



COMPUTERISED MULTIMEDIA PACKAGE IN TEACHING AND LEARNING PROCESS OF SOCIAL SCIENCES AT SECONDARY SCHOOL LEVEL- AN EXPERIMENTAL STUDY

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Abstract

*In the present context of world peace, there is a great need of strengthening the Teaching of Social, Economical, Cultural, Religious and Technological Values in the society. Since Social Sciences a wonderful treasure house of information and values, teaching of Social Sciences should be made more interesting to the students to learn at all the levels. In this regard **Instructional Media** has stimulated Social Sciences teachers to seek **innovative strategies** in teaching learning process. These strategies are concerned with the systematic application of various media and skills to the requirements of educating the syllabus of Social Sciences.*

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*Based on instructional design, a **Multimedia Package** is prepared with the combination of **text, graphics, sound, animation and video** elements and presentation delivered by the **computer**. It is an individualized learning Package with Multimedia techniques which has built in self-evaluation process also. This was validated by different groups of experts at different levels and was also field tested. Finally the achievement test was administered to the learners. Thus the effectiveness of Multimedia package (**SLM**) on achievement was studied and analyzed statistically with the help of scores obtained.*

Introduction

Social Sciences cover all aspects of Philosophies that enable us to understand the whole world. It allows us to easily comprehend the past, equips us to successfully perform in the present and prepare us to visualize future from multiple view points. The acquaintance of knowledge, skills and attitudes from Social Sciences help us to achieve academically and also help us to become active and responsible members of the society.

Social Sciences is a school full of values, and it gives insight into the working of political, social, economical, religious and technological forces. It cultivates a sense of time, space and society. It is preparing the way for globalization, liberalization etc., with the aim of world peace and co existence of all mankind.

Though Social Sciences involve human thoughts, beliefs, languages, experiences, actions, interactions etc., it is not yet considered as an important school subject. The learners are not showing encouraging attitude for learning the subject. This subject is neglected both by teachers and students at school level.

If we put a question, why proper recognition and importance is not given to Social Sciences at school level?, then there are plenty of reasons. Content is not emphasized meaningfully and interestingly to capture and sustain the minds of young students. Social Sciences as a subject of study need to focus on a conceptual understanding rather than lining up of facts to be memorized for examinations. The prevailing trends in teaching, assessing and developing subject matter of Social Sciences is far from satisfaction, because, the lessons are not planned properly to arouse interest and evaluation of students and is not reinforcing and strengthening the learning process.

It is believed that the Social Sciences merely transmit information from the text and moreover, the methods used for teaching are like text book method, source method,

story telling method etc., which are traditional in nature and teacher centered; there is very little scope for various kinds of experiences to the child. Investigations also have proved that traditional methods cannot bring out the desired goals from the teaching learning process.

In recent years, the pedagogical changes in Social Sciences are almost negligible compared to the changes in science and technology. Since, Social Sciences replicate the real world, by reaching across the thinking and actions of the people with time and space, it has to be dealt appropriately. It is a wonderful treasure house of information and values, the teaching should be made more interesting to the students to learn at all levels. It has to be taken as challenge with focused treatment.

An ideal way to deal with this is to create an atmosphere which is constructive in nature. This constructivist nature of classroom should provide access to the information with all kinds of facts and figures, places, people, with activities related to them. This provision equips the students with application and appreciation of facts and figures from multiple perspectives. Further, the classroom also enables the students to analyze and evaluate information to form their own conclusions and even contribute to the field.

How to have this kind of classroom situation? This question is answered by Education Technology. The modern era is all out for information and Technology. Every branch of learning is oriented in such a way as to produce individuals who would fit in the present world scenario.

As per **White**, it is the school system that provides a foundation for future, intellectual, social, moral, spiritual and aesthetic contributions in an increasingly complex and integrated world order. For this, the class room Teacher, should think of a strategy which would satisfy the conditions of the students because, different instructional techniques have different potentialities for realizing varied objectives.

In teaching-learning process, to improve the performance of the learner, information technology has become a corner stone. Media, in specific, has brought wonders to the field of Education. Electronic Media has various approaches to try out. One such approach is Multi Media approach through Computer.

The Computer with its virtually instantaneous response to student inputs, its extensive capacity to store and manipulate information and its unmatched ability to serve many individual students simultaneously, has wide applications in instruction. The Computer has the ability to control and manage a wide variety of media and learning material, including films, filmstrips, videos, slides, audio tapes and printed information etc. The Computer can also record, analyze and react to student

responses that are typed using a keyboard or input with a mouse. Some display screens react to the touch of students' fingers. Design, development and evaluation of instructional Media or materials with procedures are primary concerns at present.

However combining new technologies with effective pedagogy has become a very challenging task. So, as a social science teacher, the investigator felt that there is a need to develop a **Teaching learning instructional device** which can find out solutions to the above said problems of teaching learning process by providing series of learning experiences **related to Social sciences**.

This will improve the achievement of students of Secondary School, based on the guiding principles of linking knowledge to life, and ensuring learning that is shifted from rote methods to modern techniques.

If an experimentally tested and proven method or material is made available to the Teacher with research, it would be much helpful to the students to achieve better.

In view of the above discussed points, the investigator was interested to find out the impact of Computerised Multi media package (SLM) in Social Sciences on achievement of students as compared to the traditional method of learning.

In this way Multimedia has stimulated the researcher to seek innovative strategies in teaching learning process of social sciences with the systematic application.

Statement of the problem

MAGIC OF COMPUTERISED MULTIMEDIA PACKAGE IN TEACHING AND LEARNING PROCESS OF SOCIAL SCIENCES AT SECONDARY SCHOOL LEVEL- An experimental study.

Operational Definition

Multi Media Package is a combination of text, graphic, sound, animation and video elements into single collection and presentation delivered by **computer**. It is an individualized learning package with multimedia techniques. It has built in self evaluation process also.

By **achievement** the researcher means, the performance of IX Standard students in Social Sciences.

Objectives of the present study:

1. To **develop Computerised Multi Media Package (SLM)** to selected units of Secondary school IX standard Social Sciences.
2. To study the effectiveness of Computerised Multi Media Package (SLM) on the **achievement** of IX standard students in Social Sciences.
3. To study the effectiveness of Computerised Multi Media Package (SLM) on the achievement of boys and girls (**Gender**) in Social Sciences.

Hypothesis

The following hypothesis was verified by the researcher.

1. The hypothesis verified the significant difference between the achievement of the experimental group and the controlled group in Social Sciences.
2. The hypothesis verified the significant difference between the achievement of the boys and girls of the experiment group in Social Sciences.

Sample

The sample chosen for the study consisted of mainly two groups, an experimental Group and control group.

As per the Purposive Sample Techniques, the researcher has deliberately chosen two schools of Indiranagara, Bangalore city of Karnataka with state syllabus, and based on availability of computer systems with the basic software facilities to the students, The students are of IX Standard English Medium, studying in two different schools of same age group with Social Sciences as their compulsory subject. To avoid the influence of the students of experimental group on the control group, two different schools were chosen, in the same area of Indranagara.

Design of the Study

The present study is an experimental study, in which the effect of computerised Multi Media Package is studied. Hence the researcher has conducted the investigation in two phases namely:

Phase I

In the first phase, the current course content of the Secondary School syllabus was studied in depth from the point of view of several cognitive abilities that could be developed through them.

This analysis helped the researcher to know the need for developing Specific strategies by identifying the different components required for better achievement.

In order to develop material with different strategies the researcher has prepared instructional design. By keeping the frame work of the design as basis, the researcher has developed **Computerised Multimedia Package (SLM)** as self contained unit.

Development of Self Learning Material with computerised Multi Media Technique

Based on the specific instructional approach **ADDIE** and general guidelines of instructional media, the researcher has developed computer based Self Learning Material (SLM), which is also called as individualized instruction. The approach **ADDIE: Analysis, Design, Development, Implementation and Evaluation**, is different from the traditional teacher centric approach.

This Instructional approach involves the analysis of content, learner, and instructional objectives to formulate a design before implementation. It is a process of systems approach to instructional design. This focuses on self learning with clear cut outcomes of Instructional Media.

Hence the Investigator has used specific Media with variety of audio visual and animated Materials and co-related learning experiences with Instructions, to reinforce the value of each other. It is a Self Supporting Material rather than supplementary to the Teaching-learning process.

This self supporting material sensitizes the students to think and learn to the best of their abilities by strengthening their confidence effectively. So the design is purposeful, strategic and persistent in the self regulatory learning.

Based on this material, the necessary tools were prepared for evaluation and validated with different groups at different levels and field tested or tried out to find out the effectiveness.

Phase II

In the second phase the investigator administered the above validated tools.

Learners were sufficiently motivated to learn with sustained attention and interest by their active involvement in the task of learning through computerised multi media package. Gradually students got interest in learning of Social Sciences by getting rid of boredom. Thus instructional-media approach with the combination of varieties of instructional materials and techniques has provided series of learning experiences. This focused treatment has enhanced the knowledge of students and has brought improvement in their achievement. A Comparative study was conducted on traditional and innovative methods of teaching (CMMP).

Thus effectiveness of Computerised Multi Media Package (SLM) on achievement was studied and analyzed statistically with the help of scores obtained. The statistical analysis was done through t- test.

Data Collection

The researcher taught the selected units of Social Sciences by conventional approach to the control group and measured the achievement mean scores of the learners by administering achievement test.

An innovative approach was used to the experimental group i.e. Computerised Multi Media Technique for the selected units and the achievement mean scores were measured by administering the achievement test to the learners.

Statistical Analysis

The scores obtained by the two groups of students in the post-test were tabulated and analyzed using appropriate Quantitative statistical techniques.

The marked hypothesis were tested by using appropriate statistical techniques such as 't' test, The 't' test was used for testing the hypothesis for significance of mean difference in achievement scores of two groups of student.

Table 1 : Shows Comparative Mean Scores of Achievement of Experimental and Control Groups.

	Groups	N	Mean	S.D.	't'- value	Level of significance
Achievement	Exp	56	60.30	6.464	13.53**	S**
	Cntl	58	41.67	8.114		

S* Significance at 00.5 Level S**Significance at 00.1 Level

The table reveals that the obtained 't' value 13.53 is significant at 0.01 level of significance. There is a significant difference between the achievement of the experimental and controlled group of IX standard students in Social Sciences after the use of Multi Media Package. Hence the Null Hypothesis is rejected and an alternative hypothesis is formulated.

The graphical representation of the above is shown in the following page.

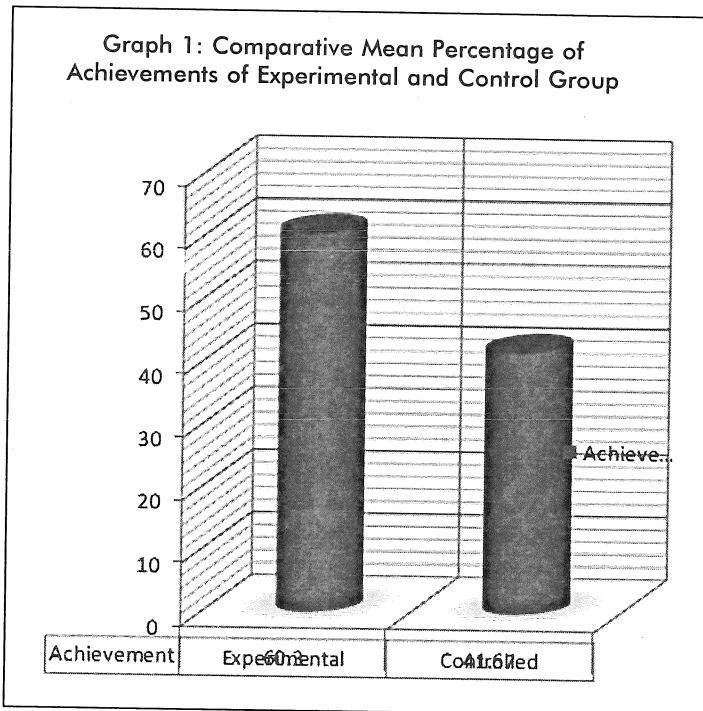


Table 2 : Shows the Comparative Mean Scores of Achievement of Boys and Girls of Experimental group.

	Groups	N	Mean	S.D.	't'- value	Level of significance
Gender	Girls	22	60.86	4.612	0.518 (NS)	NS
	Boys	34	59.94	7.467		

S* Significance at 00.5 Level S** Significance at 00.1 Level NS Not significant

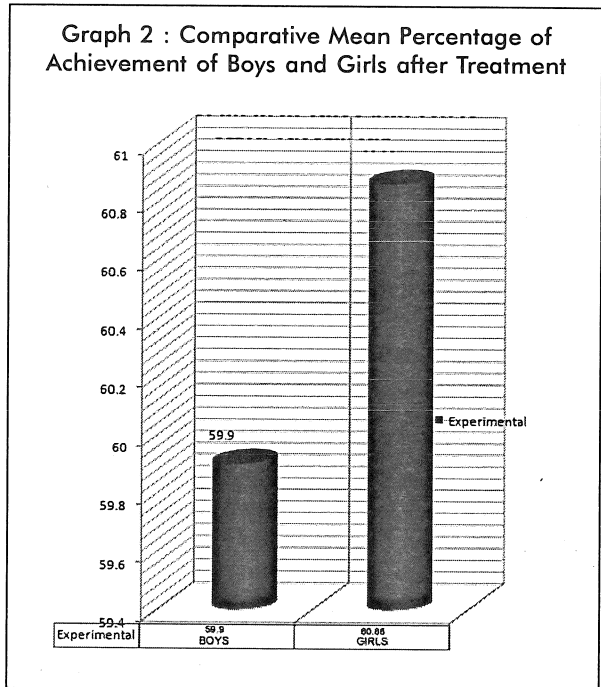
The above table shows the mean values of girls and boys of experimental group as 60.86 and 59.94 respectively. This reveals that the mean difference is not greater between the boys and girls of experimental group. Hence there is no significant difference between the mean values of boys and girls of experimental group.

In the same way, the obtained 't'-value is 0.518 at 0.05 level of significance is lesser than the theoretical value. Hence, the null hypothesis is accepted that "there is no significant difference between the achievement of boys and girls of experimental group in Social Sciences after the treatment".

The present socio-cultural aspects of the society reveal that both boys and girls are equal and equally exposed to latest technology and both are computer Savvy.

Thus it can be concluded that the gender has no influence in the achievement of students of Social Sciences. Boys and girls do not differ in their achievement in Social Sciences when they are taught through multi-media package.

Graph 2 : Comparative Mean Percentage of Achievement of Boys and Girls after Treatment



Findings of the Study

The main objective of the present study was to find out the achievement difference between the effectiveness of computerised Multimedia Package and traditional method of teaching, The study reveals that there is major significant difference between the achievement of control and experimental group.

There is no significant difference between the achievement of boys and girls of experimental group in Social Sciences, indicating that boys and girls are equal in their achievement when they are exposed to new approach. Boys and girls do not differ in their achievement in Social Sciences when they are taught through multimedia package.

This reveals that technology has played an important role in the achievement in the form of new approach which is attractive in learning process.

Educational Implications

The result of the study revealed the superiority of Computerised Multi Media Package (SLM) over Traditional Method . This material helps in enrichment of curriculum of subject Social Sciences.

It is one of the effective teaching-learning strategies to be used in Social Sciences. In order to make learning joyful activity, the teacher can make use of videos and audios and animation very easily. It has brought Educational practice and theory together with regard to providing various direct experiences to learners.

The package is teacher friendly. The problem of indiscipline can be solved very easily by creating an atmosphere for learning. As teachers it is our duty to develop packages which make the students to concentrate in leaning rather than wasting the time. The students can be exposed to a new atmosphere in which they can interact with computer assisted material by learning on their own pace.

Thus computers have attracted the learners with varieties of Media. Learners are provided with sufficient motivation to learn with sustained attention and interest, by active involvement. Gradually students develop interest in learning of Social Sciences by getting rid of boredom. The students can actively participate in self evaluation since they get the feed back immediately.

Multi Media Package may effectively be used in providing guidance and remedial instruction. Large size classrooms can be handled very easily by giving individual

instructions through SLM (MMP). It has the ability to provide mass Education in a highly personalized manner. This package has proved to be effective in bringing in reality to the classroom

Hence lot of importance has to be given to the methodology to make learning very effective with various attractive media and help the students to achieve better according to their ability. Such packages have to be used as powerful techniques to fulfill the requirement of the society in educating the mass.

Today Educational technology plays an important role to provide children with various opportunities to learn to the fullest possible extent. The Indian government is also taking lot of interest in implementing Educational Technology and educating the students at different levels by creating awareness.

Thanks to Education Department of karnataka state to their laudable efforts to implement Educational technology into classroom.

Limitations of the Study

- Three units of Social Sciences are considered for the study due to time constraint and the extensiveness of the taken units.
- Teacher made achievement test is used at the end, due to non-availability of standardized test for the topics.
- Two English medium private unaided schools are taken for the study with State Pattern syllabus as the other boards had an extensive syllabus comparatively.
- The schools are confined only to urban part of Bangalore City as the study being experimental, the researcher found it difficult to equate the developed test material for the rural group.
- The study is confined only to 114 students, comprising both boys and girls of IX standard as the study was experimental.

Suggestions for future Research

The present study is mainly concerned with finding out the effectiveness of Multi Media Package (SLM) in Social Sciences on 56 students of IX Standard.

It is desired that a similar study could be done with wider sample selection from several other secondary schools of state and also central syllabus, which may give further useful information.

The present study is conducted for few topics; it could be done for other chapters in Social Sciences and may be extended to the enrichment of other co-curricular activities of the school also. It may be extended to provide guidance and for remedial teaching.

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