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Digital Learning Platforms As Predictors Of Academic Achievement And Learning Engagement Among Students.

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Abstract
Digital learning platforms have become an important part of higher education by providing students with flexible and interactive learning opportunities. This study explored whether the use of digital learning platforms predicts students' learning engagement and academic achievement. A descriptive survey research design was adopted, and data were collected from 106 undergraduate and postgraduate students through a self-developed Learning Engagement Scale (Cronbach's α = .948), academic achievement records, and a Digital Learning Platform Checklist. The findings showed that students generally reported a high level of learning engagement. Paying attention during lessons, showing interest in subjects, understanding concepts deeply, and completing academic tasks on time were the strongest predictors of learning engagement. The study also found that the use of digital learning platforms such as Google, Wikipedia, YouTube, ChatGPT, and Zoom was significantly associated with students' learning engagement. The findings suggest that the effective integration of digital learning platforms can foster greater student engagement and support improved academic performance.

Keywords: *Digital learning platforms, learning engagement, academic achievement, higher education.*

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I. Introduction

In recent years, education system has witnessed a significant transformation worldwide due to the rapid advancement of technology. *Digital learning* acts as a core element that brings about a change in the system of education, which facilitates individualized and inclusive learning experiences (Nooji et al., 2025). At first, digital learning platforms are used as a tool that supplements traditional teaching and learning method but it has now become an important pillar in contemporary education such as *Google Classroom, Moodle, Coursera, Udemy,* and other online learning systems allows students with easy access to learning resources, interaction tools, and communicative learning experiences. These platforms played an important role in sustaining flexible and student-centered system of learning (Dhawan, 2020). Educational success is mostly indicated by academic achievement and learning engagement. *Academic achievement* is the performance of the student with respect to educational activities, while learning engagement means students' behavioral, emotional, and cognitive involvement in learning tasks (Fredricks, Blumenfeld, & Paris, 2004). Research has shown that digital learning platforms can increase students' participation, motivation, and self-regulated learning when use effectively and can improved overall academic performance (Bond et al., 2020).

Moreover, digital learning platforms open doors for collaboration, immediate feedback, and personalized learning, thereby encouraging greater student engagement and academic excellence (Martin & Bolliger, 2018). Therefore, examining digital learning platforms as predictors of academic achievement and learning engagement is needed for understanding their contribution in improving educational attainment in the digital era.

Statement Of The Problem
Digital Learning Platforms as Predictors of Academic Achievement and Learning Engagement Among Students.

Objectives
1. To examine the extent to which digital learning platforms predict students' learning engagement.
2. To examine the extent to which digital learning platforms and learning engagement predict students' academic achievement.

Research Questions

1. To what extent do digital learning platforms predict students' learning engagement?
2. To what extent do digital learning platforms and learning engagement predict students' academic achievement?

II. Review Of Related Literature

Digital learning platforms: Education is more flexible, accessible, and learner-centred. It positively influenced academic engagement and learning outcomes (Meeramani et al. 2025; Soni et al. 2025). It promotes independent learning, active engagement, and critical thinking among students (Ally, 2008). Digital Learning Platform includes Massive Open Online Courses (MOOCs), DIKSHA, SWAYAM, ePathshala, BYJU'S, Learning Management Systems (LMS), and virtual classrooms, emerging technologies (artificial intelligence, gamification) and social learning. Poor internet connectivity, digital illiteracy, socio-economic inequalities, and limited localized content restrict their effectiveness towards digital learning platform (Soni et al. 2025). It is also found that the effectiveness of e-learning depends on factors such as technological infrastructure, digital literacy, course design, and learner motivation (Mozumdar, 2025). Digital learning support academic achievement across diverse disciplines and discipline-specific content design (Reddy and Chary, 2024). It was also found that students who regularly used online learning platforms developed stronger self-regulation skills, which positively influenced their academic performance (Anderson, 2017).

Student Engagement: It was a multidimensional construct encompassing *behavioral*, *cognitive*, and *emotional* aspects (Wang, 2025). It is strongly associated with acade*mic achievement, motivation,* and overall school *performance* (Manivannan & Venkataraman, 2018). *Motivation*, *self-efficacy*, *autonomy*, learning beliefs, learning strategies, teacher support, classroom environment, peer relationships, parental involvement, and school policies, were the internal and external determinants of student engagement outcomes (Qian & Saidin, 2025).

Students' *emotional involvement* was also very important in fostering active participation and meaningful learning experiences (Zhang and Kim, 2024). Student engagement and academic achievement are closely related and students who were more actively engaged in learning tend to achieve better academic outcomes (Shikha, 2026). It was also very essential to foster student engagement as a key factor in improving academic performance among school students (Shikha, 2026). Digital learning platforms enables students to access course materials anytime and anywhere, thereby promoting continuous learning (Reddy and Chary, 2024). It strengthens student engagement, contribute significantly to the professional development of '*future teachers*' and improve educational outcomes (Pandey, 2024).

Academic Achievement: It was the reflection of students' mastery of *knowledge* and *skills* acquired through instruction (Santrock, 2018), cognitive abilities, learning conditions, and instructional quality (Bloom, 1976). Academic achievement was associated with various *personal, social, and environmental* factors, including motivation, study habits, family support, and school climate (Bloom, 1976). Strong predictor of academic achievement include engagement in learning activities, persistence, attention and participation in classroom task (Shikha, 2024). Students who regularly used digital learning resources achieved better academic results due to increased access to learning materials and opportunities for self-directed learning (Khalil, 2018).

Academic achievement was also significantly affected by factors such as teacher effectiveness, feedback, student motivation, and learning strategies (Hattie, 2009). Better academic outcomes can also be achieved by students when they are actively engaged in the learning process and receive timely feedback on their performance (Hattie, 2009). It was also found that students participating in technology-supported learning environments generally performed better than those receiving traditional face-to-face instruction alone (Means et al., 2013).

Significance Of The Study

This study contributes to understanding how digital learning platforms influence students' learning engagement and academic achievement in higher education. It provides empirical evidence on the role of digital technologies in supporting active learning, enhancing student engagement, and improving academic performance. The findings may help educators integrate digital learning platforms more effectively into teaching practices and assist educational institutions in developing technology-supported learning environments. The study also offers useful insights for policymakers and curriculum developers in promoting the meaningful use of digital technologies in higher education.

Moreover, the study adds to the existing literature on digital learning, learning engagement, and academic achievement and provides a foundation for future research on technology-enhanced learning and its impact on student outcomes.

III. Methodology

The present study employed a **descriptive survey method** to investigate the relationship between digital learning platforms, learning engagement, and academic achievement among students. The descriptive survey method was considered appropriate as it facilitates the collection of data from a defined population and helps in describing existing conditions, practices, and relationships among variables without manipulating them. The study adopted a quantitative approach using the descriptive survey method. Data were collected from students through a self-developed Learning Engagement Scale and its reliability was found to be high internal consistency with 0.948 Cronbach's alpha, checklist were prepared for other relevant measures related to academic achievement and use of digital learning platforms. The sample respondent consisted of 106 students enrolled in 2025-26 academic session who were undergoing undergraduate and postgraduate programmes from various academic disciplines in DM university. The participants were selected through **purposive sampling**, a non-probability sampling technique in which respondents were chosen based on their suitability and relevance to the objectives of the study. The inclusion criteria include students enrolled in undergraduate or postgraduate programmes, who were actively using one or more digital learning platforms, whose academic records from examinations conducted within the previous six months were available. High school and higher secondary students were excluded from the study.

The following tools were used to collect data:

1. **Learning Engagement Scale (LES):** A self-developed scale was used to measure the level of learning engagement among students. The scale assessed various dimensions of engagement related to students' participation and involvement in learning activities.
2. **Academic Achievement Record:** Academic achievement was measured using the marks obtained by students in their most recent examination conducted within the preceding six months.
3. **Digital Learning Platform Checklist:** To identify the digital learning platforms used by students, a list of commonly used digital learning platforms was provided. Participants were asked to select the platform(s) they regularly used for academic purposes

Data collection was carried out after obtaining consent from the participants. The researcher approached eligible undergraduate and postgraduate students from different academic disciplines and explained the purpose of the study. Participants were requested to complete the self-developed Learning Engagement Scale and indicate the digital learning platform(s) they used from the provided list. Information regarding academic achievement was collected through the marks obtained in their most recent examination conducted within the previous six months. The collected data were checked for completeness and accuracy before being organized for further statistical analysis.

IV. Data Analysis

Table 1: Item wise descriptive statistics on Learning Engagement

Item (N=106)	μ	σ
1. I attend my classes regularly	4.08	.859
2. I complete my assignments and academic tasks on time.	4.29	.839
3. I actively participate in classroom discussions and activities.	4.13	.691
4. I pay attention during lessons.	4.18	.753
5. I ask questions when I do not understand a topic.	4.07	.772
6. I enjoy learning new things in my classes.	4.21	.686
7. I feel interested in most of the subjects I study.	4.10	.780
8. I feel motivated to do well in my studies.	4.09	.669
9. I am excited when I learn something new.	4.30	.604
10. I feel satisfied when I successfully complete academic tasks.	4.25	.673
11. I try to understand ideas deeply rather than just memorize them.	4.01	.799
12. I connect new knowledge with what I have learned before.	3.96	.767
13. I make extra efforts to solve difficult academic problems.	4.00	.647
14. I review my mistakes to improve my learning.	4.07	.772
15. I set goals for my learning and work to achieve them.	4.09	.763

Table 2: Scale statistics

α Cronbach	μ	Variance	σ	Items
0.948	61.83	71.552	8.459	15

Table 3: Selection of Predictors

Predictor	Rank	Unadjusted Sig.	F			Pearson Correlation		
			Value	df1	df2	Value	t	df
I pay attention during lessons.	1	.000				.845	16.096	104
I feel interested in most of the subjects I study.	2	.000				.830	15.173	104

Predictor	Rank	Unadjusted Sig.	F			Pearson Correlation		
			Value	df1	df2	Value	t	df
I try to understand ideas deeply rather than just memorize them.	3	.000				.821	14.644	104
I feel satisfied when I successfully complete academic tasks.	4	.000				.798	13.511	104
I complete my assignments and academic tasks on time.	5	.000				.797	13.474	104
I feel motivated to do well in my studies.	6	.000				.790	13.138	104
I enjoy learning new things in my classes.	7	.000				.784	12.876	104
I review my mistakes to improve my learning.	8	.000				.769	12.272	104
I am excited when I learn something new.	9	.000				.767	12.175	104
I set goals for my learning and work to achieve them.	10	.000				.744	11.345	104
I actively participate in classroom discussions and activities.	11	.000				.730	10.908	104
I attend my classes regularly	12	.000				.724	10.715	104
I connect new knowledge with what I have learned before.	13	.000				.708	10.211	104
I make extra efforts to solve difficult academic problems.	14	.000				.694	9.829	104
I ask questions when I do not understand a topic.	15	.000				.652	8.779	104
Google	16	.005	3.963	4	101			
Wikipedia	17	.018	3.117	4	101			
YouTube (Educational Videos)	18	.022	2.992	4	101			
ChatGPT	19	.022	2.989	4	101			
Zoom	20	.027	2.864	4	101			

Descriptive statistics showed that the mean scores of the individual items ranged from **3.96 to 4.30**, reflecting a generally high level of learning engagement among the respondents. The item *"I am excited when I learn something new"* recorded the highest mean score (M = 4.30, SD = 0.60), indicating that most students expressed enthusiasm toward learning new concepts. Similarly, high mean scores were observed for *"I complete my assignments and academic tasks on time"* (M = 4.29, SD = 0.84) and *"I feel satisfied when I successfully complete academic tasks"* (M = 4.25, SD = 0.67). In contrast, the statement *"I connect new knowledge with what I have learned before"* had the lowest mean score (M = 3.96, SD = 0.77), although it still represented a favourable level of agreement. The total score of the Learning Engagement Scale had an overall mean of **61.83** and a standard deviation of **8.46**. These values indicate that the respondents generally demonstrated a high degree of learning engagement, with moderate variation in their responses.

To determine the predictors contributing to learning engagement, predictor screening analysis was performed. The results revealed that *paying attention during lessons* was the strongest predictor of overall learning engagement ($r = .845$, $p < .001$). Other important predictors included *feeling interested in most subjects studied* ($r = .830$, $p < .001$), *trying to understand concepts deeply rather than memorizing them* ($r = .821$, $p < .001$), *feeling satisfied after completing academic tasks successfully* ($r = .798$, $p < .001$), and *completing assignments on time* ($r = .797$, $p < .001$). All fifteen items of the Learning Engagement Scale were found to have statistically significant positive relationships with the overall engagement score ($p < .001$), confirming that each item made a meaningful contribution to the construct.

The influence of digital learning platforms was also examined. Among the platforms included in the study, **Google** emerged as the most significant categorical predictor ($F = 3.963$, $p = .005$). This was followed by **Wikipedia** ($F = 3.117$, $p = .018$), **YouTube (Educational Videos)** ($F = 2.992$, $p = .022$), **ChatGPT** ($F = 2.989$, $p = .022$), and **Zoom** ($F = 2.864$, $p = .027$). The findings suggest that the use of these digital learning platforms was significantly associated with differences in students' learning engagement.

V. Conclusion

The analysis indicates that the predictors of academic achievement and Learning Engagement depend on Digital learning platforms. Learning engagement was found to be the most important elements in predicting academic achievement. The findings reveal that the students generally exhibited a high level of learning engagement. Most respondents reported attending classes regularly, paying attention during lessons, completing academic tasks on time, and maintaining interest and motivation in their studies. They also showed a willingness to understand concepts thoroughly and actively participate in the learning process. The predictor analysis further showed that attentiveness during lessons, interest in academic subjects, meaningful understanding of concepts, and timely completion of assignments were the strongest contributors to learning engagement. Moreover, the use

of digital learning platforms such as Google, Wikipedia, YouTube, ChatGPT, and Zoom was significantly associated with students' learning engagement. The study suggests that students' engagement in learning is influenced by both their academic behaviours and their use of digital learning platforms. Promoting active learning practices and the effective integration of digital technologies can therefore help enhance students' engagement and improve their overall learning experience.

References

[1]. Ally, M. (2008). Foundations Of Educational Theory For Online Learning. In T. Anderson (Ed.), The Theory And Practice Of Online Learning (2nd Ed., Pp. 15–44). Athabasca University Press.
[2]. Anderson, T. (2017). How Communities Of Inquiry Drive Teaching And Learning In The Digital Age. North Contact, 1, 1–6.
[3]. Bloom, B. S. (1976). Human Characteristics And School Learning. Mcgraw-Hill.
[4]. Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School Engagement: Potential Of The Concept, State Of The Evidence. Review Of Educational Research, 74(1), 59–109.
[5]. Hattie, J. (2009). Visible Learning: A Synthesis Of Over 800 Meta-Analyses Relating To Achievement. Https://Doi.Org/10.4324/9780203887332
[6]. Khalil, M. (2018). Learning Analytics In Massive Open Online Courses. Https://Doi.Org/10.48550/Arxiv.1802.09344
[7]. Manivannan, S., & Venkataraman, S. (2018). Student Engagement In Learning At Secondary Level Schools In India. Department Of Education, Annamalai University.
[8]. Martin, F., & Bolliger, D. U. (2018). Engagement Matters: Student Perceptions On The Importance Of Engagement Strategies In The Online Learning Environment. Online Learning, 22(1). Https://Doi.Org/10.24059/Olj.V22i1.1092
[9]. Means, B., Toyama, Y., Murphy, R., & Baki, M. (2013). The Effectiveness Of Online And Blended Learning: A Meta-Analysis Of The Empirical Literature. Teachers College Record, 115(3), 1–47.
[10]. Meeramani, N., Sharmila, N., Duragannavar, M. G. F., & Kumar, P. (N.D.). Digital Learning Platforms India: A Comprehensive Review And Analysis.
[11]. Mozumdar, S. K. (2025). The Effectiveness Of E-Learning Platforms In Higher Education: A Systematic Review. Business And Social Sciences, 3(1), 1–7.
[12]. Pandey, S. (2024). Student Engagement In Higher Education: With Special Reference To Teacher Education. Department Of Education, Faculty Of Education And Allied Sciences, M. J. P. Rohilkhand University.
[13]. Qian, Y., & Saidin, K. (2025). Exploring Factors Influencing Student Engagement: A Concept Paper. Indian Journal Of Information Sources And Services, 15(1), 320–326. Https://Doi.Org/10.51983/Ijiss-2025.IJISS.15.1.41
[14]. Rani, S., Anjali, & Sudesh. (2023). A Study Of Academic Achievement Of Secondary School Students In Relation To Self-Concept. International Journal Of Indian Psychology, 11(2), 2868–2872. Https://Doi.Org/10.25215/1102.280
[15]. Reddy, M., & Chary, V. (2025). Impact Of Digital Learning Platforms On Academic Performance Across Technical And Non-Technical Disciplines. International Journal On Science And Technology, 16(3). Https://Doi.Org/10.71097/IJSAT.V16.I3.6869
[16]. Shikha. (2026). Relationship Between Student Engagement And Academic Achievement Among School Students. International Education And Research Journal (IERJ), 12(3). Https://Doi.Org/10.5281/Zenodo.19253607
[17]. Soni, R., Abhonkar, D. V., Dhiman, T., Gupta, N., & Bhagat, B. (2025). Impact Of Digital Learning Platforms On Student Performance In Rural Areas.
[18]. Wang, Q. (2025). Re-Discover Student Engagement From The Perspective Of Definition And Influencing Factors. Frontiers In Psychology, 15, Article 1428668. Https://Doi.Org/10.3389/Fpsyg.2024.1428668
[19]. Wang, S., & Luo, B. (2024). Academic Achievement Prediction In Higher Education Through Interpretable Modeling. PLOS ONE, 19(9), E0309838. Https://Doi.Org/10.1371/Journal.Pone.0309838
[20]. Zhang, X., & Kim, H.-J. (2024). Exploring The Factors Influencing Student Engagement In University English Classes. English Teaching, 79(1), 121–143.