

The Impact of Online Education: An Analysis of the Effects of Distance Learning on Students' Motivation

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ABSTRACT

In online learning environments, student motivation has emerged as a major challenge, as learners are required to be more independent and manage their own time effectively. Nevertheless, online education also presents positive aspects. Students who are familiar with digital technology and appreciate time flexibility often demonstrate higher levels of learning motivation. Digital platforms provide opportunities for teachers to design learning activities that are varied, interactive, and adaptive, which may enhance students' interest and engagement in the learning process.

This study aims to examine how distance learning influences students' learning motivation by considering several key factors, including digital interaction, motivation, learning satisfaction, the use of online platforms, environmental support, and technical constraints encountered during the implementation of online learning. The research employed a literature review method with a descriptive-analytical approach to explore empirical findings related to the impact of distance learning on student motivation. This method was selected to collect, analyze, and synthesize data from ten academic journal articles published during the COVID-19 pandemic. The reviewed articles addressed themes such as online learning, learning motivation, teacher–student interaction, learning satisfaction, digital platform utilization, educational policies, and challenges in implementing distance learning at both school and higher education levels. Data were obtained through searches in academic databases and repositories, including Google Scholar, ResearchGate, and institutional journal portals. Overall, the findings indicate that online learning remains less effective due to various challenges, such as limited internet connectivity, inadequate learning devices, low student motivation, and minimal interaction between teachers and students. As a result, students' learning satisfaction, academic achievement, and learning character tend to decline, suggesting that distance learning has not yet been able to fully replace face-to-face instruction.

ARTICLE HISTORY

Received :21 November 2025

Accepted :31 December 2025

KEYWORDS

Online Learning; Learning Motivation; Learning Satisfaction; Student Achievement; Teacher–Student Interaction

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Introduction

The rapid development of information technology over the past decade has significantly transformed educational practices, particularly following the widespread implementation of distance learning during the COVID-19 pandemic. The abrupt transition from face-to-face instruction to online learning compelled schools, teachers, students, and parents to adapt quickly to new learning modalities that rely heavily on digital tools and internet connectivity. This shift not only altered instructional methods but also reshaped students' learning experiences, especially with regard to their learning motivation. Learning motivation is a critical factor that determines students' level of engagement and overall academic success.

In online learning contexts, motivation has emerged as a major challenge, as students are required to be more self-directed, manage their own time, and cope with various digital distractions. Numerous studies indicate that the transition to online learning environments has resulted in varying levels of motivation: motivation may increase when online instruction is designed to be interactive and engaging, but it may also decline due to limited interaction, technical difficulties, and inadequate learning support. In practice, many students experience decreased motivation as a result of unstable internet connections, excessive academic workloads, screen

fatigue, and insufficient self-regulated learning skills.

Despite these challenges, online education also offers notable advantages. Students who are technologically proficient and value time flexibility often report higher levels of motivation in online learning settings. Digital platforms provide teachers with opportunities to design diverse, interactive, and adaptive learning activities that can enhance students' interest and engagement. Evidence from ten reviewed studies highlights the complexity of this phenomenon. Research examining the relationship between distance learning, motivation, and learning satisfaction suggests that the quality of online instruction plays a decisive role in shaping students' learning experiences.

Studies focusing on platforms such as Google Classroom demonstrate that digital learning environments can enhance interaction, although technical issues remain a persistent concern. Analyses of educational policies during the pandemic further reveal that inadequate infrastructure, limited internet access, and insufficient teacher readiness significantly hindered the effectiveness of distance learning. Other studies emphasize that home learning environments, family support, and access to appropriate devices are influential factors affecting students' motivation. Research on the challenges of online learning consistently reports declines in motivation due to boredom, limited social interaction, and heavy academic workloads.

Moreover, studies on online communication indicate that clear, responsive, and supportive communication between teachers and students can significantly enhance student participation. Conversely, several studies have found that learning motivation and academic achievement tend to decline when online learning is poorly managed, lacks creativity, and is not supported by adequate technological facilities. Overall, distance learning has had a substantial impact on students' motivation, interaction, academic achievement, and learning satisfaction. While it offers flexibility and broader access to learning resources, distance learning also presents significant challenges, including reduced motivation, unequal access to technology, and limited direct interaction.

Therefore, it is essential to critically examine how online education influences students' learning motivation in order to develop learning models that are more adaptive, human-centered, and responsive to students' needs in the digital era..

Method

This study employed a literature review method with a descriptive-analytical approach to explore empirical findings on the impact of distance learning on students' learning motivation. This method was selected to systematically collect, analyze, and synthesize evidence from ten academic journal articles published during the COVID-19 pandemic. The reviewed articles focused on themes such as online learning, learning motivation, teacher–student interaction, learning satisfaction, the use of digital platforms, educational policies, and challenges in implementing distance learning at both school and higher education levels. Data were obtained through searches conducted in academic databases and repositories, including Google Scholar, ResearchGate, and institutional journal portals.

The data collection process began with the identification of relevant keywords, including "online learning," "distance learning," "learning motivation," "student achievement," and "teacher–student interaction." A screening process was then conducted to select articles that aligned with the focus of the study. The inclusion criteria required that articles be peer-reviewed academic journal publications, available in full-text format, contain empirical data, and be published during the COVID-19 pandemic period. Articles that were opinion-based, lacked a clear research methodology, or were not directly related to learning motivation were excluded to ensure the accuracy and relevance of the analysis. All selected articles were systematically documented by recording key information such as the title, authors, year of publication, research methods, and main findings.

Data analysis was carried out by thoroughly reading each selected article, followed by a data reduction process in which information directly related to the effects of online learning on student motivation was identified and retained, while irrelevant information was excluded. The retained data were then categorized into several major themes, including the quality of distance learning implementation, the use of digital platforms, educational policy readiness, the influence of learning environments, challenges in online learning, the effectiveness of online communication, and the impact of distance learning on academic achievement and learning satisfaction.

Subsequently, a synthesis process was conducted to integrate the findings into a comprehensive understanding of how distance learning affects student motivation. This synthesis involved analyzing the relationships among key variables discussed across the reviewed studies, such as technical barriers, the quality of online communication, teachers' instructional creativity, access to technology, and environmental support. Data validity was ensured through source triangulation by comparing findings across multiple studies to confirm consistency and reliability. Overall, this literature review method provides a solid and integrated overview of the dynamics of learning motivation in distance learning contexts and serves as an important foundation for the development of more effective online learning research and practices.

Result and Discussion

Results

Table 1. Description of Articles Reviewed on the Impact of Distance Learning on Student Motivation

No	Article Identity	Research Method	Key Findings	Analytical Notes
1.	Ningsih et al. (2020). <i>The Influence of Distance Learning and Learning Motivation on Students' Learning Satisfaction</i>	Quantitative descriptive	The quality of distance learning and learning motivation significantly influence students' learning satisfaction, both independently and jointly.	Effective online instruction enhances motivation and satisfaction; poor instructional quality reduces motivation.
2.	Novayanto & Pribadi (2023). <i>The Impact of Google Classroom on Student Learning Interaction</i>	Literature review	Google Classroom can support online learning interaction, but effectiveness depends on teacher competence, student readiness, and internet stability.	Digital platforms are beneficial when supported by adequate skills and infrastructure.
3.	Sari et al. (2020). <i>Educational Policy Analysis on Distance Learning During COVID-19</i>	Qualitative descriptive	Distance learning during COVID-19 was largely ineffective due to limited facilities, poor internet access, and low readiness of teachers and students.	Unequal technological readiness weakens learning outcomes and student motivation.
4.	Pahriji (2021). <i>The Influence of Learning Environment on Student Motivation in Distance Learning</i>	Qualitative (online survey)	Home learning environments often cause distractions, leading to decreased motivation during distance learning.	A supportive learning environment is crucial for sustaining motivation.
5.	Juliya & Herlambang (2021). <i>Problems of Online Learning and Their Impact on Student Motivation</i>	Qualitative & literature study	Technical and non-technical barriers reduce students' focus and motivation; adequate facilities help maintain motivation.	Motivation declines when technical barriers and learning environments are unsupportive.
6.	Shadiqien (2020). <i>Effectiveness of Virtual Communication in Online Learning</i>	Field research (qualitative)	Online learning was less effective, particularly for practical subjects, due to low motivation, weak discipline, and technical issues.	Monotonous teaching and limited interaction reduce learning effectiveness.
7.	Laia (2021). <i>The Effect of Online Learning on Student Achievement</i>	Quantitative	Online learning significantly affects achievement, but effectiveness depends on access, participation, and motivation.	Learning outcomes improve only when participation and access are adequate.
8.	Mukaromah (2021). <i>The Effect of Online Learning on Student Motivation</i>	Quantitative descriptive	Online learning significantly influences student motivation, contributing 41.4% to motivational variance.	Online learning can enhance motivation, but other factors play a larger role.
9.	Napitupulu (2020). <i>The Impact of COVID-19 on Distance Learning Satisfaction</i>	Qualitative descriptive	Students reported low satisfaction due to difficulties accessing materials and limited lecturer competence.	Digital literacy and instructional quality are key determinants of satisfaction.
10.	Nurfaliza & Hindrasti (2021). <i>The Influence of Learning Motivation on Student Achievement in Online Learning</i>	Qualitative case study	Strong intrinsic and extrinsic motivation improves achievement despite online learning challenges.	Environmental support strengthens motivation and learning success.
11.	Massie & Nababan (2021). <i>The Impact of Online Learning on Student Character Education</i>	Qualitative	Student discipline, honesty, and responsibility declined during online learning; creativity slightly increased.	Reduced supervision weakens character development in online settings.
12.	Berani (2021). <i>The Impact of Online Learning on Children's Cognitive Development</i>	Literature study	Online learning weakened discipline and responsibility, while creativity improved marginally.	Limited interaction reduces character formation during online learning.
13.	Sunarti & Mitrohardjono	Qualitative cross-	Despite device ownership, students	Device access alone does

	(2021). <i>The Impact of COVID-19 on Distance Learning Effectiveness</i>	sectional	struggled with self-regulated learning and were dissatisfied with distance learning.	not ensure learning effectiveness.
14.	Serepinah et al. (2023). <i>The Effectiveness of Online Learning Platforms Across Educational Levels</i>	Quantitative experimental	WhatsApp was more effective for elementary students, while Zoom was more effective for junior secondary students.	Platform selection must align with students' developmental levels.
15.	Hatmo (2021). <i>The Effectiveness of Online Distance Learning During the Pandemic</i>	Quantitative (ex post facto)	Most students preferred face-to-face learning due to technical constraints and limited comprehension during online learning.	Online learning has not yet replaced the effectiveness of face-to-face instruction.

Based on the evaluation of fifteen reviewed articles, it is evident that distance learning during the pandemic faced substantial challenges. Numerous studies reported that online learning was not optimally implemented due to unstable internet connectivity, limited access to learning devices, monotonous instructional methods, and insufficient interaction between teachers and students. These conditions contributed to low levels of content comprehension, learning motivation, and learning satisfaction among both school and university students.

In addition, the home learning environment played a significant role in shaping students' learning motivation. In unsupportive environments, students were more easily distracted, which hindered their ability to concentrate. Several studies also indicated a decline in students' discipline and sense of responsibility as a result of reduced supervision during online learning. Nevertheless, some studies demonstrated that online learning can be effective when supported by appropriate digital media, creative instructional strategies, motivated learners, and adequate technological facilities.

Overall, distance learning during the pandemic has not been able to fully replace face-to-face instruction. However, it can be implemented more effectively when supported by reliable technology, well-designed teaching methods, and a conducive learning environment.

Discussion

Social collaboration, information exchange, and academic support play a crucial role in sustaining students' motivation in online learning environments. Social interaction functions as an additional stimulus that helps learners remain engaged and motivated during distance learning, highlighting the importance of the social environment as a core component of effective online education strategies. Evidence from the reviewed studies consistently indicates that strong learning motivation—supported by adequate facilities, high-quality instruction, and social support—is positively correlated with improved academic achievement. These findings underscore the role of motivation as a mediating factor between online learning and academic outcomes, suggesting that access to technology alone is insufficient without accompanying psychological and social support.

The implications of these findings point to the necessity of a comprehensive educational approach that integrates technological provision, teacher training in interactive online pedagogy, parental involvement, and the development of students' digital literacy. While the reviewed studies provide valuable insights, several limitations warrant consideration. Some studies relied on small sample sizes or case-study designs, which may restrict the generalizability of their findings. Moreover, additional variables influencing learning outcomes—such as students' mental health, home conditions, and increased academic workload—have not always been examined in depth. Future research is therefore expected to expand sample sizes, employ mixed-method approaches, and further investigate the complex relationships among motivation, technological tools, instructional quality, and learning outcomes in online learning contexts.

1. The Role of Distance Learning in Learning Motivation and Satisfaction

Cross-study analysis reveals that distance learning consistently emerges as a significant factor influencing students' learning motivation and satisfaction. While online learning offers temporal flexibility and broader access to learning resources, it simultaneously introduces challenges such as social isolation, limited face-to-face interaction, and difficulties in sustaining student engagement. These findings align with motivational theories suggesting that online learning environments require additional motivational support to remain effective. Students with strong intrinsic motivation are generally better equipped to navigate technical challenges and the absence

of structured physical learning spaces.

2. Intrinsic and Extrinsic Learning Motivation

The majority of reviewed studies demonstrate that both intrinsic motivation (internal drive) and extrinsic motivation (external encouragement such as grades, praise, and social support) significantly contribute to success in distance learning. Intrinsic motivation enables students to remain focused and persistent in completing tasks without direct supervision, while extrinsic motivation from parents, teachers, and peers helps sustain learning enthusiasm during challenging periods. The combination of these motivational types serves as a powerful driving force in maintaining the quality of online learning interactions and academic achievement.

3. Infrastructure and Digital Literacy as Critical Enablers

Many studies emphasize that satisfaction and effectiveness in distance learning are highly dependent on technological capacity and infrastructure readiness. Stable internet access, availability of appropriate devices, and sufficient digital literacy are essential prerequisites for students to fully benefit from online learning. Without adequate technological support, learning motivation alone is insufficient to ensure optimal academic outcomes. These findings indicate that the provision of technological resources and digital literacy training for both educators and students must be integral components of online education policies, particularly during crisis situations such as the pandemic.

4. Instructional Quality and Teacher–Student Interaction

Teacher–student interaction, instructional quality, and online teaching methods emerge as key determinants of learning satisfaction. The reviewed articles suggest that educators who design interactive online classes—utilizing video-based instruction, discussion forums, and timely feedback—tend to foster more motivating and satisfying learning experiences. Conversely, monotonous and non-engaging online teaching methods negatively affect students' motivation and satisfaction. Accordingly, professional development programs focusing on digital pedagogy and instructional design are essential for enhancing the quality of online education.

5. The Role of Social Support: Parents, Peers, and Learning Environment

The social environment plays a significant role in supporting students' motivation during distance learning. Parental encouragement through emotional support, recognition, and reinforcement strengthens extrinsic motivation, while peer support facilitates collaborative learning, information sharing, and mutual academic assistance. These findings suggest that social interventions, such as virtual study groups and collaborative learning communities, can serve as effective strategies to enhance student motivation in online learning contexts.

6. Impact on Academic Achievement

Nearly all reviewed studies confirm that high learning motivation is associated with improved academic achievement in online learning settings. Despite existing limitations—such as stress, fatigue, and increased workload—students with strong motivation generally demonstrate more positive learning outcomes. This reinforces the role of motivation as a key mediator between distance learning and academic performance, indicating that psychological readiness and self-regulation are as critical as technological access.

7. Implications for Educational Policy and Practice

These findings have important implications for educational institutions and policymakers. First, schools and universities must strengthen technical support by ensuring equitable access to devices and reliable internet connectivity, particularly in underserved areas. Second, teacher training in interactive and meaningful online pedagogy is essential. Third, parental and peer involvement should be recognized as integral elements of effective distance learning strategies. Finally, the development of digital literacy among both students and educators is crucial for enhancing the long-term effectiveness of online learning, even beyond the pandemic context.

8. Limitations and Directions for Future Research

Although the reviewed studies offer valuable insights, several limitations should be acknowledged. Many studies employ small sample sizes or case-study designs, which may limit the generalizability of their findings. Additionally, other influential factors—such as psychological stress, household conditions, and additional responsibilities—have not always been examined comprehensively. Future research should address these gaps by utilizing larger samples, adopting mixed-method approaches, and exploring the interactions among motivation, technological resources, instructional practices, and academic outcomes in greater depth.

Conclusion

Based on the analysis of fifteen reviewed articles, it can be concluded that learning motivation is a central factor influencing students' success in online learning. Strong motivation—both intrinsic and extrinsic—enables students to remain focused, persistent, and actively engaged despite technical or social challenges. Intrinsic motivation encourages students to learn driven by internal goals, such as understanding learning materials and achieving personal growth. In contrast, extrinsic motivation arises from external support, including parental encouragement, teacher instruction, peer influence, grades, praise, and rewards, which provide additional incentives for learning engagement.

Beyond motivation, the effectiveness of online learning is highly dependent on technological readiness and digital skills among both students and teachers. Stable internet connectivity, adequate learning devices, and the ability to use digital technologies effectively are essential prerequisites for successful online learning. Furthermore, instructional quality—particularly the use of interactive methods and engaging content delivery—plays a critical role in sustaining student participation and improving learning outcomes. Social support from parents and peers has also been shown to strengthen students' learning motivation, highlighting the importance of social interaction in achieving effective online learning.

Taken together, these findings emphasize the need for a comprehensive approach to online education that extends beyond the provision of technology. Educational strategies should integrate the development of learning motivation, high-quality instructional practices, and strong social support systems. By addressing these interconnected factors, online learning environments can better support students in achieving optimal academic performance, even under the constraints of distance learning.

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