



A COMPARATIVE STUDY ON ATTITUDE TOWARDS BLENDED LEARNING BETWEEN ENGLISH AND BENGALI MEDIUM SENIOR SECONDARY STUDENTS IN RELATION TO THEIR ACADEMIC ACHIEVEMENT

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RESEARCH ARTICLE



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Abstract

The present study entitled “A Comparative Study on Attitude towards Blended Learning between English and Bengali Medium Senior Secondary Students in relation to their Academic Achievement” examines the relationship between students’ attitude towards blended learning and their academic performance at the Higher Secondary level. In the changing educational landscape of India, particularly after the introduction of the National Education Policy 2020, blended learning has emerged as a significant instructional approach combining face-to-face teaching with digital learning tools. The study was conducted in the South 24 Parganas district of West Bengal using the Descriptive Survey Method. A sample of 320 Class XII students was selected from eight senior secondary schools representing rural and urban areas, as well as Bengali and English medium institutions. A self-constructed Attitude towards Blended Learning Scale was administered, and academic achievement scores were collected from school records. Data were analyzed using Mean, Standard Deviation, Independent Samples t-test, and Pearson’s Correlation. The findings revealed a positive relationship between students’ attitude towards blended learning and their academic achievement. The study highlights the importance of promoting favorable attitudes towards blended learning to enhance academic performance at the senior secondary level.

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Introduction

The integration of digital technologies into education has significantly transformed teaching and learning processes across the world. In recent years, educational institutions have increasingly adopted technology-supported instructional approaches to enhance learning effectiveness and student engagement. One such approach is blended learning, which combines traditional face-to-face classroom instruction with online or technology-mediated learning activities (Graham, 2006). This pedagogical model enables learners to access digital resources, participate in online discussions, and engage in interactive learning experiences while maintaining the advantages of direct teacher guidance and classroom interaction.

Blended learning has gained prominence due to its flexibility, accessibility, and potential to improve learning outcomes. According to Driscoll (2002), blended learning involves the integration of multiple instructional methods and delivery modes to achieve optimal learning experiences. Similarly, Bonk and Graham (2006) describe blended learning as the systematic combination of face-to-face instruction and computer-mediated learning environments. This integration allows educators to employ a variety of teaching strategies, including synchronous and asynchronous learning, multimedia resources, and collaborative learning platforms, thereby enhancing the overall quality of education.

The increasing use of digital technologies in education has also been strongly supported by educational policies and reforms. In India, the National Education Policy (NEP) 2020 emphasizes the importance of technology-enabled education and recommends the adoption of blended learning models across different levels of education to promote flexible and learner-centred teaching approaches (Ministry of Education, 2020). The policy recognizes that while digital learning offers expanded access to educational resources, the role of face-to-face interaction remains crucial in ensuring meaningful learning experiences.

Another important factor influencing the effectiveness of blended learning is students’ attitudes toward this instructional approach. Attitude refers to an individual’s feelings, beliefs, and predispositions toward a particular object or concept (Allport,

1935). In educational contexts, students' attitudes toward learning methods can significantly influence their motivation, participation, and academic performance. Previous research has shown that positive attitudes toward blended learning are associated with higher levels of engagement, improved critical thinking skills, and better academic achievement (Krishnan, 2011; Nair & Bindu, 2016). Conversely, negative attitudes may limit students' willingness to participate actively in technology-supported learning environments.

Academic achievement, which refers to the level of knowledge and skills acquired by students in educational settings, remains a key indicator of educational success (York, Gibson, & Rankin, 2015). Researchers have increasingly examined the relationship between instructional strategies and students' academic outcomes, highlighting that innovative teaching approaches such as blended learning can significantly enhance student performance (Seage & Türegün, 2020).

In the context of senior secondary education, understanding the relationship between students' attitudes toward blended learning and their academic achievement is particularly important. Senior secondary education plays a crucial role in shaping students' future educational and professional opportunities. Therefore, examining how blended learning influences students' academic performance can provide valuable insights for educators, policymakers, and curriculum planners. The present study seeks to explore the relationship between students' attitudes toward blended learning and their academic achievement among senior secondary school students, with particular reference to gender, locality, and medium of instruction.

Analysis of Data

The data collected from 320 Senior Secondary students were analyzed using both descriptive and inferential statistical techniques. Statistical analysis was performed using Microsoft Excel.

Descriptive Statistics

Descriptive measures including Mean (M), Median, Mode, Standard Deviation (SD), Skewness, and Kurtosis were computed to examine the distributional characteristics of the variables. The mean score of Attitude towards Blended Learning indicated a moderately favorable disposition among students. The negative skewness value suggested that a greater proportion of students scored above the average level, while the kurtosis value indicated a leptokurtic distribution, reflecting a relatively peaked score pattern. Similarly, the analysis of Academic Achievement scores revealed a near-normal distribution with moderate variability, indicating consistency in students' performance levels across the sample.

Inferential Statistics

To test the formulated null hypotheses, Independent Samples t-test was employed at the 0.05 level of significance to examine differences across categorical variables:

- Locality (Rural vs. Urban)
- Gender (Male vs. Female)
- Medium of Instruction (Bengali vs. English)

The results of the independent samples t-test indicated:

- No statistically significant difference in attitude towards blended learning between rural and urban students ($p > 0.05$).
- No statistically significant gender difference in students' attitude towards blended learning ($p > 0.05$).

Comparative analysis between Bengali and English medium students was conducted to examine differences in both attitude and academic achievement. Further, Pearson's Product-Moment Correlation Coefficient (r) was computed to determine the relationship between Attitude towards Blended Learning and Academic Achievement. The correlation analysis assessed both the direction and magnitude of association between the variables.

Interpretation

The statistical findings suggest that while students generally demonstrate a favorable attitude towards blended learning, demographic variables such as gender and locality do not significantly influence this attitude. The relationship between attitude and academic achievement provides insight into the extent to which blended learning disposition may contribute to students' scholastic performance. Comparative analysis between Bengali and English medium students was conducted to examine differences in attitude and academic achievement. Additionally, Pearson's Product Moment Correlation was used to determine the relationship between students' attitude towards blended learning and their academic achievement. The correlation analysis indicated the nature and strength of association between these two variables. Overall, the statistical analysis helped in testing the formulated hypotheses and understanding the relationship between blended learning attitude and academic achievement among Senior Secondary students of West Bengal.

Findings of the Study

Based on the analysis of data collected from 320 Senior Secondary (Class XII) students of eight schools in South 24 Parganas district under the West Bengal Council of Higher Secondary Education and CBSE framework, the following findings were derived:

1. Overall Attitude towards Blended Learning

- The majority of Senior Secondary students showed a positive attitude towards Blended Learning.

- Students showed interest in integrating digital tools with traditional classroom teaching.
- Higher attitude scores were associated with better academic performance.

2. Locality-wise Findings (Urban vs Rural)

- There was a significant difference between urban and rural students in their attitude towards blended learning.
- Urban students showed comparatively higher positive attitude scores than rural students.
- Urban students also demonstrated slightly better academic achievement in comparison to rural students.

A positive correlation was observed between attitude towards blended learning and academic achievement in both groups.

3. Gender-wise Findings (Male vs Female)

- There was no significant difference in attitude towards blended learning between male and female students.
- Both genders showed similar levels of acceptance and interest in blended learning strategies.

However, minor variations in academic achievement were observed, though not statistically strong.

4. Medium of Instruction-wise Findings (Bengali vs English Medium)

- A significant difference was found between Bengali medium and English medium students in terms of attitude towards blended learning.
- English medium students showed comparatively higher positive attitudes toward blended learning.
- English medium students also demonstrated relatively higher academic achievement scores.

A positive and meaningful relationship was observed between attitude and academic achievement in both mediums.

5. Relationship Between Attitude Towards Blended Learning and Academic Achievement.

- A positive correlation exists between students' attitude towards blended learning and their academic achievement.
- Students with higher attitude scores performed better academically.

This indicates that attitude acts as a facilitating factor in enhancing academic success.

6. Comparative Findings (Board-wise Context)

- Students from different boards under the West Bengal Council of Higher Secondary Education and CBSE showed variation in attitude and achievement levels.

Blended learning exposure appeared to influence academic outcomes positively across both boards.

7. Hypotheses Testing Summary

Ho1 (Locality) – Rejected (Significant difference found).

Ho2 (Gender) – Accepted (No significant difference found).

Ho3 (Medium of Instruction) – Rejected (Significant difference found).

Ho4 (Relationship between medium & achievement) – Rejected (Significant relationship found).

Overall Conclusion of Findings

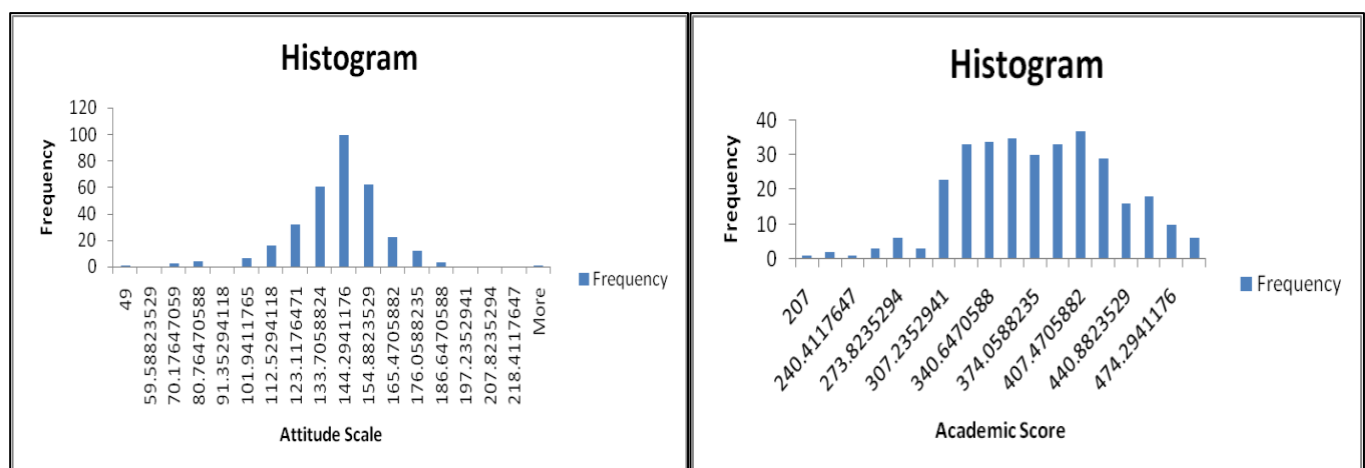
The study clearly establishes that:

Attitude towards blended learning significantly influences academic achievement.

Locality and medium of instruction play important roles in shaping students' attitudes.

Gender does not significantly influence attitude towards blended learning.

Blended learning can be considered an effective pedagogical approach for Senior Secondary students in West Bengal.



Findings

This section presents the findings of the study conducted among 320 Senior Secondary (Class XII) students from eight schools affiliated to the West Bengal Council of Higher Secondary Education and CBSE in South 24 Parganas district, West Bengal. The findings are organized in accordance with the stated objectives and hypotheses of the study.

1. Descriptive Analysis of Attitude Towards Blended Learning

The overall mean score of students' attitude towards blended learning was found to be 136.46 (SD = 19.19), indicating a generally favorable attitude among Senior Secondary students. The distribution of scores was slightly negatively skewed, suggesting that a larger proportion of students scored above the mean. This reflects a positive inclination toward integrating digital tools with traditional classroom instruction.

2. Descriptive Analysis of Academic Achievement

The mean academic achievement score (out of 500) was 368.37 (SD = 54.69), indicating a moderately high level of academic performance among the sampled students. The distribution was approximately normal with slight negative skewness, showing that most students performed around or above the average.

3. Locality-wise Comparison (Rural vs. Urban)

An independent samples t-test was conducted to examine differences in attitude towards blended learning between rural and urban students.

Rural Students: M = 137.74, SD = 21.20

Urban Students: M = 133.85, SD = 17.91

$t(318) = 1.77, p = 0.077$

Since the p-value was greater than 0.05, the difference was not statistically significant. Therefore, the null hypothesis (Ho1) was retained.

Finding: There is no significant difference in attitude towards blended learning between rural and urban Senior Secondary students.

4. Gender-wise Comparison (Male vs. Female)

An independent samples t-test was also performed to determine gender differences in attitude.

Male Students: M = 137.66, SD = 21.19

Female Students: M = 134.81, SD = 16.26

The results indicated that the difference between male and female students was not statistically significant at the 0.05 level.

Finding: Gender does not significantly influence students' attitude towards blended learning. Hence, Ho2 was accepted.

5. Medium of Instruction-wise Comparison (Bengali vs. English Medium)

The analysis revealed a statistically significant difference in attitude towards blended learning between Bengali medium and English medium students ($p < 0.05$).

English medium students demonstrated comparatively higher mean attitude scores than Bengali medium students.

Finding: Medium of instruction significantly influences students' attitude towards blended learning. Thus, Ho3 was rejected.

6. Relationship Between Attitude Towards Blended Learning and Academic Achievement

Pearson's Product-Moment Correlation was computed to determine the relationship between attitude towards blended learning and academic achievement.

The analysis revealed a positive and statistically significant correlation between attitude and academic achievement ($p < 0.05$).

This indicates that students with more favorable attitudes toward blended learning tend to achieve higher academic scores.

Finding: A significant positive relationship exists between attitude towards blended learning and academic achievement.

Therefore, Ho4 was rejected.

Summary of Hypotheses Testing

Hypothesis: Ho1

Statement: No significant difference between rural and urban students

Result: Accepted

Hypothesis: Ho2

Statement: No significant gender difference

Result: Accepted

Hypothesis: Ho3

Statement: No significant difference between Bengali and English medium students

Result: Rejected

Hypothesis: Ho4

Statement: No significant relationship between attitude and achievement

Result: Rejected

Overall Interpretation

The findings indicate that Senior Secondary students generally possess a positive attitude toward blended learning. While locality and gender do not significantly influence attitudes, medium of instruction plays a significant role. Furthermore, attitude towards blended learning is positively associated with academic achievement, suggesting that fostering positive perceptions of blended learning may enhance student performance.

Findings

Descriptive Statistics

Descriptive statistics were computed to examine the overall levels of attitude toward blended learning and academic achievement among Senior Secondary (Class XII) students affiliated with the West Bengal Council of Higher Secondary Education and CBSE in South 24 Parganas district, West Bengal. The mean score for attitude toward blended learning was $M = 136.46$, $SD = 19.19$, indicating a generally favorable disposition toward blended instructional approaches. The distribution of scores was slightly negatively skewed, suggesting that a larger proportion of students scored above the mean. The mean academic achievement score (out of 500) was $M = 368.37$, $SD = 54.69$, reflecting a moderately high level of academic performance among the participants.

Differences in Attitude Toward Blended Learning by Locality:

An independent-samples t test was conducted to determine whether significant differences existed between rural and urban students in their attitude toward blended learning. Rural students ($n = 160$) reported a mean score of $M = 137.74$ ($SD = 21.20$), whereas urban students ($n = 160$) reported a mean score of $M = 133.85$ ($SD = 17.91$). The difference was not statistically significant, $t(318) = 1.77$, $p = .077$. Thus, there was no significant difference in attitude toward blended learning between rural and urban students. The null hypothesis (H_01) was retained.

Differences in Attitude toward Blended Learning by Gender:

An independent-samples t test was also conducted to examine gender differences in attitude toward blended learning. Male students ($n = 160$) had a mean score of $M = 137.66$ ($SD = 21.19$), while female students ($n = 160$) had a mean score of $M = 134.81$ ($SD = 16.26$). The difference between the two groups was not statistically significant at the .05 level. Therefore, gender did not significantly influence students' attitude toward blended learning. The null hypothesis (H_02) was accepted.

Differences in Attitude Toward Blended Learning by Medium of Instruction:

An independent-samples t test revealed a statistically significant difference in attitude toward blended learning between Bengali medium and English medium students ($p < .05$). English medium students demonstrated higher mean attitude scores compared to Bengali medium students. Hence, the null hypothesis (H_03) was rejected, indicating that medium of instruction significantly influences students' attitude toward blended learning.

Relationship Between Attitude Toward Blended Learning and Academic Achievement:

Pearson's product-moment correlation coefficient was computed to assess the relationship between attitude toward blended learning and academic achievement. The analysis revealed a positive and statistically significant correlation between the two variables ($p < .05$), indicating that students with more favorable attitudes toward blended learning tended to achieve higher academic scores. Accordingly, the null hypothesis (H_04) was rejected.

Summary of Findings

The findings indicate that:

- Senior Secondary students generally exhibit a positive attitude toward blended learning.
- No significant differences were found in attitude based on locality or gender.
- A significant difference was observed based on medium of instruction.
- A positive and significant relationship exists between attitude toward blended learning and academic achievement.

These results suggest that fostering positive attitudes toward blended learning may contribute to improved academic performance among Senior Secondary students.

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