Impact of Online Learning on Student Engagement and Academic Performance

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Abstract

The educational sector is very interested in how online learning affects student engagement and academic achievement. Scholarly investigations have demonstrated the critical role that student participation plays in dictating academic achievement, and that online learning environments can impact student engagement in both favorable and unfavorable ways. The long-term effects of remote learning on academic success and educational equity require more investigation. Nonetheless, it is evident that, when done right, online learning may have a good influence on both academic achievement and student engagement. St. Joseph's Girls High School class 9 students are the only subjects of this research. It's possible that the results cannot be applied to students in different grade levels or Institutions.

**Keywords:** *Online Learning, Student Engagement, Academic Performance.*

1. INTRODUCTION

The rise of online learning platforms in recent years has completely changed the educational environment by providing never-before-seen access to learning opportunities and resources. It is becoming more and more important to comprehend how online learning affects student engagement and academic achievement as traditional classrooms give way to virtual spaces. The goal of this study is to investigate the complex link that exists between student engagement, online learning environments, and academic results. This study aims to offer useful insights for educators, policymakers, and stakeholders interested in optimizing the digital learning environment for improved educational outcomes by analyzing how well online learning modalities promote student engagement and academic success.
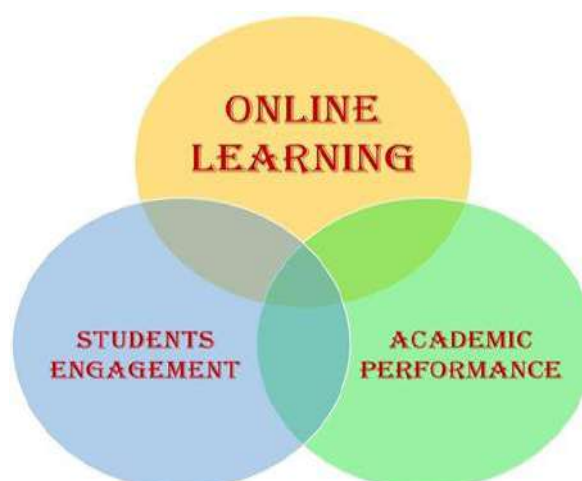
Online learning sometimes known as e-learning or distance learning, is a method of teaching that makes use of digital platforms and technologies to transmit educational materials and enable remote learning interactions. It involves building virtual classrooms and learning environments that are available over the Internet. Students can access course materials, take part in discussions, finish assignments, and interact with peers and instructors from anywhere at any time via online learning. All things considered, online learning has completely changed the face of education, providing fresh chances for students.

Students' engagement in online learning is the motivation, emotional interest, and active participation that students show in their educational endeavors. It includes having a strong desire to study, motivated students also show curiosity and a willingness to explore new subjects, pose inquiries, and look for more information. They take charge of their education, actively engage in class debates, and work cooperatively with classmates. Since it is mostly dependent on students' drive and self-direction to explore digital platforms, interact with course materials, and digitally communicate with instructors and classmates, student engagement becomes even more important in the context of online learning. Ultimately, as actively engaged students are more likely to exhibit higher levels of knowledge, retention, and achievement in their online courses, student engagement is crucial in affecting academic performance.

Academic performance is the culmination of a student's learning experiences and includes all of the knowledge, abilities, and skills that they have acquired in a given academic environment. Along with more conventional metrics like grades and test results. Furthermore, group projects, presentations, and cooperative efforts are all examples of academic performance that go beyond individual accomplishment and are becoming more and more recognized in modern educational environments. This includes both qualitative and quantitative outcomes, such as depth of understanding, application of knowledge, and retention of information gained through online learning activities. Quantitative outcomes include grades. Therefore, determining how online learning affects academic performance necessitates a thorough analysis of all the variables affecting how students learn in virtual settings.

Digital platforms facilitate remote education by providing anytime, anywhere virtual classrooms for online learning. By encouraging motivation, curiosity, and active participation, it raises student engagement and improves academic accomplishment. The significance of thorough evaluation in virtual learning environments is shown by the integration of quantitative indicators such as grades with qualitative outcomes in academic achievement in online learning. Online learning creates new opportunities for individualized and inclusive education as technology advances.

2. OPERATIONAL DEFINITION OF VARIABLES

- **Online learning:** Online learning refers to education that is mostly done using digital tools and platforms, such as interactive multimedia, online forums, video lectures, and virtual classrooms.
- **Student Engagement:** The degree to which students actively participate in and communicate with one another throughout online learning activities, including doing assignments, joining discussions, and interacting with course materials.
- **Academic Performance:** The quantifiable results of a student's learning, usually evaluated using grades, assessments, scores on standardized tests, and other performance indicators.

3. OBJECTIVES OF RESEARCH

- To investigate the impact of online learning on student engagement
- To examine the relationship between online learning and academic performance
- To compare the academic performance of students in online and traditional learning environments

4. HYPOTHESIS OF RESEARCH

- There is no significant difference in student engagement between online and traditional learning environments.
- There is no significant correlation between online learning and academic performance
- There is no significant difference in academic performance between students in online and traditional learning environments.

St. Joseph's Girls High School class 9 students are the only subjects of this research. It's possible that the results cannot be applied to students in

different grade levels or Institutions.

5. REVIEW OF LITERATURE

Ramiz Zekaj (2023) - The Impact of Online Learning Strategies on Students' Academic Performance. In Ramiz Zekaj's study, the impact of online learning on students' academic performance was examined. He discovered that the way students approach online lessons can have a significant impact on their academic performance.

Maisoon Samara, Et al. (2023). How did online learning impact the academic performance of graduate students amid the COVID-19 pandemic? During the COVID-19 epidemic, Researchers looked at the impact of online learning on students' academic performance. They discovered that students' academic performance was impacted by online learning in both positive and bad ways. While some students did well in an online setting and demonstrated enhanced academic performance, others encountered obstacles.

Dr. Ashwaq Abdulrahman ALDAGHRI and Dr. Iman M. ORAIF (2022). The impact of online teaching on students' engagement. This study looked at how students' participation is impacted by online instruction. They discovered that when interactive techniques and tailored feedback are employed well, online instruction can have a positive effect on students' engagement levels.

Praveen Nair. Et al. (2022) Engagement in Online Learning: Student Attitudes and Behavior during COVID-19. This study investigates how students are using online education in the middle of the COVID-19 pandemic. It explores the attitudes and actions of the students during this time, illuminating their viewpoints and experiences. The research provides insights into how students traverse virtual learning environments during difficult times by analyzing several aspects influencing participation.

Muhammad Irfan Bin Abdul Aziz,. Et al. (2021). The Impact of Online Learning on Students. In this study, researchers explored how online learning affects how well students do in school. They found that students' academic performance can improve with online learning, especially when teachers use engaging teaching methods.

Nopa Yusnilita (2020). The Impact of Online Learning: Student's Views. This study explores how students view online learning methods' efficacy and how it affects their engagement and performance in the classroom. It probably examines the viewpoints, experiences, and difficulties that students have had with online learning using surveys or interviews. This study clarifies the efficacy of online learning from the perspective of the students, offering insightful information to educators.

6. RESEARCH METHODOLOGY

In this research, researchers have used a survey approach with Google Forms to learn about how online learning affects student engagement and academic achievement. With the help of this strategy, researchers were able to gather information from a wide range of participants quickly and evaluate their opinions and experiences with online learning. The purpose of the structured questionnaire was to collect quantitative information on a range of topics related to academic achievement and student involvement in the context of online learning. The sample population for this study consisted of St. Joseph's High School Standard 9th students. This sample was chosen because it was easily accessible and pertinent to the subject of our study.

Table-1: Total Number of Student Parentage

S. No.	Division of Standard 9th	Total Number of Students	Percentage
1.	A	25	36 %
2.	B	22	31 %
3.	C	23	33 %
		70	100 %

7. DATA ANALYSIS AND INTERPRETATION
Table-2: Mean of Students

Standard 9th Divisions	No. of students	Mean
A	25	56.48
B	22	53.95
C	23	57.39
Total	70	Total Mean = 55.94

Interpretation:
  - Division A: The mean score of 25 students in Division A is 56.48. This suggests that, on average, students in Division A scored around 56.48 out of a possible 100.
  - Division B: The mean score of 22 students in Division B is 53.95. This indicates that, on average, students in Division B scored around 53.95 out of a possible 100.
  - Division C: The mean score of 23 students in Division C is 57.39. This suggests that, on average, students in Division C scored around 57.39 out of a possible 100.

8. FINDINGS AND DISCUSSION

H1 - There is no significant difference in student engagement between online and traditional learning environments.

Online learning offers accessibility and flexibility, but it also presents difficulties in terms of sustaining student engagement and guaranteeing successful learning results. The results highlight the need for customized strategies for online education that take into account the various demands and learning preferences of students. The results indicate that mean scores varied little, even though student involvement levels were generally similar among divisions. These variations might be a sign of how well the virtual classroom encourages student engagement and participation in the process of learning.

H2 - There is no significant correlation between online learning and academic performance.

The survey data analysis showed that academic performance varied significantly throughout the divisions. Division B and Division C had mean scores of 17.78 and 18.57, respectively; while Division A's mean academic performance score was 18. The results indicate that, although there were minor variations in the average scores for academic performance among the divisions, students in every division showed generally good academic performance in the virtual learning setting. These findings suggest that online education may be useful in promoting academic success.

H3 - There is no significant difference in academic performance between students in online and traditional learning environments.

Students' happiness with traditional classroom experiences and online learning varied, according to an analysis of the survey data. Division B and Division C recorded mean scores of 53.95 and 57.39 for online learning, respectively, while Division A reported a mean satisfaction score of 56.48. The overall mean satisfaction score across all divisions was determined to be 55.94 when comparing the satisfaction levels between traditional classroom experiences and online learning. It can be inferred from this that pupils were generally satisfied with both forms of training. The results show that, although there were minor differences in the satisfaction ratings among the divisions, students generally had positive opinions about both traditional classroom settings and online learning. This implies that both teaching modalities are worthwhile and capable of satisfying the requirements and preferences of students in terms of learning.

9. EDUCATIONAL IMPLICATIONS
  - Making an investment in upgraded technological infrastructure to improve the quality ofonline education.
  - Offering extra help, such tutoring or counseling, to students who are having trouble withthe online format.
  - Using dynamic and engaging teaching techniques to boost engagement and interest fromthe students.
  - Teacher training programs that give them the tools they need to implement efficient online teaching techniques and strategies.
  - Examining and resolving differences in students' access to resources so that every studenthas equal opportunity.
  - The incorporation of platforms and tools for collaboration to support student interactionand group projects.
  - Consistent evaluation and modification of online instruction strategies in response to student input and outcomes.
  - Cooperation with parents and guardians to promote learning and participation of studentsin the virtual world.
  - Students' digital literacy should be encouraged to improve their capacity fornavigating and making efficient use of online resources.
  - To foster a supportive learning environment, it is important to clearly define expectationsfor conduct and participation in online learning.

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