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Key Factors Influencing the Increased Use of Artificial Intelligence Tools Among Students at Albukhary International University

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Abstract

The rapid integration of Artificial Intelligence (AI) technologies in higher education has significantly influenced students' learning practices, prompting increased reliance on AI-based academic tools. This study aims to analyze the key factors contributing to the growing use of AI tools among students at Albukhary International University. The research employed a qualitative, literature-based approach, using descriptive and content analysis methods to review relevant scholarly publications on AI adoption in higher education. The findings indicate that three major factors drive students' use of AI tools: intensified academic workload and performance pressure, widespread digital accessibility and institutional technological integration, and the need for linguistic and cognitive support within an international academic environment. These factors collectively create structural conditions that encourage students to integrate AI technologies into their academic activities, particularly for writing assistance, information processing, and problem-solving tasks. The study concludes that the increasing use of AI tools among university students is not merely a technological trend but a response to academic, institutional, and learner-related demands in contemporary higher education. The findings imply that universities need to develop clear academic policies and support systems to ensure the responsible and ethical use of AI technologies while maintaining academic integrity and meaningful learning outcomes.

Keywords: Artificial intelligence in education, academic workload, digital learning environment, educational technology, technology adoption.

INTRODUCTION

Artificial Intelligence (AI) refers to computer-based systems capable of performing tasks that typically require human intelligence, such as learning, reasoning, language processing, and problem-solving (Russell & Norvig, 2021). In higher education, AI tools include intelligent tutoring systems, automated writing assistants, learning analytics platforms, and generative language technologies that help students complete academic tasks. The integration of these tools into university learning environments represents a significant transformation in how students engage with academic content, manage coursework, and interact with institutional systems.

Recent data indicate a rapid increase in the adoption of AI technologies among university students worldwide. According to EDUCAUSE (2023), more than 60% of higher education students report using AI-based tools for academic purposes, reflecting a substantial increase compared to pre-2020 levels. This trend has been accelerated by the expansion of digital learning infrastructures and the normalization of technology-mediated education following the COVID-19 pandemic (OECD, 2021). However, while the prevalence of AI usage is well documented, understanding the underlying drivers of this phenomenon remains a critical area of inquiry.

Previous research has identified several key factors influencing students' adoption of educational technologies. Bond et al. (2021) found that students are more likely to adopt digital tools when they perceive them as effective in managing academic workload and improving learning efficiency. Similarly, Selwyn (2020) emphasizes that technology adoption in higher education is often shaped by institutional structures, including the availability of digital infrastructure and policy support, rather than purely by students' interest in innovation. In addition, other studies highlight that students frequently utilize AI-based tools, particularly writing assistants and translation technologies, to overcome linguistic challenges and enhance academic performance in multilingual contexts. These findings suggest that AI usage is closely linked to practical academic needs, institutional conditions, and individual learner characteristics.

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Despite these insights, prior studies tend to examine these factors in isolation or within generalized higher education contexts, with limited attention to how they interact simultaneously in specific institutional settings, particularly in international universities with diverse student populations. Furthermore, there remains a lack of focused analysis on how academic pressure, digital accessibility, and linguistic-cognitive needs collectively shape students' reliance on AI tools. This gap indicates the need for a more integrative and context-specific investigation.

Addressing this gap is particularly important at Albukhary International University, where students operate in a multilingual academic environment characterized by high academic expectations and strong technological integration. Understanding the combined influence of structural, technological, and individual factors is essential to provide a more comprehensive explanation of AI adoption in such contexts. Accordingly, this article offers a novel perspective by examining the interconnected roles of academic workload and performance pressure, institutional digital accessibility, and students' linguistic and cognitive support needs in shaping AI tool usage. By situating these factors within a specific international university context, this study contributes to a more nuanced understanding of why students increasingly rely on AI in higher education.

MATERIALS AND METHODS

Time and Place

This study was conducted between January and March 2026. The research did not involve a specific physical field location because it relied on secondary data sources and scholarly literature. The analytical process was carried out through systematic identification and review of relevant academic publications discussing the use of Artificial Intelligence (AI) tools in higher education contexts, particularly those related to student learning behaviors and academic environments.

Research Design

This study employed a qualitative literature-based research design using a descriptive-analytical approach. Literature review research aims to synthesize existing scholarly works to identify patterns, theoretical perspectives, and empirical findings relevant to a specific research problem (Snyder, 2019). Through this approach, the study analyzed prior research, theoretical frameworks, and institutional reports on the adoption of Artificial Intelligence tools in higher education. The descriptive-analytical method was applied to interpret and organize findings from various sources to explain the underlying factors influencing students' use of AI tools. This method allows researchers to develop conceptual explanations based on accumulated academic evidence rather than primary empirical data (Creswell & Creswell, 2018).

Population and Sample

The subject of this study consists of scholarly publications that discuss Artificial Intelligence in higher education, student technology adoption, and digital learning environments. These publications include peer-reviewed journal articles, academic books, institutional reports, and international research outputs that are relevant to the research focus. The objective of this study is to analyze factors influencing students' use of AI tools in higher education contexts. Specifically, this study examines three main aspects: academic workload and performance pressure, digital accessibility and institutional technological integration, and linguistic and cognitive support needs in international academic environments.

In conducting the study, the researcher selects relevant sources using purposive criteria, including relevance to the research topic, the publication's credibility, and its contribution to understanding AI adoption among university students (Etikan, Musa, & Alkassim, 2016). The researcher collects data through documentation by reviewing academic databases, including Google Scholar, Scopus-indexed journals, and institutional publications. To support the analysis process, the researcher uses a literature review matrix as the research instrument to organize, classify, and synthesize the selected sources.

Research Procedure

The research procedure consisted of several systematic stages. First, the researcher identified the research problem related to the increasing use of AI tools among university students. Second, relevant academic literature was searched and collected from credible academic databases using keywords such as "Artificial Intelligence in higher education," "AI tools in learning," and "student technology adoption." Third, the collected literature was screened and selected based on relevance, publication credibility, and thematic alignment with the research focus. Fourth, the selected sources were analyzed and categorized according to the major factors influencing AI adoption. Finally, the findings were synthesized to construct a comprehensive explanation of the structural, institutional, and learner-related factors contributing to the increased use of AI technologies in higher education.

Data Analysis Techniques

Data analysis was conducted using qualitative content analysis techniques. Content analysis enables researchers to systematically interpret textual data by identifying recurring themes, concepts, and patterns across multiple sources (Krippendorff, 2018). In this study, the analysis involved coding relevant information from the selected literature, grouping similar ideas, and categorizing them into broader thematic factors influencing AI usage among students. The analytical process followed three main stages: data reduction, data organization, and interpretation. Through these steps, key themes such as academic pressure, digital accessibility, and linguistic support needs were identified and analyzed to explain their relationship with AI adoption in higher education contexts. The analysis was conducted manually through structured literature matrices to ensure systematic interpretation of the reviewed sources.

RESULTS AND DISCUSSION

Result

This study analyzed scholarly sources using the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) framework to ensure a transparent and systematic selection process. The selected studies form the basis for identifying the key factors influencing students' use of Artificial Intelligence (AI) tools in higher education contexts.

Academic Workload and Performance Pressure

The findings indicate that academic workload and performance pressure are among the main factors driving the increasing use of Artificial Intelligence (AI) tools by students at Albukhary International University. Students face demanding academic requirements, including continuous assessments, research-based assignments, and frequent analytical writing tasks. These academic conditions increase both cognitive and time-related pressures, encouraging students to seek technological assistance to manage complex academic tasks more efficiently.

In response to these pressures, students increasingly utilize AI-based tools to support various academic activities. AI-powered applications are commonly used for writing assistance, information summarization, idea organization, and problem-solving tasks. These tools allow students to complete assignments more efficiently while maintaining the required academic standards.

The findings also show that the use of AI tools is closely associated with the need to manage time constraints and academic expectations. Many students rely on AI technologies to complete multiple assignments within limited timeframes. As a result, AI tools become practical resources that help students navigate demanding academic workloads. The results demonstrate that an intensified academic workload and performance expectations encourage students to integrate AI technologies into their learning processes. AI tools serve as supportive tools that help students manage academic responsibilities and complete complex tasks more effectively.

Digital Accessibility and Institutional Technological Integration

The findings reveal that digital accessibility and institutional technological integration are other important factors influencing the increased use of Artificial Intelligence (AI) tools among students at Albukhary International University. The learning environment at the university is characterized by extensive digital infrastructure, including online learning platforms, cloud-based academic resources, and stable internet connectivity, which facilitate students' access to digital technologies.

Students operate in a technology-rich academic environment where various digital tools are commonly used to support learning activities, including accessing course materials, submitting assignments, conducting research, and communicating with lecturers. Within this digital ecosystem, AI-based tools are readily accessible resources that students can use to assist with academic tasks.

The results also indicate that the availability of AI tools through web-based platforms and mobile applications enables students to access academic support quickly and conveniently. Students frequently use these tools for tasks such as generating ideas, organizing written content, summarizing information, and improving the clarity of their academic writing.

Additionally, the widespread use of online learning systems has increased students' familiarity with digital technologies. As a result, AI tools are increasingly perceived as practical extensions of existing digital learning practices rather than entirely new technologies. The findings demonstrate that the availability of digital infrastructure, combined with the accessibility of AI-powered platforms, creates favorable conditions that encourage students to incorporate AI tools into their academic activities.

Linguistic and Cognitive Support Needs in an International Academic Environment

The findings indicate that linguistic and cognitive support needs represent another important factor influencing the increasing use of Artificial Intelligence (AI) tools among students at Albukhary International University. As an international university, the institution hosts students from diverse linguistic and cultural backgrounds, many of whom are required to conduct their academic activities in English. Students often encounter challenges with academic writing, comprehension of complex academic texts, and expressing structured arguments in English. These linguistic challenges encourage students to seek technological assistance to meet academic communication standards.

The results also show that students frequently utilize AI-based language tools to support their academic work. These tools are commonly used for grammar checking, paraphrasing, summarizing information, and improving the clarity and coherence of academic writing. Through these features, AI applications help students refine their written assignments and ensure that their work aligns with expected academic conventions.

In addition to language-related challenges, students also face cognitive demands associated with university-level study. Tasks such as synthesizing information from multiple sources, organizing ideas logically, and interpreting theoretical concepts require higher-order thinking skills. Many students use AI tools to assist with idea generation, content structuring, and conceptual clarification when engaging with complex academic materials.

Furthermore, the availability of on-demand AI assistance provides students with immediate support when working independently. As a result, AI tools are increasingly used as practical resources that help students overcome linguistic and cognitive difficulties encountered in their academic activities. The findings demonstrate that linguistic and cognitive challenges in an international academic environment significantly contribute to students' reliance on AI-based tools to support their learning.

Discussion

Academic Workload and Performance Pressure as a Driver of AI Adoption

The findings suggest that academic workload plays a critical role in shaping students' adoption of AI technologies. In contemporary higher education environments, universities increasingly emphasize continuous assessment systems, research-based learning, and competitive academic performance. These conditions significantly increase students' cognitive and temporal demands.

Previous studies support this interpretation. Research by Liu et al. (2022) found that students experiencing higher levels of academic stress were significantly more likely to adopt AI-based tools for writing, data processing, and study organization. These tools help students manage academic responsibilities more

efficiently, particularly during intensive academic periods such as midterm examinations and final assessments.

This phenomenon can also be explained through cognitive load theory, which suggests that learners seek external support mechanisms when task demands exceed their cognitive capacity (Sweller, Ayres, & Kalyuga, 2019). AI tools serve as cognitive scaffolding systems that help students organize information, structure arguments, and process complex academic materials.

Furthermore, institutional academic cultures may reinforce students' reliance on technological support. Universities often prioritize measurable academic outcomes such as grade point averages, research productivity, and employability indicators (Bond et al., 2021). According to Selwyn (2020), such environments reflect broader performance-oriented trends in higher education that encourage efficiency and productivity. Within this context, students may perceive AI tools not merely as optional learning aids but as essential instruments for meeting academic expectations.

In addition, social learning dynamics may contribute to the normalization of AI tool usage among students. Studies indicate that students are more likely to adopt digital technologies that are commonly used or recommended within their peer networks and academic communities (Alammary et al., 2022). This social influence further reinforces the integration of AI tools into everyday academic practices. Taken together, these findings suggest that students' use of AI technologies is not solely driven by technological curiosity but rather emerges as an adaptive response to structural academic pressures within modern higher education systems.

Digital Accessibility as an Enabler of AI Adoption in Higher Education

The findings highlight the critical role of digital accessibility in facilitating students' adoption of AI technologies in higher education. In digitally advanced academic environments, the availability of technological infrastructure significantly influences how students engage with emerging educational technologies.

This phenomenon can be explained through the Technology Acceptance Model (TAM), which posits that users are more likely to adopt technological systems when they perceive them as useful and easy to use (Davis, 1989). In the context of AI tools, accessibility through familiar digital platforms—such as learning management systems, academic databases, and web-based writing assistants—reduces barriers to adoption and encourages students to integrate these tools into their learning routines.

Previous research supports this interpretation. Studies indicate that students are more likely to adopt AI-based academic tools when such technologies are embedded within institutional digital ecosystems (Salloum et al., 2023). The integration of AI features within digital learning platforms increases students' exposure to these technologies and contributes to their normalization in academic practices.

Furthermore, the rapid expansion of digital learning environments during and after the COVID-19 pandemic has accelerated students' reliance on technology-mediated learning. The shift toward online and hybrid learning models has familiarized students with digital tools for communication, research, and academic collaboration (OECD, 2021). Within this context, AI technologies are often perceived as natural extensions of existing digital learning practices rather than disruptive innovations.

Economic accessibility also plays a supporting role in the widespread adoption of AI tools. Many AI-based academic applications operate using freemium or low-cost service models, making them accessible to a broad range of students. According to Holmes, Bialik, and Fadel (2022), affordability and ease of access significantly influence sustained engagement with AI technologies in higher education environments.

Additionally, institutional digital cultures help shape students' attitudes toward technological innovation. Universities that emphasize digital literacy and technological competence as core academic skills tend to foster more positive perceptions of AI technologies among students (Bond et al., 2021). In such environments, the use of AI tools becomes part of a broader culture of digital learning and innovation.

Linguistic and Cognitive Challenges as Drivers of AI Tool Usage

The findings highlight the important role of linguistic and cognitive support needs in shaping students' adoption of AI technologies within international higher education contexts. In universities that attract students from diverse linguistic backgrounds, academic communication in English often becomes a significant challenge.

Previous research indicates that second-language learners frequently experience difficulties in academic writing, comprehension of complex texts, and the articulation of critical arguments (Hyland, 2019). These challenges can increase students' cognitive load and motivate them to seek technological tools that assist in managing language-related academic tasks.

Empirical studies support this interpretation. Research by Lee and Briggs (2021) shows that non-native English-speaking students are more likely to rely on AI-powered language tools such as grammar checkers, paraphrasing systems, and automated writing assistants to meet academic language expectations. These technologies provide immediate feedback and linguistic scaffolding that help students refine their academic writing.

From a cognitive perspective, the use of AI tools can also be explained through cognitive load theory. When learners face complex academic tasks that exceed their available cognitive resources, they tend to use external support systems to aid their learning (Sweller, Ayres, & Kalyuga, 2019). AI technologies can therefore function as cognitive aids that help students structure ideas, organize information, and interpret complex academic materials.

The internationalization of higher education further intensifies these challenges. Global universities often operate within standardized academic conventions that may be unfamiliar to students from diverse educational backgrounds (Altbach, Reisberg, & Rumbley, 2019). As a result, students adopt adaptive strategies to bridge these gaps, including using AI-based tools to improve clarity, coherence, and adherence to academic writing conventions.

In addition, limitations in institutional academic support services may contribute to students' reliance on AI technologies. While universities commonly provide writing centers and academic workshops, access to personalized assistance may be constrained by time and availability. AI tools provide continuous, on-demand support, enabling

students to receive immediate feedback during independent study (Holmes, Bialik, & Fadel, 2022).

These findings suggest that the increasing use of AI tools among international students reflects broader structural conditions within contemporary higher education systems. AI technologies serve as accessible tools that help students navigate linguistic and cognitive challenges associated with studying in multilingual, academically demanding environments.

CONCLUSION

This study identifies three primary factors driving the increased use of Artificial Intelligence (AI) tools among students at Albukhary International University. First, academic workload and performance pressure encourage students to utilize AI tools to manage time constraints, cognitive demands, and complex academic tasks. Second, digital accessibility and institutional technological integration facilitate and normalize the use of AI within academic environments. Third, linguistic and cognitive support needs, particularly in multilingual and international contexts, lead students to rely on AI tools to enhance academic writing, comprehension, and higher-order thinking. These findings demonstrate that AI adoption among students is shaped by interconnected academic, institutional, and individual factors rather than merely technological advancement.

The findings imply that higher education institutions need to develop balanced policies that integrate AI use with academic integrity and meaningful learning outcomes. Institutions should strengthen digital literacy programs and provide clear ethical guidelines to ensure responsible AI usage. However, this study is limited to a literature-based analysis and does not include empirical data from students' direct experiences, which may limit contextual depth. Therefore, future research is recommended to incorporate empirical approaches, such as surveys or interviews, to validate and expand these findings across diverse institutional settings.

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AUTHOR CONTRIBUTION

Table of Author Contributions

Contribution Indicator	Author		
	1	2	3
Conceptualization	✓		✓
Literature Review		✓	
Research Design / Methodology		✓	✓
Instrument Development	✓		✓
Data Collection	✓	✓	✓
Data Curation		✓	
Formal Analysis	✓		✓
Data Interpretation	✓	✓	
Writing – Original Draft	✓		
Writing – Review & Editing		✓	✓
Visualization / Tables		✓	
Supervision	✓	✓	✓

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