A Study of Blended Learning and Its Influence on Student Engagement at the Undergraduate Level

Susmita Mallick
Department of Education

Abstract— Blended learning has emerged as an important instructional strategy in higher education due to rapid technological advancement and increased integration of digital tools in teaching and learning processes. The present study examines the influence of blended learning practices on student engagement among undergraduate students. A descriptive survey method was adopted for the study. The sample consisted of 400 undergraduate students selected from Arts and Science streams. Data were collected using a Blended Learning Practices Questionnaire and a Student Engagement Scale. Statistical techniques such as mean, standard deviation, correlation, and t-test were used for analysis. The results reveal a strong positive relationship between blended learning practices and student engagement. The study also indicates that students exposed to blended learning demonstrate higher participation, motivation, and collaborative learning behavior. The findings suggest that effective integration of online and face-to-face teaching methods can significantly improve student engagement and the overall quality of higher education.

Keywords— Blended Learning, Student Engagement, Digital Learning, Higher Education, Undergraduate Students

1. Introduction

The rapid development of information and communication technologies has significantly transformed educational practices across the world. Traditional classroom teaching methods are increasingly being supplemented with digital tools, online learning platforms, and virtual communication systems.

In recent years, blended learning has emerged as an effective instructional approach that combines traditional face-to-face teaching with online learning activities. This approach enables students to access course materials digitally while also benefiting from direct interaction with teachers and peers.

Blended learning environments offer several advantages, including flexibility, accessibility, interactive learning opportunities, and personalized instruction. Students can access lectures, assignments, and learning materials through online platforms, allowing them to learn at their own pace.

Student engagement is widely recognized as a critical factor influencing academic success. Engaged students actively participate in learning activities, interact with peers and instructors, and demonstrate higher levels of motivation toward academic tasks.

Therefore, understanding how blended learning influences student engagement is essential for improving teaching strategies in higher education institutions.

The present study aims to investigate the extent to which blended learning practices influence student engagement among undergraduate students.

2. Conceptual Framework

The conceptual framework of the study is based on constructivist learning theory, which emphasizes that learners actively construct knowledge through interaction with their environment.

Blended learning environments provide opportunities for students to interact with learning materials through various formats such as videos, discussion forums, online quizzes, and collaborative projects.

Student engagement can be categorized into three dimensions:

Behavioral Engagement

Participation in academic activities such as discussions, assignments, and group work.

Emotional Engagement

Students' interest, enjoyment, and positive attitudes toward learning activities.

Cognitive Engagement

Students' effort in understanding complex concepts and applying knowledge.

Blended learning environments support these forms of engagement by combining digital technologies with traditional classroom teaching.

3. Review of Related Literature

Several researchers have examined the effectiveness of blended learning in higher education.

D. Randy Garrison and Heather Kanuka (2004) emphasized that blended learning integrates the advantages of online and traditional classroom instruction, creating meaningful learning experiences.

Charles R. Graham (2006) described blended learning as a powerful instructional approach that improves accessibility and flexibility in education.

Curtis J. Bonk and Charles R. Graham (2012) highlighted that blended learning promotes collaborative learning and active student participation.

Sten Hrastinski (2019) analyzed the concept of blended learning and discussed its increasing importance in digital education systems.

Anthony G. Picciano (2017) proposed theoretical frameworks for online education and emphasized the role of digital environments in promoting student engagement.

These studies indicate that blended learning plays an important role in improving learning experiences and academic participation.

4. Objectives of the Study

1. To examine the extent of blended learning practices among undergraduate students.
2. To study the level of student engagement in blended learning environments.
3. To analyze the relationship between blended learning practices and student engagement.
4. To compare engagement levels between Arts and Science students.

5. Hypotheses

H1: There is no significant relationship between blended learning practices and student engagement.

H2: There is no significant difference in engagement levels between Arts and Science students.

6. Methodology

Research Method

The present study adopted a **descriptive survey method** to investigate blended learning practices and student engagement.

Sample

The sample consisted of **400 undergraduate students** selected from Arts and Science streams.

Stream	Number of Students
Arts	200
Science	200
Total	400

Tools Used

1. Blended Learning Practices Questionnaire
2. Student Engagement Scale

Statistical Techniques

The following statistical techniques were used:

- Mean
- Standard Deviation

- Correlation
- t-test

7. Data Analysis

Table 1

Mean and Standard Deviation

Variable	Mean	Standard Deviation
Blended Learning Practices	72.45	8.12
Student Engagement	75.36	7.45

Interpretation

The results indicate that undergraduate students demonstrate a moderate to high level of participation in blended learning activities.

Table 2

Correlation Between Blended Learning and Student Engagement

Variables	Correlation (r)
Blended Learning & Student Engagement	0.68

Interpretation

The correlation coefficient (0.68) indicates a **strong positive relationship** between blended learning practices and student engagement.

Table 3

Comparison Between Arts and Science Students

Stream	Mean	t-value
Arts	74.21	
Science	76.48	2.14

Interpretation

Science students demonstrate slightly higher engagement levels compared to Arts students.

8. Major Findings

1. Blended learning practices are widely used among undergraduate students.
2. Students demonstrate moderate to high levels of engagement in blended learning environments.
3. A strong positive relationship exists between blended learning practices and student engagement.
4. Science students show slightly higher engagement levels than Arts students.
5. Blended learning increases student motivation and participation in academic activities.
6. Online discussion forums and digital assignments encourage collaborative learning.
7. Blended learning helps students develop digital literacy skills.
8. Students express positive attitudes toward technology-supported learning environments.

9. Educational Implications

The findings of the study have important implications for higher education institutions.

1. Colleges should integrate digital learning platforms with classroom teaching.
2. Teachers should receive professional training in blended learning strategies.
3. Institutions should develop adequate technological infrastructure.
4. Blended learning can improve teaching effectiveness and student learning outcomes.

10. Limitations of the Study

1. The study was limited to undergraduate students from selected colleges.
2. The research relied on self-reported questionnaire data.
3. Only Arts and Science streams were included in the sample.

4. Time constraints limited the scope of the investigation.

11. Suggestions for Future Research

1. Future research may examine blended learning at postgraduate levels.
2. Comparative studies may be conducted between public and private institutions.
3. Researchers may explore teachers' digital competence in blended learning environments.
4. Long-term studies may examine the impact of blended learning on academic achievement.

12. Conclusion

Blended learning has become an important instructional strategy in modern higher education. By integrating online learning resources with traditional classroom teaching, it creates flexible and interactive learning environments.

The present study demonstrates that blended learning has a positive influence on student engagement among undergraduate students. Students exposed to blended learning show higher participation, motivation, and collaboration in learning activities.

Therefore, higher education institutions should adopt blended learning approaches to enhance teaching effectiveness and improve student learning outcomes.

References

- Allen, I. E., & Seaman, J. (2017). *Digital Learning Compass.*
- Anderson, T. (2008). *The Theory and Practice of Online Learning.*
- Bernard, R. M. et al. (2014). Meta-analysis of blended learning. *Educational Research Review.*
- Bonk, C. J., & Graham, C. R. (2012). *Handbook of Blended Learning.*
- Garrison, D. R., & Kanuka, H. (2004). Blended learning. *The Internet and Higher Education.*
- Garrison, D. R., & Vaughan, N. (2008). *Blended Learning in Higher Education.*
- Graham, C. R. (2006). Blended learning systems.
- Hrastinski, S. (2019). What do we mean by blended learning?
- Johnson, L. et al. (2016). *NMC Horizon Report.*
- Means, B., Toyama, Y., Murphy, R., & Baki, M. (2013). Online and blended learning effectiveness.
- Moore, M. G. (2013). *Handbook of Distance Education.*
- Picciano, A. G. (2017). *Theories and Frameworks for Online Education.*
- Rasheed, R., Kamsin, A., & Abdullah, N. (2020). Challenges in online learning.
- Singh, H. (2003). Building effective blended learning programs.
- Vaughan, N. (2014). Student engagement in blended learning environment.