

Effect of Blended Learning on The Academic Achievement in Social Science of Secondary School Students

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Abstract:

This study has been undertaken to examine the correlation between Blended learning and Academic Achievement of Secondary school students of Mayurbhanj District. The Investigators used Experimental research method to study the variables for which 40 (18 male and 22 female) 9th class students of Govt. Secondary school of Baripada town in Mayurbhanj District were selected as samples by using Simple random sampling technique. For collection of data the investigators used Self-made achievement test for collection of data and the collected data were analyzed using Statistical Techniques like Mean, Standard Deviation and Independent t-test and tested at 0.01 and 0.05 Significance levels. The results showed that there is a significance positive relationship between the effect of blended learning and Academic Achievement of secondary school students of Baripada town in Mayurbhanj District. The findings also showed that there exists no significant difference between the boys and girls' students of 9th class students in academic achievement using blended learning.

KeyTerms: Blended learning, Academic Achievement and Secondary school students.

INTRODUCTION

In the context of the rapidly developing scientific and technical revolution, the education and training sector has actively implemented tasks and solutions to enhance support management, teaching, learning, assessment, scientific research, and the application of information and communication technology (ICT) (Acosta et al., 2018; Baris, 2015; Bray and Tangney, 2017; Diabat and Aljallad, 2020). The teaching and learning environment is embracing a number of innovations and some of these involve the use of technology through blended learning. This innovative pedagogical approach has been embraced rapidly though it gives through a process of Blended Learning. Recently the educational research literature has indicated that blended approaches to learning might provide an optional environment for enhancing student engagement and success. The idea of blending different learning experiences has been in existence since human started thinking about teaching. The on-going infused web-based technologies into the learning and teaching process has highlighted the potential of blended learning. Collaborative web-based applications have created new opportunities for students to interact with their peers, teachers and content. Blended Learning is often defined as a combination of face-to-face and online learning. Most of the

recent definitions of blended courses indicate that this approach to learning offers potential for improving how we deal with content, social interactions, reflections, higher order thinking, problem solving, collaborative learning and more authentic assessment in higher education, which could potentially lead to a greater sense of student engagement. Moskal, Dziuban and Hartman (2013) suggest that “blended learning has become an evolving, responsive and dynamic process that in many aspects is organic, defying all attempts at universal definition”.

THEORETICAL FRAMEWORK

Meaning of Blended learning

Blended learning is a student-centered learning method (Vasileva-Stojanovska, 2015) that combines traditional face-to-face classrooms (synchronous learning activities) with e-learning activities (asynchronous learning activities) (Attard and Holmes, 2020; Kerz'ić et al., 2019). Gambari et al. (2017) emphasized the role of the e-learning factor, according to Adiguzel et al. (2020).

Academic Achievement

The phrases "academic" and "achievement" are combined to form the phrase "academic achievement." The term "academy" refers to a school where particular kinds of training are given, and the word "academic" is derived from this word. "Achievement" is a noun that denotes accomplishment or attainment. Therefore, a person's achievement represents the degree to which he or she has learned a skill or body of knowledge from the instruction given to him (Trama, 1998).

Blended Learning and Academic Achievement

The term *blended learning* is the use of traditional classroom teaching methods together with the use of online learning for the same students studying the same content in the same course. It is a “thoughtful fusion of face-to-face and online learning experiences” (Garrison & Vaughan, 2008). It is called hybrid learning, is an approach to education that combines online educational material and opportunities for interaction online with traditional place-based classroom methods. blended learning set ups, face-to-face experiences form part of the blend and learner positive attitudes to such sessions could mean blended learning effectiveness.

A study by Marriot, Marriot, and Selwyn (2004) showed learners expressing their preference for face-to-face due to its facilitation of social interaction and communication skills acquired from classroom environment. Their preference for the online session was only in as far as it complemented the traditional face-to-face learning. Learners in a study by Osgerby (2013) had positive perceptions of blended learning but preferred face-to-face with its step-by-step instruction. Beard, Harper and Riley (2004) show that some learners are successful while in a personal interaction with teachers and peers thus prefer face-to-face in the blend. Beard however dealt with a comparison between online and on-campus learning while our study combines both, singling out the face-to-face part of the blend.

Achievement in blended learning can be defined as the level of success or accomplishment that students attain when participating and completing a blend of online and traditional face-to-face learning activities (Inal and Korkmaz, 2019). This measure of achievement encompasses various learning outcomes, such as improved academic performance, increased engagement, and enhanced critical thinking and problem-solving abilities. In blended learning, the achievement can be assessed through a variety of methods, including graded quizzes and assignments, class participation, peer evaluations, and self-reflection.

Additionally, the use of learning analytics and data-driven assessment measures can provide valuable insights into students' progress and provide feedback to instructors for more personalized and effective teaching strategies. Achievements in this study include: exam scores, students' knowledge state, writing content relevance, English test scores, actual grades in the academic goal planning assignment, achievement test scores, course grades, level of knowledge, gain in knowledge, student learning outcomes, reading achievements, and academic progress.

JUSTIFICATION OF THE STUDY

Teaching method has a very important role on academic achievement of the students. There are various types of learning method like online learning, face to face learning and blended learning. In the present situation it is notice that blended learning is very much helpful. The investigator tried to explore the effectiveness of blended learning on achievement in social science among secondary school students.

The present study is carried out to find the possible solution which the previous studies have not been able to do. The previous studies only highlighted the infrastructural facilities and learning outcomes of students, parental perception about the government and private schools, findings based on the academic achievement of students etc. but no research studies highlighted root area of the problem. So, this study will highlight the areas where the government schools are lacking in terms of providing quality education and other provisions of education by collecting useful data from the school administrators.

OBJECTIVE OF THE STUDY

1. To study the effect of blended learning on academic achievement of students of secondary school.
2. To study the significance difference between boys and girls in achievement on pre-test.
3. To study the significance difference between boys and girls in achievement on post-test.

HYPOTHESES

1. There exists a significant effect of blended learning on academic achievement of secondary school students.
2. There exists a significant difference between boys and girls on achievement in pre-test.
3. There exists a significant difference between the boys and girls on achievement in post-test.

RESEARCH METHODOLOGY

The methodology section outlines the plan and method that how the study is conducted. This includes Universe of the study, sample of the study, Data and Sources of Data, and analytical framework. The details are as follows;

3.1 Population and Sample

The population of the proposed study constituted all the 9th grade Govt. Secondary school students of Baripada town Mayurbhanj District. Among them 40 9th grade Students were selected as sample using Simple Random Sampling Technique from two Govt. High Schools in Baripada town. 20 Students from each institution were collected including both males and females to represent the entire population truly.

3.2 Data and Sources of Data

In this study, the researcher used self -made achievement test consisting 25 marks for the collection of

data from respondents to find out the correlation between Blended Learning and Academic Achievement.

3. Statistical tools

In this study investigators used SD and t-Test to find out the effect of Blended Learning on Academic Achievement of Secondary school students of grade-IX.

IV. RESULTS AND DISCUSSION

4.1 Analysis of Objectives 1

Analysis of the effect of blended learning on academic achievement in social science among students

Table-4.1

GROUP	N	MEAN	SD	SED	t-Ratio	Level of significance
Pre-test	40	10.42	2.43	0.62	5.58	Significant
Post-test	40	13.92	3.14			

The above table 4.1 shows the effect of blended learning on the academic achievement in social science among secondary school students. The total number of samples taken for the study was 40. After finding out the raw scores of both these variables of the selected sample the investigators then tried to find out the significance of difference between the two variables by employing independent t-Test. It also shows that the Mean scores of Pre-tests and post-test are 10.42 & 13.92 with SD 2.43 & 3.14 respectively. The S. ED come out from the two groups is 0.62 & t -Ratio come out from two groups is 5.58 which is significant at .01 level of significance. That means there exist a significant effect of blended learning on the academic achievement of students. Thus, **H1 There exists a significant effect of blended learning on academic achievement” is accepted.**

4.2 Analysis of Objectives 2

Analysis of the significant difference between boys and girls in achievement on pre-test.

Table-4.2

GROUPS	N	MEAN	SD	SED	t-Ratio	Level of Significance
Pre-Test Male	18	10.44	2.47	0.77	0.05	Not significant (0.1 and 0.5)
Pre-Test Female	22	10.40	2.46			

The above table 4.1 depicts that the significant difference between boys and girls in achievement on pre-test. The total number of samples taken for the study was 40(18 male and 22 female). After finding out the raw scores of both these variables of the selected sample the investigators then tried to find out the significance of difference between the two variables by employing independent t-Test. It also shows that the Mean scores of Pre-test male and pre-test female are 10.44 & 10.40 with SD 2.47 & 2.46 respectively. The S. ED come out from the two groups is 0.77 & t-Ratio come out from two groups is 0.05 which is not significant at any level of significance. That means, there exist no significant difference between male and female on the academic achievement in Pre-test. Thus, **H2 “There exists significant difference**

between the boys and girls on achievement in pre-test” is rejected.

4.3 Analysis of Objective 3

Analysis of the significant difference between boys and girls in achievement on post-test

Table-4.3

GROUPS	N	MEAN	SD	SED	t-Ratio	Level of Significance
Post-test Male	18	13.11	2.94	0.97	1.52	Not Significant (0.1 and 0.5)
Post-test Female	22	14.59	3.20			

The above table 4.1 shows the significant difference between boys and girls in achievement on post-test. The total number of samples taken for the study was 40(18 male and 22 female). After finding out the raw scores of both these variables of the selected sample the investigators then tried to find out the significance of difference between the two variables by employing independent t-Test. It also shows that the Mean scores of Post test male and post-test female are 13.11 and 14.59 with SD 2.94 and 3.20 respectively. The S. ED come out from the two groups is 0.97 and t ratio come out from two groups is 1.52 which is not significant at any level of significance. That means, there is no significant difference between boys and girls on the academic achievement in post-test. Thus, **H3 “There exists a significant difference between the boys and girls on achievement in post-test” is rejected.**

V. FINDINGS

After analysis of the data, following major findings emerged as the findings of the study:

- There is a significant effect of blended learning on the academic achievement in social science of secondary schoolstudents.
- There is no significant difference between boys and girls on the academic achievement in pre-test.
- There is no significant difference between boys and girls on the academic achievement in post-test.

VI. EDUCATIONAL IMPLICATIONS

- Teachers should implement blended learning in the classroom teaching for the good academic achievement of student insocial science.
- Students should be encouraged to be familiar with the blended learning.
- There is no difference between the achievement in male and female student in pre-test and post-test. Hence, teacher should give equal emphasis to all the students.
- It develops learning flexibility in education field. As the students feel more comfortable with the teaching-learning situation both in face-to-face and online mode of learning.

VII. CONCLUSION

This study explored the effect of blended learning on the academic achievement in social science subject of secondary school students of Baripada town of Mayurbhanj district. The findings provide valuable insights into the effect of blended learning as the result of the study indicates that both boys and girls were good in academic performance. There was a positive relationship between teachings through blended

mode on the Academic Achievement of Secondary school students of Baripada town of Mayurbhanj District. Although there was no significant difference was found between male and female secondary school students in pre-test results and post-test results. These findings may help the students, parents, teachers and policy makers for implementing Blended mode of learning more often. Overall, it is important to note that this study focused solely on Baripada town of Mayurbhanj district. Further research needed to validate and expand the findings of this research.

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