A Comparative Study of Blended Mode of Learning and Traditional Method of Learning Among Secondary School Children

Dr. Yarasani Syam Krupakar
PGT. AP Model School, Chirumamilla (Village), Nadendla (Mandal), Palnadu (District)- 522234

***Abstract*—The world is changing rapidly in all fields including education. The progression of digital platforms has a huge impact on teaching and learning strategies. Over time and with the rise new forms of technology, it can be observed that there is constant transformation that is taking place at a global level, but there are demands for both technology and traditional learning methods. As result of this, the art of combining digital equipment with conventional classroom face to face gave birth to the Blended Learning. Blended Learning is not only combination of digital and face to face mode, but it refers to a well – planned combination of meaningful activities. The blended learning mainly focusing in learning outcomes and the child centered instructional environment. It enhances teacher and student interaction. Blended learning will improve the children's' learning out comes.**

***Index Terms*— Learning, Blended Learning, Traditional Method.**

I. INTRODUCTION

Blended Learning is an innovative teaching-learning approach that combines traditional face-to-face classroom instruction with digital and online learning methods. It integrates the strengths of conventional teaching and modern educational technology to create an effective, flexible, and student-centred learning environment. Through videos, presentations, virtual classrooms, online assessments, and interactive activities, students can learn at their own pace and access educational resources anytime and anywhere.

It promotes active participation, collaboration, creativity, critical thinking, and independent learning. Teachers act as facilitators, guiding students towards meaningful knowledge construction. Blended Learning enhances teaching effectiveness, improves learning outcomes, and prepares learners for the challenges of the digital world.

II. NEED OF THE STUDY

The NEP2020 has given more importance for the transformation of education. It clearly states that it is time to take on a NEP2020 that is undoubtedly student centric or what can be safely put down as education 4.0, in this line of thinking the NEP gives acceptability of many modes of learning and also promotes use of vocational courses and multi disciplinary courses by focusing on blended learning.

III. STUDIES RELATED TO THE TOPIC

Eswari B, Jayalakshmi et al (2023) found in their study that the blended way of learning improved the academic achievement. Felicia Jefferson (2006) found that the influence of blended learning was more than the traditional learning with respect to the achievement levels. Nikolaos Vernadalys and Maria Giannousi (2012) found in their study that the blended learning plays an importance role in students' learning results.

IV. OBJECTIVES OF THE STUDY

(1) To compare academic achievement in biological sciences of secondary school students taught through blended mode of learning and traditional method of learning
(2) To compare academic achievement in biological sciences of secondary school students taught through blended mode of learning and traditional method of learning with respect to gender

V. HYPOTHESES OF THE STUDY

(1) There is no significant difference between academic achievement in biological sciences of secondary school students taught through blended mode of learning and traditional method of learning

(2) There is no significant difference between academic achievement in biological sciences of secondary school students taught through blended mode of learning and traditional method of learning with respect to gender

VI. METHOD OF THE STUDY

In order to find out the academic achievement in biological sciences of secondary school children through blended mode of learning and traditional method of learning, in a systematic and scientific manner, a researcher design is to be made by the investigator. In the present study the investigator adopted experimental method (Quasi experimental design). The design of the study was posting test design only.

Group	N	Treatment	Post Test
Experimental	50	Blended mode of Learning	Academic achievement
Control	50	Traditional method of Learning	Academic achievement

VII. SAMPLE OF THE STUDY

The present study, the population consist secondary school students in Palnadu District, Andhra pradesh. The sample has been selected by a convenience sampling technique. The study was conducted on a sample of 100 secondary school children.

VIII. TOOL OF THE STUDY

A simple scholastic achievement test is used and standardized. The reliability of the test is 0.81

Interpretation of the Data

Hypothesis: 1

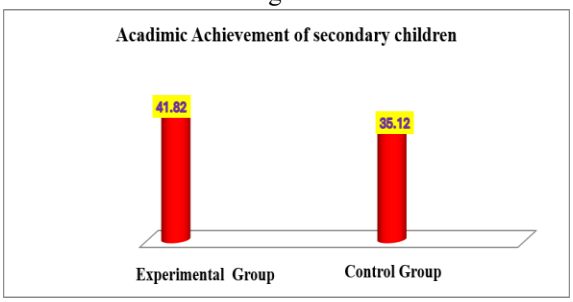
There is no significant difference between academic achievement in biological sciences of secondary school students taught through blended mode of learning and traditional method of learning

Table: 1 (Mean achievement score of experimental and control group)

Variable	Group	Mean	SD	df	C.R Value	Level of significance
Academic Achievement	Experimental Group (50)	41.82	5.77	98	2.257	Not Significant
	Control Group (50)	39.17	5.88			

The data presented in the table I shows that the mean achievement score of Experimental groups is 41.82 and S.D. is 5.77 and the mean achievement score of control group is 39.17 as S.D.is 5.88. This shows that Experimental group is an upper age on their counterparts. Which mean also found to be statistically significant as the t-value was 2.257 which was higher than the table t-value at 0.01 level of significance and 98 df.

Figure 1



The above table provided evident that academic achievement of experimental group and control group was extremely significant. So, result had not come according to the hypothesis. So, hypothesis I is rejected.

Hypothesis: 2

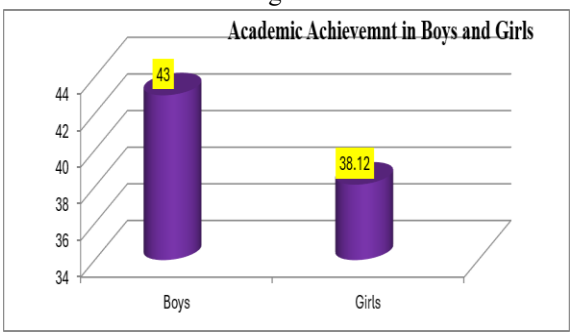
There is no significant difference between academic achievement in biological sciences of secondary school students taught through blended mode of learning and traditional method of learning with respect to gender

Table: 2 (Mean achievement score of Boys and Girls of Experimental group)

Variable	Gender	Mean	SD	df	C.R Value	Level of significance
Academic Achievement	Boys (34)	43	2.6	48	2.57	Not Significant
	Girls (16)	38.12	10.51			

The data presented in the table II shows that the mean achievement score of Boys is 43 and S.D. is 2.6 and the mean achievement score of Girls is 38.12 as S.D.is 10.51. This shows that boys are an upper age over their counterparts. Which mean it is found to be statistically not significant as the t-value was 2.57 which was less than the table t-value at 0.01 level of significance and 48 df.

Figure 2



IX. FINDINGS AND CONCLUSION

From the above results, the conclusion of the research is that the reason behind the better academic achievement of blended learning than the traditional learning may be that, if teacher teach with blended learning s/he can satisfy the needs of diverse learners. When teachers provide online content along with physical presence through a concurrent way then it develops interest in the student towards learning. Either content is provided through non concurrent way under Blended Learning, children study only when they want to study. It improves their attention and interest towards studies. So, it improves academic achievement of secondary school students. Based on the above result researcher wants to use more and more online content, videos and classroom teaching in the school setup

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