EFFECTIVENESS OF MIND MAPPING IN ENGLISH TEACHING AMONG VIII STANDARD STUDENTS

By

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ABSTRACT

The aim of the study is to find out the effectiveness of mind mapping technique over conventional method in teaching English at high school level(VIII), in terms of Control and Experimental group. The sample of the study comprised, 60 VIII Standard students in Tiruchendur Taluk. Mind Maps and Achievement Test (Pre-test & Post-test) were developed by the investigator. Two equivalent group Pretest-Posttest Experimental Design was employed for this study. In analysis Mean, S.D. and 't' values were computed and the present study reveals that the Mind Mapping Technique is more effective than the Conventional method.

Keywords: Effectiveness, Mind Map, Teaching English.

INTRODUCTION

Education is an integral part of human life. It is the basic condition for the development of the 'Whole Man' and vital instrument for accelerating the well – being and prosperity of all, in every direction. Without education, man would still be living just like a splendid slave or like reasoning savage. Education must help individuals recall the truths, or ideas that are present in talent form in their minds. For Plato, learning was the rediscovery or recollection of latent knowledge. True knowledge is changeless and eternal. True education is one that aims to cultivate morally excellent people so that it creates a holds that moral excellence to be above technical or vocational training. Education should prepare the learner for a worthy use of one's leisure time. Education in schools should aim at organizing cultural training and procreative activities to avoid idleness, aimlessness and emptiness.

1. Review of Related Literature

Kessler, Cristy; Zuercher, Deborah; Wong, Caroline (2013) conducted a study on "Thinking Maps: Research-Based Instructional Strategy in a PDS". An exploratory action research case study was conducted at Moanalua Middle School from 2006-2009, to examine the impact of Thinking Maps on student achievement. This study tells the story of one middle school, where a school-wide initiative demonstrated an increase to 86% grade-level reading proficiency within three years.

Thangarajathi (2008) conducted a study on "Effectiveness of mind mapping technique in teaching mathematics". The sample of the study comprised 60 IX Standard students in Tuticorin District. The present study reveals that the Mind Mapping Technique is more effective than the Conventional method.

Zipp, Genevieve Pinto, Maher, Cathy, D'Antoni, Anthony V. (2009) conducted a study on "Mind Maps: Useful Schematic Tool for Organizing and Integrating Concepts of Complex Patient Care in the Clinic and Classroom". Academicians are always trying to answer the question, "What is the most effective way to teach?" Finding the answer to this question is no easy task. But, recognizing that each teachable moment must be shaped, based upon the learner, task, and the environment enable the academician to consider viable teaching strategies that would promote the learning goals. The purpose of this paper is first, to describe one teaching strategy "Mind Mapping Learning Technique (MMLT)"; second, to provide an understanding of how the MMLT is used to promote critical thinking skills in graduate students; and finally, to assess students' perceptions, regarding the use of the mind mapping learning technique, as a tool to enable them to better organize, prioritize, and integrate material presented in a course.

Renu Raj & Sweta Dvivedi (2010) conducted a study on Concept mapping as a technological tool to facilitate teacher education programmed and enhance e-learning. The present paper describes the concept maps and their applicability in teacher education programme, in particular and educational context, in general. It also tries to highlight the use of concept maps in e-learning. The concept maps feature a broad field of applications in educational contexts, in general and in the scope of e-learning, in particular. With today's wide availability of software tools for concept mapping, this method is in a position to provide powerful support in planning, building and implementing e-learning.

2. Need and Significance of the Study

English can be made interesting, if we present the whole chapter in a single diagram. Mind map makes it possible. At present, majority of English teachers follow the traditional methods of instruction in schools. What is required, is learner centered- approach to enable them to work on their own with little support from the teachers. When teachers carry out instructional process in the classroom, learner tends to be more passive listeners. No lesson can be effective unless there is effective pupil participation in it. In order to enable the learners to participate in the instructional process, there is an imperative need to adopt some kind of learner-centered new approaches in the classroom. Mind map begins with a central image; branches out organically and utilizes color, images, codes, symbols and key words in a hierarchical manner. Mind maps are a great way to introduce an overall topic, increase student involvement and get thoughts down quickly. Mind map is a skill that cuts cross ability level and encompasses all subject matters. It can accommodate creative thinking while still adapting to linear tasks such as note making, planning and organizing. It will help students make better platform for synthesis. The investigator has selected the topic "Effectiveness of mind mapping in English teaching among VIII standard students".

3. Statement of the Problem

At present, majority of English teachers follow the traditional methods of instruction in schools. What is required, is learner centered- approach to enable them to work on their own with little support from the teachers.

4. Operational Definitions of the Key Terms

4.1 Mind Mapping

A Mind Map is a graphic diagram used to represent our thoughts and ideas, tasks, or other items linked to a central key idea or theme.

4.2 VIII Standard

The students, those who are studying in VIII standard, in the school are called as VIII standard students.

5. Objectives of the Study

5.1 General Objectives

- The present study is to find out the effectiveness of mind map in English teaching.

5.2 Specific objectives

- To find out and compare the mean scores of the control and experimental group students in their gain scores for attainment of knowledge, understanding, and application.
- To find out the achievement mean scores of the pre & post-test of control and experimental group students in attainment of knowledge, understanding, and application.

6. Hypotheses of the Study

- There is no significant difference between the mean scores of the control and experimental group students in their gain scores for attainment of knowledge, understanding and application.
- There is no significant difference between the achievement mean scores of the pre-test of control and experimental group students in attainment of knowledge, understanding and application.
- There is no significant difference between the achievement mean scores of the post-test of control and experimental group students in attainment of knowledge, understanding and application.
- There is no significant difference between the achievement mean scores of the pre-test and post-test of the control group students in their attainment of knowledge, understanding and application.

- There is no significant difference between the achievement mean scores of the pre-test and post-test of the experimental group students in their attainment of knowledge, understanding and application.

7. Methods used for the Present Study

After reviewing the characteristics of the different methods of educational research, the investigator decided to use the experimental method which is the most suitable method for the present study.

7.1 Experimental Design of the Study

The conceptual structure of the research procedure is given by the research design. Experimental method, among the other research methods is considered to be a scientific method of research. The investigator adopted experimental method as the study was experimental in nature. Experimentation is the name given to the type of Educational Research in which the investigator controls the educative factors, to which a student or group of students are subjected during the period of enquiry and observes the resulting achievement.

Experimental method provides a systematic and logical way for answering the research questions. It is the best way to establish cause and effect relationship. Hence, the investigator had adopted the experimental design for the present investigation. An experiment has three characteristics. An independent variable is manipulated. All other variables except the independent variables are held constant. The effect of the manipulation of the independent variable on the dependent variables is studied. There are different patterns of experimental research based on the groups used as individual or single group, parallel (or) equated groups and rotational groups. In this study, the investigator adopted two or parallel group design.

Experimental design is the blue print of the procedures that enable the researcher to test hypotheses by reaching vivid conclusions about relationships between independent and dependent variables.

In this experimental research, the investigator has chosen the two groups pretest-posttest, equivalent-groups design for her study.

The pretest-posttest equivalent groups design is

$R\ O_1\ X\ O_2$ $\quad X\ \text{gain} = O_2 - O_1$ $\quad O_1O_3$ – Pre-tests

$R\ O_3\ C\ O_4$ $\quad C\ \text{gain} = O_4 - O_3$ $\quad O_2O_4$ – Post-tests

In this experimental method, two groups of subjects are selected. One of the equivalent groups serves as the control group in which the subjects are taught by traditional method. The other group serves as the experimental group in which the subjects are taught using the Mind map.

7.2 Population and Sample

In this research, all the VIII standard students studying at Tiruchendur Taluk have been taken as the population of the study.

7.3 Sample selected for the study

Sample is a smaller representation of a large whole. The investigator has chosen randomly selected, "Senthil Murugan Government Boys Higher Secondary School, Tiruchendur", to serve as both experimental and control groups. There were thirty students in each group.

7.4 Tools for the Study

The data required for the present study will be collected using the following tool.

1. Creation of mind map for selected English grammar.
2. Achievement test (pre-test and post-test) in English grammar.

7.5 Establishing Reliability

According to Anne Anastasi, "The Reliability of the test scores refers to the consistency of scores obtained by the same individual on different occasions with different sets equivalent items". Then, the product moment correlation co-efficient was found. The reliability of the achievement test is 0.84

7.6 Validating the Achievement Test

Validity is the extent to which a test measures what it intends to measure. According to Boring and others, "The degree to which the test actually is measuring what it seeks out to measure is called its validity". The test has been given to the experts in the field of English. They have given suggestions and on the basis of their suggestion, some items are modified.

8. Statistical Techniques Used

For the present study, the investigator has used the following statistical techniques.

8.1 Arithmetic Mean, Standard Deviation, 't' Test.

8.1.1 Analysis

Null Hypothesis 1

Here, the calculated 't' values are greater than the table value. Therefore, we reject the null hypothesis. Thus, there is a significant difference between control and experimental group students in their gain scores for attainment of knowledge, understand and application objectives. Table 1 shows the mean difference between control and experimental group students in their gain scores for attaining the objectives.

Null Hypothesis 2

There is no significant difference between pre-test scores of control and experimental group students in attainment of knowledge, understanding and application objectives.

Here, the calculated 't' values are less than the table value. Therefore, we accept the null hypothesis. Thus, there is no significant difference between the knowledge, understand and application objectives. Table 2 shows the mean difference between pre-test scores of control and experimental group students in attainment of objectives.

Objectives	Control group		Experiment group		Calculated 't' value	Remarks at 5% end
	Mean	S.D	Mean	S.D		
Knowledge	1.70	1.264	2.43	1.654	1.990	Significant
Understanding	1.80	1.495	3.17	1.949	3.048	Significant
Application	0.87	1.548	1.80	1.157	2.646	Significant

Table 1. The mean difference between control and experimental group students

Objectives	Control group N=30		Experiment group N=30		Calculated 't' value	Remarks at 5% end
	Mean	S.D	Mean	S.D		
Knowledge	2.27	1.285	2.53	1.408	0.766	No Significant
Understanding	2.67	1.605	2.63	1.732	0.077	No Significant
Application	4.03	1.629	3.83	1.577	0.483	No Significant

Table 2. The mean difference between pre-test scores of control and experimental group students

Objectives	Control group		Experiment group		Calculated 't' value	Remarks at 5% end
	Mean	S.D	Mean	S.D		
Knowledge	3.83	1.177	4.70	1.291	2.718	Significant
Understanding	4.40	1.276	5.80	1.472	3.937	Significant
Application	4.23	1.305	5.50	1.408	3.614	Significant

Table 3. The mean difference between post-test scores of control and experimental group students

Null Hypothesis 3

There is no significant difference between post-test scores of control and experimental group students in attainment of knowledge, understanding and application objectives.

(For df = 58 at 5% level of significance, the table value of 't' is 1.96)

Here, the calculated 't' value is greater than the table value. Therefore, we reject the null hypothesis. Thus, there is a significant difference between the post-test scores of control & experimental group students in attainment of knowledge, understanding and application objectives. Table 3 shows the mean difference between post-test scores of control and experimental group students in attainment of objectives

9. Findings of the Study

The major findings, which have emerged from the study are as Follows.

- There is a significant difference between control and experimental group students in their gain scores for attainment of the knowledge, understanding and application objectives. That is, the experimental group is better than control group in attainment of their objectives. This may be due to the attraction of the presentation and it is easily understandable by the students and so it is better.
- There is no significant difference between the pre-test scores of control and experimental group students in attainment of knowledge, understanding and application objectives. This may be due to the fact that the students understood the concept, but no opportunities for evaluating the concept studied.
- There is a significant difference between the post-test scores of control group and experimental group students in attainment of knowledge, understanding and application objectives. This may be due to the fact that the student's attention is drawn towards the topic to be learnt. The students showed more interest in learning the contents and to apply it more confidentially.

Two groups were benefited by their respective methods. Eventhough the control group was benefited, the experimental group was more benefited than the control group. Mind Mapping was more attractive, colourful, self paced etc., it stuffed the fresh mind of experimental group students very sharply. Mind map creates visual influences in the mind of learners. So, the experimental group might have shown higher performance.

10. Interpretations

These findings showed that the two groups of the present study are equal in the pre-test, whereas the students of the experimental group performed well, when they are taught with the mind map. This shows that using mind map in teaching English is effective than the ordinary lecture method.

The post-test scores in the control group and the experimental group showed significant difference with respect to the objectives 'knowledge', 'understanding' and 'application'. The mean scores of the experimental group are higher than the control group. This may be due to the presentation designed in the mind map that was attractive and which pulled the attention of the subjects towards the presentations. In the mind map, the complex matter is simplified and presented according to the student's level. So, the students in the experimental group might have shown higher performance in the knowledge, understanding application levels.

The result shows that the experimental group students are better than the control group students in attainment of knowledge, understanding and application level objectives in their gain scores. This may be due to the effectiveness of the mind map, which has motivated the students to understand the aspects of science student's attention in learning the subject contents using colourful pictures since it enhanced them to a great extent.

In general, as the mind map was presented in a logical manner, students were highly motivated in learning aspects of science easily. Thus, this mind map is effective in learning English among VIII standard students.

11. Suggestions for Further Research

- The present study was carried out to find the effect of mind map on learning English. The similarity of the findings in other areas of English may be identified and validated by conducting this study in other areas.
- This study was conducted with the sample of students with High School level. The same study could be conducted with the sample of students with higher secondary and college level having English as major discipline to find out the further impact of this study.

12. Delimitations of the Study

- In this present study, to equate the group, the investigator considers only the achievement marks of the students in their studies rather than their IQ test and family background.
- The present study was restricted to Senthil Murugan Government Boys Higher Secondary School. Tiruchendur.
- The study was conducted among the VIII standard students and not extended to other standard students studying in "Boys Hr.Sec.School", because of various constraints.

Conclusion

The major purpose of this study is to develop new innovative and effective instructional strategy for teaching English at High school level so as to make the students understand the subject quite easily and enable them to achieve good mark in the public examinations. Through this study, the investigator found out that the mind map method could be of much help to the teacher to teach English more effectively. The investigator believes that the same strategy may bring positive results if applied in the teaching of other branches of other English subjects.

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