

EFFECTIVENESS OF BLENDED LEARNING METHOD, E-LEARNING METHOD AND TRADITIONAL LEARNING METHOD ON STUDENTS'ACHIEVEMENT IN GUJARATI SUBJECT

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ABSTRACT: *Given the importance of the use of modern technology to the different sectors of the state, such as to the acquisition of information, enhancement of achievement, improvement of skills, low cost and overcoming obstacles, both the state and organizations alike have a duty to cope with the current technological advancements in order to respond to the needs of their relevant societies.*

In other words, given the human resources and expertise available to them, the duties of these institutions should extend beyond educating individuals to include the development of the society as a whole to reach international standards. Bearing in mind the current age of globalization, modern technology is becoming increasingly important to improve the education systems in the state like Gujarat.

So far as the education is concerned, much more is emphasized on how teachers teach in the classroom. Teaching-learning method is a key factor in education system. There are numbers of different teaching methods used in the classroom; at the same time it is a matter of debate in the education field that which method is more powerful in dealing with the students. The present study was an attempt to compare three learning methods named 'the blended learning', the e-learning' and 'the traditional method'

Key Words:

1. Preface

Given the importance of the use of modern technology to the different sectors of the state, such as to the acquisition of information, enhancement of achievement, improvement of skills, low cost and overcoming obstacles, both the state and organizations alike have a duty to cope with the current technological advancements in order to respond to the needs of their relevant societies.

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2. Statement of the problem

The title of the present research was worded as:

Effectiveness of Blended learning, E-learning And Traditional Learning on students' Achievement in Gujarati Subject

In the present venture the researcher tried to employ three methods of teaching the the Gujarati lessons of the grade VI. Teaching learning material was developed in the Google site by using multimedia and hyperlinks.

By employing "Three equivalent groups only posttest design", the effectiveness of the blended learning, the e-learning and the traditional learning was tested. Researcher selected three groups from grade VI of Gujarati medium schools:

- (1) Experimental group I (Blended learning group),
- (2) Experimental group II (E-learning group) and
- (3) Control group (Traditional learning group)

Data was collected by the post test based on the units. statistical analysis on the collected data was done using SPSS program.

3. Objectives of the study

The main objective of this study was to make a contribution towards improving the quality of teaching English at the upper primary level of the Gujarati medium schools of Gujarat by investigating the impact of the e-learning method and the blended learning method on students' achievement. Hence, in essence the specific objectives of this study were as follows.

- 1- To examine the impact of the e-learning method on the student's achievement compared to the traditional learning method with regard to Gujarati subject in standard six of Gujarati medium primary school of Gujarat.
- 2- To identify the effect of the blended learning method on the student's achievement compared to the traditional learning method with regard to Gujarati subject in standard six of Gujarati medium primary school of Gujarat.
- 3- To determine if there was a positive impact of the blended learning method on the Student's achievement as compared to the e-learning method with regard to teaching Gujarati subject in standard six of Gujarati medium primary school of Gujarat.
- 4- To determine if there was a positive impact of the blended learning method on the Student's achievement as compared to the e-learning method and traditional learning with regard to teaching Gujarati subject in standard six of Gujarati medium primary school of Gujarat

4. Hypotheses of the study

This study was initiated with the following null hypotheses:

- 1- There will be no significant difference between the achievement of students who use the blended learning method and the achievement of students who use the traditional learning method.
- 2- There will be no significant difference between the achievement of students who use the e-learning method and the achievement of students who use the traditional learning method.
- 3- There will be no significant difference between the achievement of students who use the blended learning method and the achievement of students who use the traditional learning method
- 4- There will be no significant difference between the achievement of students who use the blended learning method, e-learning method and the traditional learning method

5. Area of Research

The study was carried out to compare the relative effectiveness of the blended learning, e-learning and traditional learning methods. The researcher has also developed digital content through the Google site to be used in the blended learning and e-learning methods in teaching Gujarati lessons of sixth standard of Gujarati medium primary schools. So, The present research relates to 'Educational Technology', 'Teaching Strategies', 'Comparative Education' and 'Language Education' respectively.

6. Type of Research

Research is classified under three broad categories:

1. Basic or fundamental research
2. Applied research
3. Action research

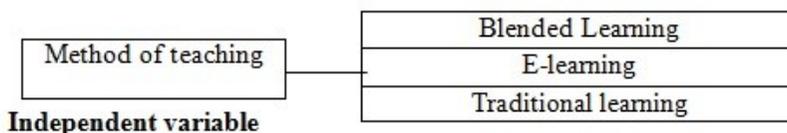
Although the line of demarcation between these categories is not very sharp, they have their distinctions. "Applied research is conducted in a field of common practice and is concerned with the application and development of research-based knowledge about that practice." The present research is concerned with the application of learning methods in teaching-learning process; therefore the present study is an applied research. Moreover in the context of collected data and the method of analysis this is a quantitative research

7. Variables

The present study was an experimental study. Variables involved in the study were as following.

7.1 Independent Variable. It is that factor which is measured, manipulated, or selected by the experimenter to determine its relationship to an observed phenomenon. Independent variable is also referred to as the treatment.

The independent variable in the present study was Method of Instruction. It consisted of three levels. 1) Instruction through the blended learning method 2) Instruction through the e-learning method and 3) instruction through the traditional learning method.



7.2 Dependent Variable. It is that factor which is observed and measured to determine the effect of the independent variable i.e., that factor that appears, disappears, or varies as the experimenter introduces, removes, or varies the independent variable. In the present study student's academic achievement on unit achievement test was considered as dependent variable. It was expressed in terms of achievement score.

7.3 Control variables. Those factors, which are controlled by the researcher to cancel out or neutralize any effect, they might have on the observed phenomenon.

The following variables were controlled during the experimentation:

1. Subject matter
2. Gender
3. Area of school
4. Time duration
5. Grade
6. School environment

7.4 Intervening variables. Those factors which cannot be controlled by researcher during the experiment for any reason. Intervening variables are independent variables that may or may not influence the results. In the present study the following were the intervening variables.

1. Interaction among students of the experimental groups and control group
2. Individual differences in intelligence, motivation, interest in learning and study habits
3. Educational guidance or getting help outside the school
4. Socio-economic status or environment of different Students
5. Computer knowledge of the students.

8. Definitions of terms

8.1 Blended learning Blended learning has been defined as a mixture of traditional learning and online learning (Williams, 2002; Osguthrope & Graham, 2003). It is also defined as the integration of e-learning tools such as virtual learning environment with face to face learning (Welker & Berardino, 2006). The aim of this type of learning is to join the advantages of face to face classroom learning with the advantages of e-learning to enhance the learning environment (Bleed, 2001; Garnham & Kaleta, 2002). In the current study the blended learning takes the form of a combination between the traditional classroom (face-to-face) and internet based virtual classroom, where students have to attend some lectures in the classroom and take other lectures and activities through internet using the Google site.

8.2 E-learning E-learning is one of the new methods which might be supporting change in the educational environment. In fact, it facilitates the interaction and the exchange of views and experiences. This type of learning depends on the use of electronic means for communication between teachers and learners as well as between learners and educational institutions. Some researchers define e-learning as "the acquisition and use of knowledge distributed and facilitated primarily by electronic means. This form of learning currently depends on networks and computers but will likely evolve into systems consisting of a variety of channels (e.g., wireless, satellite), and technologies (e.g., cellular phones, PDA's) as they are developed and adopted." (Wentling et al, 2000). In the present study the e-learning is the learning unit delivered through Internet connected computers using Google site.

8.3 The traditional learning The simple definition of traditional learning is face-to-face learning. This method used by the teaching staff in the lecture rooms. In this study the students meet with the instructor at the same time in one place and mainly relying on the teacher for lecturing and discussing the topics with them.

8.4 Achievement. Spence (1983) defines achievement as a task related behavior that renders the individual's performance to be assessed according to some internally imposed criteria that involves a certain level of excellence. Achievement is also defined as the overall accomplishment that students achieve in a specific course measured by their scores. In this research, the achievement referred to the outcome of learning a specific unit measured by the points scored by learners in the test given to them immediately at the end of teaching the unit

8.5 Experimental group I. Experimental group I means group of students receiving instruction through the blended learning method during the experiment and replication stages.

8.6 Experimental group II. Experimental group II means group of students receiving instruction through the e-learning method during the experiment and replication stages.

8.7 Experimental group III Experimental group III means a group receiving instruction through the traditional method during the experiment and replication stages.

8.8 Effectiveness The effectiveness of the was accepted as a significant difference between the mean scores obtained from the pretest and the posttest of the experimental group I, the experimental group II, and the experimental group III at 0.05 / 0.01 level

9 Importance of the study

The importance of this study stems from the fact that it will contribute to addressing the lack of experimental studies with regard to the use of e-learning and blended learning in the field of primary education of Gujarat. It is expected that this study will contribute to clarify to what extent the e-learning and blended learning method might promote students' achievement.

This study, to the best of the researcher's knowledge, is the first of its kind in the Gujarat primary education, aiming at investigating the effects of the e-learning and the blended learning compared to the traditional method on the student's achievement in the area of Gujarati subject. However, the results of this study are expected to clarify issues for policy makers regarding the teaching of primary school subjects in Gujarat. Likewise, it will clarify issues for those in charge of training by providing useful information about the effectiveness of the different methods of education on the learning of primary school subjects. Moreover, this study will pave the way for more research and studies in the future, in areas such as the use of modern technology in higher education which is in high demand in the present time..

10. Delimitations of the study

This study will be limited to the following:

10.1 The substantive limits

The research was limited to the comparative study of the impact of the e-learning, the blended learning and the traditional learning on the student's achievement. The research was also limited to the Gujarati subject course allocated for the Gujarati medium, sixth standard students of Gujarat primary schools.

10.2 The time limits

This research was limited to the students of Valukad primary school, who were going to study the Gujarati subject, in the second semester for the academic year 2015/2016.

10.3 The limits of place

This research was confined to the Valukad primary school located in the rural area of Bhavnagar district.

11 The population of the study

The population involved in this study was all the students of standard sixth studying in the government primary schools of Gujarat. For the purpose of this study a sample was selected from this population. The target sample was 90 students from Valukad primary school of the academic year 2015-16.

12 sample selection

The samples for the piloting, experimental and replication stage were selected from the population involved in this study was all the students of standard sixth studying in the government primary schools of Gujarat. The students of sixth standard of Nonghanvadar primary school were selected for the piloting stage and the students of sixth standard of Valukad primary school were selected for the experimental stage while the students of sixth standard of Sarvedi primary school were selected for the replication stage. All the students were divided into three groups. The researcher used marks of Gujarati subject of the previous semester exam and made the groups equivalent.

13. Method of the Research

It was three equivalent group only post test experimental research. The sample was divided into three equivalent groups for which the researcher used marks of Gujarati subject of first semester of the sixth standard. All the three groups were given equal treatment by using different teaching- learning approaches like blended learning, e-learning and traditional learning. Three groups were taught two lessons of Gujarati subjects for seven days and then the post test was held to collect the data in all three piloting, experimental and replication stages.

14 Tool of the study

A teacher made test was used as a tool to collect the data in the research. The tool contained 25 questions including multiple choice and short answer questions based on the cognitive, comprehensive and applicative objectives of the lessons. The tool was checked and approved by the expert teachers. The tool was used as post test to collect the data of the research.

15 Data collection

As it was three groups only post test experimental study, the post test was held after the treatment to all three groups of the students. It was a teacher made test which was used as the post test and the scores achieved by the students were considered as the data of the research. Thus the numerical data was collected in the study.

16 Data analysis.

Analysis was done through SPSS. Data sheets were prepared on data editor. The graphs were prepared through SPSS. The data gathered as above were analyzed and interpreted by employing 'ANOVA', Post hoc 'Tuckey Test'.

17 Findings of the study

- 1- The first hypothesis of the study 'There will be no significant difference between the achievement of students who use the blended learning method and the achievement of students who use the e-learning learning method' was not accepted. The mean difference of the two groups was 3.16 which was significant at 0.05 level. It shows that the mean of the blended learning method which was 13.30 which was higher than the mean 9.17 of the e-learning method
- 2 The null hypothesis 'There will be no significant difference between the achievement of students who use the e-learning method and the achievement of students who use the traditional learning method' was accepted as there was no significance difference between the groups. The mean difference of the groups was 0.85.
- 3 The null hypothesis 'There will be no significant difference between the achievement of students who use the blended learning method and the achievement of students who use the traditional learning method' was not accepted. The mean difference of the two groups was 2.22 which was significant at 0.05 level. It shows that the mean of the blended learning method which was 13.30 which was higher than the mean 10.27 of the e-learning method
- 4 The hypothesis 'There will be no significant difference between the achievement of students who use the blended learning method, the e-learning method and the traditional learning method' was not accepted. The 'F' value between the three groups was 5.09 which was significant at 0.05 level.

18 summery of the study

The results of experiment stage showed that the effectiveness of the blended learning was significant at 0.05 levels than the e-learning method and traditional method. At the same time there was no significant difference between the e-learning method and the traditional learning method. The results did not differ in the replication stage to. So, it can be summarized that the blended learning method is more effective than e-learning method and the traditional learning method in education.

20 Educational implications

The blended learning method has been proved to be significantly effective compared to e-learning method and traditional learning method for teaching of Gujarati in the present study. The blended learning method may be used by the teachers of upper primary and high-school levels in their teaching. In other words, during classroom teaching a teacher should adopt the blended learning method specifically based on computer and internet technology. By adopting this approach students' involvement in teaching and interest in learning can be increased and maintained.

A resourceful teacher with necessary computer skills may develop similar blended learning content in other areas of his / her teaching to meet the peculiar demands of his/her classroom teaching.

21 Recommendations for Further Research

Research is a continuous unending process. Every research generates new areas for further researches. Following is the list of some major areas for further researches that may be conducted in the relevant fields.

- In other areas of teaching at upper primary level and high-school level blended learning content may developed and their comparative effectiveness may be examined.
- Similar experiments may be conducted in the areas of teaching Hindi, English or other subjects.
- Similar experiments may be conducted in the areas of teaching at secondary, higher secondary or graduation level.
- Future researchers may also think of developing such blended learning content for the fast learners and slow learners.
- The comparison of these methods may be applied and their joint and individual effectiveness on either gender or in general may be found out.

Conclusion

These findings permit us to conclude that, the blending of teacher and technology in Gujarati language learning is quite effective in comparing to the other methods of learning. The blended learning method should be heeded specially by the teachers when computers and internet technology are invading our schools, our educational system, our society and our life at large.

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