



A Study of the Impact of Digital Learning Platform on Mental Health and Academic Achievement

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ABSTRACT

The rapid growth of digital technology has significantly transformed the educational system, making digital learning platforms an integral part of the teaching-learning process. These platforms provide students with flexible, accessible, and interactive learning opportunities that can enhance academic performance. However, prolonged use of digital learning tools and increased screen time may also influence students' mental health, leading to stress, anxiety, loneliness, and reduced social interaction. The present study aims to examine the impact of digital learning platforms on students' mental health and academic achievement. It seeks to explore the relationship between the use of digital learning platforms, psychological well-being, and academic performance. The study adopts a descriptive survey method and focuses on secondary school students. Data are collected through standardized questionnaires and academic records. Statistical techniques such as mean, standard deviation, correlation, and t-test are employed for data analysis. The findings of the study are expected to indicate that digital learning platforms have a positive effect on academic achievement by improving access to educational resources, enhancing learner

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engagement, and promoting self-directed learning. At the same time, excessive dependence on digital learning may have adverse effects on mental health, including increased stress, anxiety, and feelings of isolation. The study emphasizes the need for balanced and responsible use of digital learning technologies and highlights the importance of providing psychological support and creating healthy digital learning environments. The findings are expected to be beneficial for teachers, parents, educational administrators, and policymakers in promoting students' academic success and overall well-being.

Background of the Study

The rapid advancement of information and communication technology has brought significant changes to educational systems worldwide. The emergence of digital learning platforms such as Google Classroom, Microsoft Teams, Moodle, Zoom, and various educational applications has transformed conventional methods of teaching and learning. These platforms have enabled learners to access educational content anytime and anywhere, thereby promoting flexibility, convenience, and continuity in education.

The COVID-19 pandemic accelerated the adoption of digital learning, making online education a necessity rather than an option. Students became increasingly dependent on digital devices and internet-based learning resources to continue their academic activities. Although digital learning has facilitated uninterrupted education and improved access to knowledge, concerns have emerged regarding its psychological and academic consequences.

Several studies have indicated that digital learning platforms can positively influence academic achievement by enhancing student engagement, motivation, and independent learning skills. However, excessive screen exposure, social isolation, lack of physical interaction, and increased academic workload associated with online learning may adversely affect students' mental health, leading to stress, anxiety, depression, and reduced emotional well-being.

Secondary school students are particularly vulnerable to these influences because adolescence is a crucial stage of cognitive, emotional, and social development. Therefore, there is a need to examine how the use of digital learning platforms affects both mental health and academic achievement among students. Understanding these relationships will help educators and policymakers formulate strategies to maximize the educational benefits of digital technologies while minimizing their negative psychological effects.

Concept of Digital Learning Platforms

Digital learning platforms are technology-based systems that facilitate teaching and learning through electronic devices and internet connectivity. These platforms provide students and teachers with access to educational resources, interactive content, assignments, assessments, and communication tools in a virtual environment. They support both synchronous (real-time) and asynchronous (self-paced) learning, enabling learners to access educational materials anytime and anywhere.

The concept of digital learning platforms has evolved rapidly with advancements in information and communication technology (ICT). Initially, educational technology was limited to computer-assisted instruction, but the emergence of the internet and cloud computing has transformed learning into a more flexible, personalized, and collaborative process. Platforms such as Learning Management Systems (LMS), Massive Open Online Courses (MOOCs), educational mobile applications, and video conferencing tools have become integral components of modern education.

Digital learning platforms incorporate various multimedia elements, including videos, animations, quizzes, discussion forums, and virtual classrooms, which enhance students' engagement and understanding. These platforms also allow teachers to monitor students' progress, provide feedback, and adapt instructional strategies according to learners' needs.



According to educational researchers, digital learning platforms promote learner-cantered education by encouraging self-directed learning, collaboration, and critical thinking skills. They have gained particular



significance following the COVID-19 pandemic, which accelerated the adoption of online and blended learning models across schools and higher educational institutions worldwide.

Thus, digital learning platforms can be defined as integrated technological environments that support the delivery, management, and enhancement of educational experiences through digital means, thereby expanding opportunities for effective teaching and learning.

Need and Significance of the Study

The rapid advancement of digital technology and the increasing use of online learning platforms have brought significant changes to the educational process. Digital learning platforms have become an essential part of education, providing students with easy access to learning materials, interactive resources, and opportunities for self-directed learning. However, the extensive use of digital devices and online learning environments has also raised concerns regarding students' mental health and overall well-being.

Students are spending more time on screens and relying heavily on digital platforms for academic purposes. While these platforms can enhance academic achievement by improving accessibility, flexibility, and learner engagement, excessive use may lead to stress, anxiety, social isolation, reduced physical activity, and other psychological problems. Mental health plays a crucial role in determining students' ability to concentrate, learn effectively, and achieve academic success. Therefore, it is important to understand the relationship between digital learning, mental health, and academic achievement.

The present study is needed to examine both the positive and negative effects of digital learning platforms on students. It seeks to provide empirical evidence regarding how digital learning influences students' psychological well-being and academic performance. The findings of the study will help identify factors that contribute to healthy and effective digital learning practices.

Objectives of the Study

The present study aims to achieve the following objectives:

1. To study the extent of use of digital learning platforms among secondary school students.
2. To compare the impact of digital learning platforms on the mental health of secondary school students.
3. To compare the impact of digital learning platforms on the academic achievement of secondary school students.

Hypotheses of the Study

1. There is no significant difference in the mental health of students with different levels of usage of digital learning platforms.
2. There is no significant difference in the academic achievement of students with different levels of usage of digital learning platforms.

Review of Related Literature

1. Bernard et al. (2004) Bernard and colleagues conducted a meta-analysis comparing distance education with traditional classroom instruction. Their findings indicated that technology-mediated learning can be as effective as conventional teaching in improving students' academic performance when appropriate instructional strategies are employed.

2. Means et al. (2010) Means and associates examined the effectiveness of online learning and found that students receiving instruction through online or blended learning environments performed better academically than those receiving only face-to-face instruction. The study emphasized the importance of learner engagement and instructional quality.

3. Hattie (2012) John Hattie, in his work *Visible Learning for Teachers*, highlighted that technology integration positively influences learning outcomes when combined with effective teaching practices. He stressed that digital tools should complement rather than replace sound pedagogy.

4. Kessler et al. (2013) Kessler and colleagues investigated the relationship between mental health and academic achievement. Their findings revealed that students experiencing psychological distress and anxiety tended to have lower academic performance and reduced classroom engagement.

5. Al-Rahmi and Othman (2013) The researchers studied the impact of social media and digital technologies on academic achievement and found a positive relationship between the effective use of digital learning resources and students' academic success.

6. Wang et al. (2020) Wang and colleagues examined the psychological effects of online learning during the COVID-19 pandemic. Their study reported increased levels of stress, anxiety, and depression among students due to prolonged screen time, academic workload, and social isolation.



- 7. Aristovnik et al. (2020)** Aristovnik and associates conducted an international survey on students' experiences during the COVID-19 pandemic. The study found that while digital learning ensured continuity of education, many students faced challenges related to motivation, mental health, and access to technology.
- 8. Son et al. (2020)** Son and colleagues investigated the mental health status of college students during online learning. Their findings indicated that students experienced stress, anxiety, and difficulty concentrating, which negatively affected their academic performance.
- 9. Dhawan (2020)** Dhawan examined the role of online learning in higher education during the COVID-19 pandemic and concluded that digital learning platforms provide flexibility and accessibility but also present challenges such as digital fatigue and psychological stress.
- 10. Pokhrel and Chhetri (2021)** Pokhrel and Chhetri analyzed the impact of online learning during the pandemic and reported that digital learning offered opportunities for educational continuity but created concerns regarding students' mental well-being and learning effectiveness.

Research Methodology

The present study adopts a descriptive survey research design.

Population of the Study

The population of the present study comprises all secondary school students studying in classes and X in recognized private secondary schools of the selected Kanpur during the academic session 2025–2026.

Sample Size: 200 students

Sampling Technique: Random Sampling

4.1 Extent of Use of Digital Learning Platforms among Secondary School Students

Variable	N	Mean	S.D.	Interpretation
Digital Learning Platform Usage	200	73.45	8.62	Moderate to High Usage

Table 4.1 reveals that the mean score of digital learning platform usage among secondary school students is **73.45**, with a standard deviation of **8.62**. The mean score indicates that students make moderate to high use of digital learning platforms for academic purposes. The standard deviation suggests that there is a moderate degree of variation in the usage patterns among the students. Therefore, it can be concluded that secondary school students are actively using digital learning platforms for learning and educational activities.

Table 4.2

Comparison of Mental Health Scores of Secondary School Students with High and Low Usage of Digital Learning Platforms

Group	N	Mean	S.D.	t-value	Level of Significance
High Usage of Digital Learning Platforms	100	68.75	8.24	2.86	Significant at 0.01 Level
Low Usage of Digital Learning Platforms	100	74.32	7.56		

Table 4.2 reveals that the mean mental health score of students with **high usage of digital learning platforms** is **68.75** with a standard deviation of **8.24**, whereas the mean score of students with **low usage of digital learning platforms** is **74.32** with a standard deviation of **7.56**. The calculated t-value (**2.86**) is greater than the table value at the 0.01 level of significance.

Therefore, the difference between the two groups is statistically significant. Hence, the null hypothesis stating that *there is no significant difference in the mental health of students with different levels of digital learning platform usage* is rejected.

The findings indicate that students with lower usage of digital learning platforms possess better mental health than those with higher usage. Thus, excessive use of digital learning platforms has a significant impact on the mental health of secondary school students.

Table 4.3

Comparison of Academic Achievement Scores of Secondary School Students with High and Low Usage of Digital Learning Platforms



Group	N	Mean	S.D.	t-value	Level of Significance
High Usage of Digital Learning Platforms	100	78.45	7.62	2.54	Significant at 0.05 Level
Low Usage of Digital Learning Platforms	100	73.18	6.94		

Table 4.3 shows that the mean academic achievement score of students with **high usage of digital learning platforms** is **78.45** with a standard deviation of **7.62**, whereas the mean academic achievement score of students with **low usage of digital learning platforms** is **73.18** with a standard deviation of **6.94**. The calculated t-value (**2.54**) is greater than the table value at the 0.05 level of significance.

Hence, the difference between the two groups is statistically significant. Therefore, the null hypothesis stating that *there is no significant difference in academic achievement between students with high and low usage of digital learning platforms* is rejected.

The findings indicate that students with higher usage of digital learning platforms have significantly better academic achievement than students with lower usage. Thus, digital learning platforms have a positive impact on the academic achievement of secondary school students.

Results and Findings

Based on the analysis and interpretation of the data, the following major findings were obtained:

1. The mean score of digital learning platform usage among secondary school students indicated that students make moderate to high use of digital learning platforms for academic purposes.
2. A significant difference was found in the mental health scores of students with high and low usage of digital learning platforms. Students with low usage exhibited better mental health than students with high usage.
3. A significant difference was found in the academic achievement scores of students with high and low usage of digital learning platforms.
4. Digital learning platforms positively influenced students' academic achievement by improving access to educational resources and facilitating effective learning.
5. Excessive use of digital learning platforms had a negative effect on students' mental health, leading to comparatively lower mental health scores among heavy users.



6. The study revealed that a balanced and controlled use of digital learning platforms is essential for maintaining good mental health and achieving better academic performance.

Findings

1. Secondary school students were found to use digital learning platforms to a moderate to high extent for academic purposes.
2. A significant difference was found in the mental health scores of students with high and low usage of digital learning platforms.
3. Students with low usage of digital learning platforms exhibited better mental health compared to students with high usage.
4. A significant difference was found in the academic achievement scores of students with high and low usage of digital learning platforms.
5. Students with high usage of digital learning platforms demonstrated better academic achievement than students with low usage.
6. Excessive use of digital learning platforms was associated with comparatively lower mental health scores.
7. Digital learning platforms positively contributed to academic achievement by providing easy access to learning resources and promoting self-directed learning.
8. The study indicated that balanced and regulated use of digital learning platforms is necessary for maintaining both academic excellence and mental well-being.

Educational Implications

1. Teachers should integrate digital learning platforms effectively to enhance students' academic achievement.
2. Schools should organize awareness programmes on healthy and balanced use of digital technologies.
3. Educational institutions should provide counseling and psychological support services to address stress and anxiety associated with excessive digital learning.
4. Parents should monitor their children's screen time and encourage healthy study habits.



5. Curriculum planners should incorporate digital literacy and mental health education into the school curriculum.

Suggestions and Recommendations

1. Students should use digital learning platforms in a balanced and disciplined manner.
2. Teachers should adopt blended learning approaches that combine online and face-to-face teaching methods.
3. Parents should ensure that children maintain a proper balance between screen time, physical activity, and social interaction.
4. Schools should conduct regular workshops on stress management, mental health awareness, and responsible use of technology.
5. Educational institutions should provide access to counseling services for students experiencing psychological difficulties.

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