

Educational Platforms as a Mechanism to Increase Academic Achievement: Justifications and Obstacles

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Abstract

This study examines the role of educational platforms as a modern mechanism for enhancing academic achievement in the context of rapid digital transformation, particularly following the COVID-19 pandemic. It aims to identify the pedagogical, technological, and social justifications for adopting these platforms, as well as the key challenges that limit their effectiveness. The study adopts a descriptive analytical approach based on a critical review of recent Arabic and international literature published between 2019 and 2024. The analysis focuses on understanding the use of educational platforms and evaluating their pedagogical, technological, and organizational dimensions. The findings indicate that educational platforms have strong potential to improve academic achievement by creating interactive learning environments, supporting self-directed learning, diversifying digital resources, facilitating access to knowledge, and enhancing learner motivation and engagement. However, their effectiveness is constrained by several challenges, including inadequate technological infrastructure, limited digital competencies among teachers and students, low quality digital content, organizational limitations, and resistance to change. The study concludes that improving academic achievement through educational platforms requires more than mere technological adoption. It depends on effective instructional design, strategic planning, capacity building, and supportive institutional policies. Accordingly, the study recommends strengthening digital education policies, expanding teacher training in digital pedagogy, and promoting applied research to evaluate the real impact of educational platforms in different educational contexts.

Keywords: Educational Platforms, E-Learning, Academic Achievement, Digital Transformation, E-Learning Challenges

Introduction

The contemporary world is witnessing rapid transformations driven by continuous advancements in information and communication technologies. These developments have significantly influenced various vital sectors, most notably the education sector, which is among the most affected by ongoing digital changes. Education is no longer confined to

traditional models based solely on direct instruction and physical presence. Instead, it has increasingly shifted toward flexible learning models that integrate digital technologies, online educational platforms, and learning management systems, in alignment with the demands of the knowledge society and the digital economy (UNESCO, 2023).

This transformation has contributed to reshaping the philosophy of education and redefining the roles of its key actors. The teacher is no longer the sole source of knowledge but has become a facilitator, guide, and supporter of the learning process. Meanwhile, the learner has emerged as the central focus of education and an active participant in constructing knowledge through engagement and interaction. This shift has been emphasized in numerous recent studies in digital education (Anderson, 2019; Salama, 2021).

In this context, electronic educational platforms have emerged as one of the most significant tools of digital transformation in education. These platforms represent integrated digital environments that enable the delivery, organization, management, and assessment of educational content, while also supporting synchronous and asynchronous interaction between teachers and learners. This model of education has created unprecedented opportunities for accessing knowledge, overcoming spatial and temporal constraints, and addressing diverse learner needs (OECD, 2021).

Academic achievement is one of the most prominent indicators used to assess the quality and effectiveness of educational systems, as it reflects the extent to which educational objectives are achieved and the degree to which learners acquire knowledge, skills, and values. The challenges facing traditional education, such as increasing student populations, limited resources, and unequal access to learning opportunities, have prompted the search for alternative approaches capable of improving academic achievement and ensuring sustainable learning. Among these alternatives, e-learning through educational platforms has gained particular prominence (Al-Ali, 2020).

The importance of educational platforms increased dramatically following the COVID-19 pandemic, which led to the closure of educational institutions worldwide and disrupted the education of more than 1.6 billion learners. Consequently, online learning became an essential alternative to ensure the continuity of education (UNESCO, 2020). While this sudden shift accelerated the adoption of educational platforms, it also revealed significant challenges related to technological infrastructure readiness, teacher competency, the quality of digital content, and equity in access to education.

Despite the widespread use of educational platforms and the growing body of research examining their impact, previous studies have produced inconsistent findings. Some studies highlight their effectiveness in enhancing academic achievement and promoting self-directed learning skills, whereas others indicate limited or negligible impact, particularly within Arab educational contexts. This variation can be attributed to differences in cultural and educational contexts, platform models, and the degree of integration between technology and pedagogical vision (Al-Hamadi, 2020).

Accordingly, the present study seeks to provide a balanced and critical scientific analysis of the role of electronic educational platforms as a mechanism for enhancing academic

achievement. It does so by examining the justifications for their implementation and analyzing the obstacles that hinder their effectiveness. This contributes to enriching educational literature and offers an evidence-based perspective to support policymakers and researchers in optimizing the use of these platforms.

The significance of this study lies in its focus on a contemporary issue directly related to educational quality and outcomes. Its importance can be understood from both theoretical and practical perspectives.

From a theoretical standpoint, this study contributes to expanding the conceptual framework related to educational platforms, e-learning, and academic achievement by offering a critical analysis of recent educational literature. It also addresses a notable gap by linking the justifications for using educational platforms with the challenges associated with their implementation and their impact on academic achievement, an area that has not been sufficiently explored in previous studies.

From a practical perspective, the findings of this study provide valuable insights for educational policymakers in developing more effective e-learning policies. They also assist educational institutions in diagnosing challenges associated with the use of educational platforms and proposing practical solutions. Furthermore, the study guides teachers toward more effective use of these platforms, thereby positively influencing student achievement and supporting efforts to enhance educational quality in the context of digital transformation.

Research Problem

Despite the substantial expansion in the use of electronic educational platforms across both Arab and global educational institutions, this growth has not always been accompanied by a measurable improvement in academic achievement. This raises fundamental questions regarding the actual effectiveness of these platforms and the extent of their contribution to improving learning outcomes.

A review of the educational literature reveals considerable inconsistency in findings related to the impact of educational platforms on academic achievement. Some studies focus primarily on the technical aspects of these platforms and emphasize their role in facilitating access to content, while neglecting the pedagogical and strategic dimensions related to their effective integration in promoting deep learning and meaningful achievement (Al-Hosani, 2021).

Moreover, many studies treat educational platforms as neutral technological tools, without sufficient consideration of the educational contexts in which they are implemented or the human, administrative, and organizational barriers that may limit their effectiveness. There is also a notable lack of comprehensive critical analyses that connect the rationale for adopting educational platforms with the challenges of implementation and their direct impact on academic achievement, particularly in Arab educational environments characterized by varying levels of digital readiness.

Although significant efforts have been made to advance e-learning following the COVID-19 pandemic, practical applications in many institutions reveal a superficial reliance on

educational platforms. This often involves merely transferring traditional content into digital environments without pedagogical redesign or adequate training for teachers and learners, thereby limiting the effectiveness of these platforms in enhancing academic achievement (Salama, 2021).

Accordingly, the problem of the present study lies in the need for a systematic and scientific analysis of the role of electronic educational platforms as a mechanism for improving academic achievement. This involves identifying the justifications for their adoption, analyzing the obstacles that hinder their effectiveness, and addressing the following central research question:

To what extent do electronic educational platforms contribute to improving academic achievement, what justifies their adoption, and what are the key challenges that limit their effectiveness in contemporary educational contexts?

Research Objectives

This study aims to achieve the following objectives:

To analyze the pedagogical role and effectiveness of electronic educational platforms in enhancing learners' academic achievement within the context of digital transformation.

To identify the key pedagogical, technological, and social factors influencing the adoption and effective use of educational platforms, including the challenges that limit their impact.

To provide a critical, evidence based perspective that examines the relationship between educational platforms and academic achievement while contributing to the development of Arabic educational literature in this field.

Theoretical Framework

First: Academic Achievement

Concept of Academic Achievement

Academic achievement is a central concept in educational sciences and serves as a key indicator of the effectiveness and quality of the educational process. It refers to the extent to which learners acquire knowledge, skills, and values as a result of structured educational experiences. It is typically measured using various assessment tools, such as achievement tests, assignments, and projects (Al-Assaf, 2016).

With the shift toward digital education, academic achievement is no longer limited to the recall of information. It now encompasses deeper understanding, application of knowledge, problem-solving, and interaction with learning content. Recent studies indicate that achievement in digital learning environments is more closely associated with levels of interaction and instructional design quality than with the mere quantity of information (Salama, 2021; Anderson, 2019).

Determinants of Academic Achievement

Academic achievement is influenced by several interrelated factors, including:

Individual factors: such as motivation, cognitive abilities, and self-regulated learning skills. Learners with strong self-regulation tend to achieve higher outcomes in digital environments (Zimmerman, 2020).

Pedagogical factors: including teaching methods, content quality, and assessment strategies.

Active learning approaches implemented through educational platforms have been shown to enhance achievement (Anderson, 2019).

Technological factors: such as the availability of digital infrastructure, platform usability, and design quality. Weak technological infrastructure can significantly limit the effectiveness of e-learning (OECD, 2021).

Socio-economic factors: including family support and home learning environments. The digital divide continues to affect learning opportunities and achievement levels, particularly in resource-limited contexts (UNESCO, 2023).

Second: Academic Achievement in Digital Learning Environments

The expansion of e-learning has redefined the concept of academic achievement, linking it closely to levels of interaction and participation within digital learning environments. Research indicates that educational platforms contribute to deeper understanding, increased learner motivation, and the development of critical thinking and problem-solving skills.

A study by Al-Hamadi (2020) found that platforms incorporating interactive instructional design achieve higher levels of academic performance compared to those limited to content delivery. Additionally, the connectivism theory proposed by Siemens (2005) emphasizes that learning in the digital age is based on building knowledge networks and engaging with diverse sources of information, elements that are effectively supported by modern educational platforms.

Electronic Educational Platforms

Concept of Educational Platforms

Electronic educational platforms refer to integrated digital environments used to deliver, manage, and facilitate interaction around educational content عبر الإنترنت. They are defined as web-based systems designed to manage learning processes, provide content, and enable interaction among participants in the educational process (Abdul Naeem, 2016).

In contemporary educational contexts, these platforms are no longer مجرد tools for content delivery, but comprehensive learning environments that integrate pedagogical and technological dimensions. Anderson (2019) emphasizes that educational platforms play a central role in digital learning systems by combining content delivery, interaction, and assessment.

Characteristics of Effective Educational Platforms

The effectiveness of educational platforms depends on several key characteristics, including:

Interactivity: enabling communication between learners, instructors, and content, which is positively associated with higher academic achievement (Salama, 2021).

Flexibility and accessibility: allowing learners to access content anytime and anywhere, thereby expanding learning opportunities (UNESCO, 2023).

Personalized learning: addressing individual differences through the analysis of learner data (OECD, 2021).

Immediate feedback: helping learners identify and correct errors, leading to continuous improvement (Al-Hamadi, 2020).

Pedagogical Foundations of Educational Platforms

Educational platforms are grounded in several modern learning theories, including:

Constructivist theory: emphasizing the learner's active role in constructing knowledge through interaction.

Social learning theory: focusing on learning through observation and interaction with others.

Connectivism theory (Siemens, 2005): highlighting the importance of building knowledge networks in the digital age.

Multimedia learning theory: emphasizing that integrating text, images, and audio enhances understanding and retention (Al-Ali, 2020).

The Role of Educational Platforms in Enhancing Academic Achievement

Numerous studies indicate a positive relationship between the use of educational platforms and academic achievement, particularly when these platforms are implemented within an effective instructional design framework. Educational platforms contribute to:

Improving comprehension and understanding through the integration of multimedia elements and continuous interaction with learning content (Al-Ali, 2020).

Developing self-directed learning skills by enabling learners to organize their learning according to their individual needs and pace.

Enhancing learning motivation as a result of diverse learning activities, continuous assessment, and immediate feedback (Salama, 2021).

Addressing individual differences in learners' abilities and learning styles, thereby reducing achievement gaps (OECD, 2021).

Educational Platforms and Achievement among Special Groups

Recent studies suggest that educational platforms provide supportive learning environments for special groups, including learners with disabilities and non-native speakers of Arabic.

In inclusive education contexts, these platforms allow content to be presented in multiple formats, offer control over learning pace, and incorporate assistive technologies. Such features contribute significantly to improving academic achievement among learners with special needs (Al-Hafnawi, 2017; Al-Shamsi, 2022).

In the field of teaching Arabic as a second or foreign language, research has demonstrated that educational platforms enhance language proficiency through interactive activities and continuous feedback mechanisms (Al-Otaibi, 2022; Al-Ali, 2020).

Challenges in the Use of Educational Platforms

Despite their numerous advantages, the implementation of educational platforms faces several challenges, including:

Technical challenges, such as weak digital infrastructure and slow internet connectivity.

Human-related challenges, particularly limited digital competencies among some teachers and students (Abdullah, 2020).

Pedagogical challenges, resulting from inadequate instructional design of digital content (Salama, 2021).

Organizational challenges, including the absence of clear policies and insufficient institutional support for e-learning implementation (Al-Assaf, 2016).

Research Methodology

This study adopts the descriptive-analytical approach, which is well suited to the nature and objectives of the research. This approach is widely used in educational studies that aim to describe, analyze, and interpret educational phenomena in light of existing literature. It involves systematically collecting data from diverse sources and analyzing it in a structured scientific manner to reach conclusions that enhance understanding of the phenomenon without directly manipulating its variables (Creswell, 2014).

The descriptive-analytical method was employed to examine recent Arab and international studies addressing electronic educational platforms, e-learning, and academic achievement. The analysis focused on research published between 2019 and 2024 to ensure the relevance and timeliness of the reviewed literature in light of rapid developments in digital education. Additionally, a comparative analysis of previous studies was conducted to identify similarities and differences in findings and to explain variations in results based on differences in educational contexts, types of platforms used, and pedagogical implementation strategies.

General Findings of the Study

Based on the theoretical analysis and review of previous studies, several key conclusions can be drawn:

Educational platforms represent an effective instructional mechanism for improving academic achievement, provided they are implemented within a clear pedagogical and strategic framework.

The effectiveness of educational platforms depends not only on technology but also on the quality of instructional design, teacher competence, and the level of interaction within the learning environment.

Technical, human, and pedagogical barriers constitute significant challenges that limit the expected impact of educational platforms, particularly in Arab educational contexts.

Educational platforms provide equitable learning opportunities for special groups, including learners with disabilities and non-native Arabic speakers, thereby enhancing their academic achievement.

There is a pressing need for empirical and field-based studies to measure the actual impact of educational platforms on academic achievement in Arab contexts.

Conclusion

This study concludes that electronic educational platforms represent a central component of digital transformation in education and a promising mechanism for enhancing academic achievement amid contemporary challenges faced by educational systems. The findings demonstrate that these platforms contribute to creating interactive learning environments, supporting self-directed learning, and increasing learner motivation, all of which positively influence learning outcomes.

However, the study also emphasizes that the effectiveness of educational platforms is not automatically achieved. It requires a comprehensive pedagogical vision, strategic planning, capacity building for educators, and the development of high-quality digital content that reflects cultural and educational contexts. Addressing technical, administrative, and human-related challenges is essential to maximizing the impact of these platforms on academic achievement.

Recommendations

In light of the study's findings, the following recommendations are proposed:

Adopting clear educational policies that support the effective integration of educational platforms as a mechanism for improving academic achievement.

Prioritizing teacher training in digital instructional design, rather than focusing solely on technical platform use.

Developing high-quality Arabic digital content that reflects cultural and linguistic specificity.

Promoting the use of educational platforms in teaching learners with special needs, in accordance with principles of inclusive and universal access.

Encouraging the conduct of empirical and experimental studies to measure the actual impact of educational platforms on academic achievement in Arab educational contexts.

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