests of the experimental and the retention group of multimedia package mean scores are 3.53 and 4.96 respectively. Likewise, the experimental and the retention group standard deviations are 2.23 and 2.34 respectively. The table concluded that the calculated 't' value 2.42 is greater than the table value indicates the rejection of the hypothesis. Hence it is concluded that there is a significant difference between post-tests experimental group and retention group.

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CONCLUSION

School education should make skillful and effective students (Selinger, 2004). They should give sufficient learning experience to the students and training given to the teachers in utilizing the technological equipment's. They should conduct special programmes on preparing a multimedia package for languages as well as science and social sciences for all medium students and teachers. Any multimedia product available in a digital form and it typically refers to music, information and images that are available for distribution on electronic media are called multimedia. (Anurag Saxena, 2011). For the multimedia package development aspect each one is used to develop the following phases of ADDIE model viz., analysis, design, development, implementation, and evaluation (Prensky, 2006). A digital text and images designed for display on web pages which is suitable for a particular audience are called as 'multimedia package'. e-learning is a process and multimedia package is a product. This approach of teaching has become an answer to the complicated problems and un-identified areas.

With multimedia package materials, the learner and teacher will understand that he or she is changing from a provider of facts to the one who facilitates a learning environment (Cady et al., 2011). Humans can integrate information from different sensory stimuli into meaningful experiences. (Revathi et al.,2019). This experimental study proved that multimedia package enhances the achievement of the ninth standard students. It is observed that the ninth standard students' academic achievement on 'Cultural Traditions of Tamil Nadu' and participation in learning had improved significantly when compared to traditional instruction.

The students have shown much enthusiasm to learn through this mode and it is observed that they prefer to select various other topics. It is further observed that the students started using a wide variety of media from the internet, PowerPoint presentations, simulations and activities in Learning as it provided a holistic approach (Senthilkumar, 2017). This can be facilitating students to master the concept of their subject at their own pace, which also demands that teachers create such Electronic learning digital applications that can be used in their schools and to enable students to access it in anytime.

We need innovative work in multimedia package material as a form of digital literacy in educational settings particularly to investigate the implications of new forms of social networking, knowledge sharing, and knowledge building. The application of the multimedia package is the teaching-learning process will have a significant impact. As technology becomes user-friendly the creation of multimedia package by teaching community will be much easier. The multimedia package is generally designed to guide students through a lot of information in a specific task. The quality of learning depends not only on the form of how the process is carried out but also on what multimedia is taught and how the multimedia is presented.

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