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Challenges of Online Learning and Their Effect on Students' Academic Success

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ABSTRACT

Online education is instruction and learning conducted in virtual settings via the internet, enabling flexible, accessible learning that is not limited by time or place. Online learning, in contrast to traditional in-person instruction, eliminates geographical and physical constraints, enabling students to access course materials and take part in classes from almost any location. Even though distance learning has been around since the middle of the 1980s, e-learning has become a key part of contemporary educational institutions due to the quick development of technology and the ubiquitous availability of the internet. Asynchronous and synchronous modes, Massive Open Online Courses (MOOCs), blended learning, personalized learning, and microlearning are some of the ways that online education is being offered. Digital tools that improve communication and participation, like blogs, podcasts, discussion boards, and social media platforms, help these strategies. The global use of online learning was further pushed by the COVID-19 pandemic, which also revealed inequalities in digital access and literacy while guaranteeing educational continuity during institution closures. Online learning continues to be a dynamic and revolutionary force in modern education as digital assessment methods advance.

Introduction- Online education includes all types of learning that take place in a virtual setting and is a flexible way to give teaching via the internet. It allows teachers to engage with students who, because of personal, professional, or geographic limitations, cannot attend traditional face-to-face (F2F) sessions (Patwa et al., 2024). Online learning eliminates physical barriers and gives students the ability to access information from almost anywhere, in contrast to traditional classroom environments. Similar to this idea, online learning - also referred to as e-learning, distance learning, or web-based education-enables students to access learning materials whenever they want, without being constrained by timetables or location (Asaolu, 2024; Curtain, 2002). Technological developments have expedited the rise of remote education in recent decades, despite the fact that it has existed since the mid-1980s and increased considerably in the late 1990s (Chavan & Begum, 2022). Online education is therefore a revolutionary approach to teaching and learning that is backed by digital technologies, rather than just a short-term substitute for traditional classroom training.

The change of educational systems is reflected in the growth of online learning. According to Salamat et al., (2018), learning has historically advanced from informal and non-formal systems to formal schooling, remote education, and now e-learning, the current era of technology-driven education. Over time, various types of distance learning have been developed. These include telecourses aired on radio or television, correspondence courses sent by mail, teaching based on CD-ROM, online learning via the internet, and mobile learning via smartphones or other digital devices (Yusnilita, 2020). The most popular format among them is online learning, which can be provided asynchronously (self-paced learning) or synchronously (real-time engagement). Additionally, online learning integrates several instructional methods, including Massive Open Online Courses (MOOCs), blended learning, personalized learning, and microlearning (Asaolu, 2024). In order to improve communication and participation, it also incorporates digital resources, including blogs, podcasts, webcasts, discussion boards, and social media platforms (Rai et al., 2022). An important factor in this change has been the growth of internet access. According to Sharma and Park (2018), there were over 4.1 billion internet users worldwide by 2018, and countries including the US, Canada, the UK, and Finland have ensured that all educational institutions have online access (Hargittai, 2019). Consequently, in both affluent and developing countries, online learning has become the main component of remote education (Bartley & Golek, 2004; Darkwa & Antwi, 2021).

1. Student-centered Learning and Pedagogical Transformation:

The student-centered approach is one of the most unique features of online learning. Online learning necessitates that students actively participate in knowledge construction, in contrast to traditional face-to-face training, which is frequently teacher-centered (Asaolu, 2024). Through digital communication platforms, students communicate with classmates, participate in discussions, share ideas, and interact with teachers, all of which enhance their comprehension and academic performance (Patwa et al., 2024). This change is consistent with Asabere's (2012), assertion that by focusing on active participation and knowledge building, online education changes the way academic processes are organized. Teachers are now facilitators who create dynamic learning environments and promote meaningful engagement rather than just information providers.

Additionally, using multimedia resources - such as blogs, interactive tests, movies, and online study groups - improves educational opportunities and accommodates various learning preferences (Rai et al., 2022). Web and video blogs have been shown to enhance critical thinking, motivation, creativity, and language acquisition (Khusniyah & Hakim, 2019; Mandasari & Aminatun, 2019). Thus, online learning not only alters the location of education but also the way that knowledge is disseminated, accessible, and assessed. (Condie & Livingston, 2007).

2. Advantages of Online Education:

Online education's many benefits are partly responsible for its rising popularity. Flexibility is a key advantage. Students can balance their academic obligations with their personal and professional commitments by studying at their own speed and on their own time (Rai et al., 2022; Satrio, 2011). Working professionals and digital nomads who favor location-independent lifestyles would especially benefit from this flexibility (Patwa et al., 2024).

Cost-effectiveness is yet another important benefit. Transportation, accommodation, food, and campus amenities costs are all decreased by online learning (Patwa et al., 2024). Additionally, institutions gain from lower administrative costs and infrastructural requirements (Yusnilita, 2020).

Online education also encourages self-reliance and self-control. Students need to stay motivated, establish appropriate study spaces, and efficiently manage their time (Patwa et al., 2024). In addition to fostering important life skills like time management and technological competency, this calls for strong self-regulation. Additionally, by giving students who might not otherwise have access to high-quality institutions similar chances, online education levels the playing field. It enables schools to provide top-notch programs, degrees, and certificates internationally, improves outreach, and opens up enrollment

markets (Yusnilita, 2020). Accordingly, millions of students take online courses each year for a variety of reasons, including flexibility, cost, accessibility, and skill development (Elfakil et al., 2019).

3. Impact of COVID-19 on Online Learning:

The COVID-19 epidemic significantly expedited the global acceptance of online education, despite the fact that it had been growing gradually. A quick transition to digital education resulted from the forced closure of schools and colleges in 2020 in nations like India, Indonesia, Morocco, Myanmar, China, the United States, and the Kingdom of united (Huddarl et al., 2023; Wajdi et al., 2020; Aung & Bhumika, 2025). To maintain educational continuity, governments implemented emergency measures like virtual interactions, e-learning platforms, and digital classrooms. Institutions have occasionally used hybrid approaches, which combine online and in-person training. (Artino & Stephens, 2009). These changes generated discussions regarding the quality of education and student happiness, even though they ensured that learning went on during lockdowns (Asaolu, 2024). Disparities in digital literacy, internet connectivity, and device access were highlighted by the sudden shift, particularly for students from disadvantaged or rural backgrounds. (Chavan & Begum, 2022; Huddarl et al., 2023). As a result, the pandemic both accelerated the digital revolution and widened already-existing socioeconomic gaps in education.

4. Challenges and Limitations of Online Education:

Online learning has many benefits, but it also has drawbacks. Insufficient communication between teachers and students might lower participation, impede the growth of values, and prevent cooperative learning opportunities (Mandasari, 2020). In contrast to in-person classes, online settings might feel alienating if they are not adequately controlled.

Particularly in rural areas, technical problems including erratic internet connections, data capacity limitations, and a dearth of digital devices continue to be major obstacles (Chavan & Begum, 2022). These difficulties are considerably more severe in nations like Myanmar that are going through crises or political unrest (Aung & Bhumika, 2025).

Furthermore, a significant degree of self-motivation is required for online learning. Academic difficulties may arise for students who lack discipline (Mandasari, 2020). Additionally, there are worries that e-learning can become unduly commercialized or favor skill-based training over a comprehensive education. Additionally, children's academic performance may suffer if the widespread use of the internet

for social media and recreation is not properly regulated (Balakrishnan & Gan, 2019; Batat, 2020). While the internet facilitates worldwide communication and information gathering, it also presents diversions that should be used carefully (Asfaw & Bo, 2018; Bouhnik et al., 2019).

5. Online Assessment and Future Prospects:

Assessment procedures have changed along with the growth of online education. Assessment, which was originally defined as evaluating students' progress (Spivey & McMillan, 2014), now makes use of digital technology to generate assignments, provide feedback, and efficiently maintain results (Bahar & Asil, 2018). Institutions can measure performance, record interactions, and improve administrative efficiency by using online exams (Yusnilita, 2020).

With the help of information technology developments, online learning is becoming more and more feasible, which indicates that it will continue to play a major role in educational systems around the world. Methods to raise student satisfaction and achievement in digital contexts are still being investigated by researchers and educators. Because of its adaptability, accessibility, and worldwide reach, online learning is not just a temporary fix during emergencies but rather a long-term, developing aspect of contemporary education. Fatawi et al., (2020) discovered that using concept maps as a formative assessment in online learning greatly improved students' learning outcomes as well as their behavioral, emotional, and cognitive engagement.

In a study conducted by Nadeak (2020), students at Universitas Kristen Indonesia evaluated the efficacy of distant learning via social media platforms during the COVID-19 pandemic. The results show that social media-based distant learning is generally successful for theoretical and some practical courses. It is less appropriate, nevertheless, for classes that call for a lot of fieldwork and practical exercises. Specifically, it was discovered that social media sites like Facebook, Instagram, and YouTube were less conducive to remote learning for specific course kinds. The study examined the effect of online learning on student results in Indonesian language courses (Hakim et al., 2023). According to the findings, offline learning resulted in a greater improvement in student performance than online learning. This implies that, especially for fourth-grade Indonesian Class IV students at SD Negeri 1 Bonto-Bonto, Pangkep Regency, the impacts of online learning on learning outcomes are more noticeable when combined with or followed by offline instruction.

Research by Guan et al., (2021) examined how online education affected Chinese college students during the COVID-19 pandemic. The findings showed that academic performance was negatively impacted by

online learning, especially for students who lacked desire and self-regulated learning abilities. According to the researchers, student performance in online learning environments could be improved by offering focused assistance and instruction in self-regulated learning techniques. A different study that looked at the connection between online learning and academic achievement among Vietnamese high school students was analyzed by Phan et al., (2021). The results showed that pupils who engaged in online instruction performed better academically than those who did not. Students' subjective enjoyment of online learning had an impact on this favorable association. According to the experts, adding interesting and interactive exercises to online classes could improve student engagement and performance even further.

A study by Lee & Kim, (2020) looked at how online education affected South Korean undergraduate students' academic achievement. Although the difference was not statistically significant, the data indicated that students taking online courses received somewhat worse grades than those in in-person classes. Online learning may be more helpful for students with weaker academic motivation, according to the researchers, who hypothesized that this disparity may be partially caused by academically driven students choosing in-person classes more often. A study by Kaur and Mahal (2021) examined how online education affected Indian college students' academic achievement. The results showed that online learning improved student performance, especially for those with better academic standing and more pronounced propensities for self-directed learning. To improve overall academic results, the researchers suggested encouraging more contact and collaboration in online courses and offering extra assistance to students who struggle with self-directed learning.

According to Kallick et al., (2017), personal study habits are the unique methods and techniques that individuals use to advance their education and raise their academic standing. According to Cuevas Monzonís et al., (2021), schools all around the world were forced to adopt urgent remote learning as a preventative measure against the COVID-19 epidemic. Traditional educational paradigms were upended by the repeated lockdown phases and other restrictive measures, which led to the widespread adoption of remote learning strategies enabled by technology. Online learning consequently gained popularity as a teaching strategy at all educational levels. The average learning outcomes of second-semester English Tadris students in 2010/2011 who received instruction via e-learning were higher than those of students who received instruction via traditional methods, according to research by Lulu Choirun Nisa titled "The Effect of E-Learning on Learning Outcomes in the Statistics Course of English Tadris Students, Tarbiyah Faculty, IAIN Walisongo."

E-learning significantly and favorably affects the learning quality of FKIP UNINUS Bandung students, according to research by Euis Karwati titled "The Effect of Electronic Learning (E-Learning) on the Quality of Student Learning." The effect was classified as strong, meaning that students' learning quality improves more when e-learning is used extensively. Using the Unified Theory of Acceptance and Use of Technology (UTAUT) framework, Cheung and Vogel (2020) did a study to determine the variables influencing student performance in e-learning environments. In order to improve the UTAUT model for use in higher education, the study also sought to suggest new variables. The study used a survey of 200 students in tertiary institutions in Indonesia's Riau District, expert interviews, and a review of the literature.

Azhari & Ming (2015) state that because of its exceptional functionality, adaptability, and broad accessibility, student demand has continued to rise and reach audiences worldwide. According to Magnoson et al., (2010), the integration of electronic technologies has expanded educational opportunities and supported the development of students' skills. Research indicates that e-learning can significantly enhance learner engagement, foster positive teacher attitudes, enable personalized learning, and stimulate learners' creativity. Negash & Wilcox (2008), quoted in Mahmoodi et al., (2015), Researchers have identified six distinct types of e-learning, which are described as follows:

1. **E-learning with physical presence and without electronic communication (face-to-face):** Traditional classroom learning without online interaction.

2. **E-learning without presence and without electronic communication (self-learning):** Independent study using digital or printed materials without interaction.

3. **E-learning without presence but with electronic communication (asynchronous):** Learners engage online at different times, e.g., discussion forums or recorded lectures.

4. **E-learning with virtual presence and with electronic communication (synchronous):** Real-time online learning through video conferencing or live virtual classes.

5. **E-learning with occasional presence and with electronic communication (blended/hybrid asynchronous):** A combination of face-to-face sessions and online activities that are not simultaneous.

6. **E-learning with presence and with electronic communication (blended/hybrid synchronous):** Combines in-person sessions with real-time online learning activities.

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