

The Effects of Using Artificial Intelligence Technologies (AIT) on Irbid National University (INU) Students and Faculty Members (FM)

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Abstract

This study aimed to explore the impact of using Artificial Intelligence (AI) technologies at Irbid National University in Jordan on students and faculty members from the perspectives of faculty members. A descriptive-analytical approach was employed. Data were collected through an electronic questionnaire adapted to the Jordanian context and administered to a random sample of 129 faculty members from scientific and humanities colleges. The questionnaire included demographic variables (gender and college type) and two domains addressing the impact of AI technologies on students and faculty members. Data were analyzed using SPSS (version 24). The results indicated that the use of AI technologies had a high level of impact on both students and faculty members. No statistically significant differences were found based on gender or college type, except for a significant difference in favor of scientific colleges. The study recommended providing training programs for both students and faculty members to enhance their competence in using AI applications.

Keywords: Artificial Intelligence (AI), Technology, Faculty Members (FM), Irbid National University (INU).

أثر استخدام تقنيات الذكاء الاصطناعي على الطلبة وأعضاء هيئة التدريس في جامعة إربد الأهلية

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الملخص

هدفت الدراسة إلى استكشاف أثر استخدام تقنيات الذكاء الاصطناعي في جامعة إربد الأهلية في الأردن على الطلبة وأعضاء هيئة التدريس من وجهة نظر أعضاء هيئة التدريس، باستخدام المنهج الوصفي التحليلي. تم جمع البيانات من خلال استبانة إلكترونية طبقت على عينة عشوائية مكونة من (129) عضو هيئة تدريس من الكليات العلمية والإنسانية. أظهرت النتائج أن لاستخدام تقنيات الذكاء الاصطناعي أثراً مرتفعاً على الطلبة وأعضاء هيئة التدريس، مع عدم وجود فروق دالة إحصائية تعزى لمتغيري الجنس ونوع الكلية، باستثناء فروق لصالح الكليات العلمية. وأوصت الدراسة بضرورة توفير برامج تدريبية لتعزيز كفاءة الطلبة وأعضاء هيئة التدريس في استخدام تطبيقات الذكاء الاصطناعي.

الكلمات المفتاحية: الذكاء الاصطناعي، تكنولوجيا، أعضاء هيئة التدريس، جامعة إربد الأهلية.

Introduction

Over the past few decades, the world has witnessed rapid developments in all fields, especially in technology. Among these developments are those in the field of Artificial Intelligence (AI). Technological changes have a rapid impact on all aspects of life. For example, the number of ChatGPT users reached 100 million worldwide just three months after its launch in November 2022, with a large percentage of them being university students (Hu, 2023). Higher education's future is closely linked to technology development; AI applications have become an integral part of our daily lives, including education. The educational applications of AI have increased dramatically over the past few years. Due to advances in AI, new possibilities and challenges have emerged in teaching at higher education institutions (Holmes et al., 2021; Pardamean et al., 2022; Rodríguez-Hernández et al., 2021).

The adoption of AI in higher education systems is one of the most significant technological changes in teaching and learning systems. From knowledge transfer to its assessment, it has revolutionized the delivery and consumption of knowledge. However, this technological revolution poses various challenges that require careful consideration to ensure optimal teaching. The use of AIT in institutions of higher education has transformed students' roles, enabling them to become active learners who acquire knowledge independently by searching for and interpreting data (Alhawery & Aljamali, 2021; McDonald et al., 2025).

Adopting AI in education presents an opportunity for higher education instructors to enhance their skills, streamline their tasks, and increase their productivity. It enables them to focus on creating educational content for their lectures from a diverse range of sources. It also facilitates student assessment by electronically marking assignments, analyzing student errors, and automatically conducting personalized analysis of student weaknesses, reducing their effort and workload. Furthermore, students can utilize AIT to collect academic materials and develop personalized learning plans, making the learning process more organized and systematic, thereby improving learning outcomes (Niu, 2024). The use of AIT in the education field enables accurate and individualized tracking of each student's academic progress. It also enables each student to identify their strengths and weaknesses. Furthermore, it enables each student to participate actively in the learning process. Furthermore, the use of AIT enables the assessment of each student's skills by providing personalized adaptive tests (Alhawery & Aljamali, 2021).

AI applications in higher education institutions have also revolutionized teaching and learning methods through complex and diverse student-centered applications. They provide unique learning experiences for students. Learning platforms utilize sophisticated analytics to process vast amounts of information about student activities and provide targeted feedback on their learning progress. They track course completion, achievement of expected learning outcomes, time commitments, and ongoing assessments. Through this, these systems adapt learning processes to reflect individual and group learning rates of students (McDonald et al., 2025; Popenici & Kerr, 2017). Automated assessment systems are another significant achievement in integrating AI into higher education institutions. These systems utilize intelligent programs, such as machine learning algorithms, to assess student work in various ways, ranging from simple multiple-choice systems to comprehensive writing assignments

that include passing grades. The use of this technology has evolved to the point where it can provide comprehensive feedback on writing style and technical details. In many cases, assessment is more consistent than human assessment. This automation has changed the role and expectations of teachers, shifting from performing a large number of routine assessment tasks to providing effective and continuous instruction that fosters personal reflection and guidance. AI tools have the potential to revolutionize higher education by providing personalized learning support for students, enhancing creativity and collaboration, offering tutoring, assisting with language assignments, streamlining research and writing processes, developing programming and data analysis skills more efficiently, and supporting students' ongoing learning. AI tools also play a significant role in enhancing the overall quality and effectiveness of higher education (Chan & Hu, 2023; Jingwei He et al., 2025; Kartal, 2024; Lingard, 2023; Papyshv, 2024; Raman et al., 2024; Rawas, 2023; Vujinović et al., 2024).

Using AIT lets each student identify their achievement level, strengths, mistakes and weaknesses by providing honest feedback. Furthermore, AIT enables teachers to take individual differences into account when providing innovative tutoring services. This is because using AIT provides teachers with access to records of each student's achievements and learning needs. The use of AIT also empowers teachers to effectively assess students' skills, as these AIT provide students with personalized tests to achieve this goal. They also provide each student with academic material tailored to their learning needs, weaknesses, and strengths (Alhawery & Aljamali, 2021). The use of AIT enables students and teachers to communicate effectively. For example, message translation allows students to access academic references related to their subject of study. It also provides them with access to popular libraries, electronic databases and journals. It can also be used to access academic curricula, as it enables teachers to access materials easily (Aljeraisy, 2023). AIT can be used to solve complex questions related to the subject. Students can also use it to engage in purposeful educational activities, making the learning process fun and engaging for students and motivating them to learn. AIT can be used to automatically correct students' work and detect errors in their writing and projects (Aljeraisy, 2023). The use of AIT also enables students to address academic issues, as it can diagnose academic problems, thereby contributing to the improvement of the quality of education provided.

The use of AIT enables students to employ a variety of learning methods, instead of relying on a single method. It also enables each student to learn according to a learning style that suits their individual needs (Alatal et al., 2021). Additionally, AI enables students to automatically edit assignments to ensure compliance with grammar rules, as editing text programs. It also improves students' time management skills and study, as some AITs offer training programs to develop these skills. It also provides students with answers to their inquiries, connecting them to relevant resources such as books, magazines, search engines, and databases. It also enables them to enrich their vocabulary, providing information derived from electronic dictionaries (Mohammad, 2023). Intelligent tutoring systems are also being used effectively to compensate students for what they miss during formal instruction outside of class time. These advanced platforms use self-learning AIT to develop educational courses that closely resemble face-to-face teaching. These systems are available to students 24/7 and

can communicate with them, explain concepts, solve problems, and provide information on the most complex questions that may arise (McDonald et al., 2025; Sajja et al., 2024).

The use of AIT enables teachers to track each student's progress, assess their achievement levels, and recognize their learning needs. This is credited to the logical capabilities of AIT. Additionally, AIT enables teachers to select effective teaching and learning strategies by providing them with insights into which strategies are most effective. AI also provides teachers with summaries of curricula, eliminating the need to read lengthy textbooks and saving time (Alhawery & Aljamali, 2021).

In general, AI has varied usage in institutions of higher education. For example, it can be used to offer students innovative educational services, eliminating the need to hire faculty assistants. It can be used to provide students and faculty with summaries of long academic materials, saving the time and effort required to read long texts. Furthermore, AIT can tailor academic materials to each student's learning needs in a personalized manner, saving the effort required to modify each course based on the student's profile and requirements (Alhawery & Aljamali, 2021).

some studies revealed this topic as the study which conducted by Asghr et al. (2025) explored the effectiveness of AI-based tools on the problem-solving skills of higher education students. The AI tool was developed as a motivational tool to enhance students' real-world problem-solving skills. The study examined how AI-based motivation enhances critical thinking and logical reasoning abilities, and it revealed its effectiveness in improving problem-solving skills. A stratified sample of 300 female undergraduate students from Pakistani universities majoring in computer science, social sciences, languages, and sciences was selected. The results showed that integrating AI tools into teachers' teaching practices improved student learning outcomes.

Khadragy et al. (2024) conduct a study in the United Arab Emirates aimed to explore the impact of using AIT in higher education institutions on faculty and students. The study used an electronic questionnaire distributed to FM at eight universities affiliated with the Ministry of Higher Education in the United Arab Emirates, adopting an analytical and descriptive approach. The use of AIT in higher education universities in the United Arab Emirates has been shown to have a positive impact on students and FM. Students' use of AIT fosters the development of critical thinking, research, and time management skills.

In a study conducted by Daradkah et al. (2023), the benefits of employing AI applications in the university educational environment were explored from the perspectives of students enrolled in the Higher Diploma in School Administration program at Ajloun National University in Jordan. The researchers employed a descriptive-analytical approach, and the study sample consisted of 81 students. The results showed that participants expressed positive attitudes toward the use of AI in university education, as these applications contributed to developing critical thinking and research skills, enhancing students' motivation to learn, improving communication between teachers and students, fostering collaboration, reducing reliance on traditional curricula as the sole source of knowledge, and providing appropriate and adequate educational opportunities for students with special needs.

On other hand, Abu Swaireh et al. (2022) conduct a study to explore the effectiveness of an electronic instruction unit on AI in developing students' skills in programming among

female 9th-grade students in Gaza. The sample consisted of (31) ninth-grade female students selected from Al-Aishiya Basic School for Girls in Gaza. A quasi-experimental pre-test and post-test approach was used. Teaching the proposed unit was found to have a significant positive impact on the development of students' programming skills among the study sample.

The study by Alhawery and AlJamali (2021) examined the role of AI in enhancing the academic empowerment of primary school students in the Republic of Yemen, from the perspective of facilities management at Sana'a University. The researchers employed a descriptive approach and surveyed the opinions of 23 university facilities management staff members. A questionnaire was designed covering four areas: teachers, students, smart content, and intelligent systems. The results showed that AI helped students identify their level of achievement and the mistakes they made, and also provided opportunities for academic discussion. For teachers, these AITs enabled them to choose more effective teaching methods, provide accurate feedback, and more clearly determine student achievement.

In the same context, Alatal et al. (2021) conducted a study aimed at exploring the role of AIT in supporting the educational process from the students' perspective in the College of Basic Education in Kuwait. The study employed a descriptive approach, collecting data from a sample of 229 male and female students using a questionnaire. The results showed that AI enabled students to make informed academic decisions, provided reliable feedback to both students and teachers, helped teachers assess student performance more accurately, and contributed to motivating students to interact and actively participate in learning. It also reduced the time required for teachers to cover curriculum content.

Previous studies confirm the growing importance and effectiveness of AIT in enhancing various aspects of the educational process across different educational levels and geographical contexts. A common thread across these studies is the positive impact of AI tools on students' cognitive, metacognitive, and academic competencies. They also provide strong empirical support for the integration of AIT into education. These studies highlight AI's ability to personalize learning, promote higher-order thinking, improve student outcomes, and enhance the overall teaching and learning experience. Previous studies have used a variety of approaches, including quasi-experimental, analytical, and descriptive methods. This study employed a descriptive-analytical approach, as it is the most suitable for achieving the study's objective and answering its questions. Several different tools were used, including an AI tool to enhance students' real-world problem-solving skills, a questionnaire distributed to students, and another to FM. This study used an electronic questionnaire distributed to FM at INU. Previous studies have not explored the impact of using AIT on students and FM from the perspective of FM at Jordanian higher education universities. This study aims to fill this gap.

In this situation, the researcher trusts that the use of AIT in universities should increase, given their plentiful advantages. This is because the use of AIT in these universities will improve the quality of university education and decrease the FM workload. Therefore, this study aimed to discover the effect of using AIT in INU on students and FM. So, it is essential to highlight the significance of conducting this study for several reasons. For example, this study is the first to discover the influence of using AIT in Jordanian universities, particularly at INU FM. Additionally, this study raises consciousness among educational decision-makers

in universities of the benefits of using AIT. Regarding the influence of this study, its findings can be used to advance university syllabuses by integrating AI-based materials and exercises. It can also be used to assess students' readiness to adopt the use of AIT in the classroom. Therefore, this study discovered the impact of using AIT at INU in Jordan on FM and students, from the perspective of FM. To achieve the study's objective, the following questions were formulated:

- Q1. What are the effects of using AIT at INU on students, from the FM's perspective?
- Q2. What are the effects of using AIT at INU on FM, from the FM's perspective?
- Q3. Does the impact of using AIT at INU on students differ depending on the gender of the responding FM?
- Q4. Does the impact of using AIT at INU on students differ depending on the type of FM college they attend (scientific or humanities)?
- Q5. Does the impact of using AIT at INU on FM differ by the gender of the responding FM?
- Q6. Does the impact of using AIT at INU on FM differ depending on the type of FM college they attend (scientific or humanities)?

Methodology

The researcher adopted the analytical and descriptive approach. He also adopted a quantitative approach, utilizing quantitative measures, after consulting previous literature (Khadragy et al., 2024).

Participants

The study population consists of all FM staff working at INU during the second semester of the 2024/2025 academic year. The required data were obtained by designing a questionnaire using a Google Form. The researcher shared the questionnaire link with several WhatsApp groups and emails targeting FM at INU. (129) FM participated in the questionnaire. Table 1 shows the demographic data of the participants.

Table 1

Distribution of FM in the sample according to demographic variables (gender, nature of college)

variable	Variable description	number	percentage
Gender	Male	87	67.4
	Female	42	32.6
Nature of the college	Humanity	96	74.4
	cScientifi	33	25.6
Total		129	100

Instrument

After reviewing previous literature (Khadragy et al., 2024; Daradkah et al., 2023), the researcher developed a questionnaire using a 5-point Likert scale. This questionnaire consists of two main parts. The first part collects demographic data (gender and college type). The second part targets two domains. The first domain addresses the effects of using AIT in higher education institutions at INU on students. In contrast, the second domain addresses the effects of using AIT on FM. After designing the questionnaire, the researcher shared the survey link on several WhatsApp groups targeting FM at INU during the second semester of the 2024/2025 academic year.

Participants were asked to mark the appropriate response on a five-point Likert scale (strongly agree, agree, neutral, disagree, strongly disagree). The criteria established by Al-Bawaliz et al. (2015) were followed in assigning the instrument's values (5, 4, 3, 2, and 1), and the scores for strongly agree, agree, neutral, disagree, and strongly disagree were assigned. The following range of scores was used to estimate participants' response level to the instrument: 1-1.80 (very low), 1.80-2.60 (low), 2.60-3.40 (medium), 3.40-4.20 (high), and finally 4.20-5 (very high).

Validity and reliability of the instrument

To verify the validity of the instrument, the preliminary version of the questionnaire was presented to three faculty experts, they were asked to evaluate the questionnaire according to criteria related to clarity, appropriateness, language and format. They were also asked to provide their recommendations. After evaluating the questionnaire, they confirmed its validity and usability to achieve the study objectives. They added that the questionnaire was clear, well-worded, and grammatically correct. Cronbach's alpha was calculated, yielding a value of 0.711. This value is considered high, as it is above 0.70.

Results and discussion

The results are detailed below for each question:

First: Results of the first question

Q1. What are the effects of using AIT at INU on students, from the FM's perspective?

The means and standard deviations of participants' responses to the items on the impact of AIT at INU on students are presented in Table 2.

Table 2

Effects of AIT at INU on Students

No	Paragraph	Mean	SD	Rank level
1.	Provides them with immediate and reliable feedback on their duties	3.81	0.97	high
2.	It accurately portrays his strengths and weaknesses.	3.74	0.94	high
3.	It enables them to improve their academic achievement	3.67	0.96	high
4.	It allows them to learn while taking into account their differences	3.63	0.94	high
5.	It reduces their dependence on the curriculum to acquire knowledge	3.98	0.93	high
6.	It enhances cooperation between them	3.30	1.11	Intermediate
7.	to learn It enables them through the use of diverse teaching methods	3.67	0.96	high
8.	It develops their research skills	3.51	1.28	high
9.	It develops their critical thinking skills	3.14	1.32	Intermediate
10.	Improves their study skills	3.26	1.24	Intermediate
11.	their time management skills It improves th	3.30	1.09	Intermediate

12.	Provides them with correct answers to their questions and inquiries	3.53	1.00	high
13.	Enriches their vocabulary	3.47	1.11	high
14.	It positively affects their relationship with the teacher	3.51	1.09	high
Total		3.54	1.07	high

The results of Table 2 show that FM believes AI has a highly positive impact on students in many aspects. First item "Provides them with immediate and reliable feedback on their duties" with an average score of 3.81. This result is consistent with the study by Khadragy et al. (2024). AI-powered tools (such as automated assessment systems or intelligent tutoring systems) enable students to analyze their work and provide specific and constructive feedback instantly. This indicates that AI has a significant capacity to provide reliable and timely feedback. This finding is consistent with educational research that emphasizes the importance of providing immediate feedback to enhance learning and correct misconceptions early in the learning process. The second item, "It accurately portrays his strengths and weaknesses," had an average score of 3.74. This result confirms that AI is viewed as a helpful tool for personal assessment. Knowing academic strengths and weaknesses helps students focus on areas that need improvement, which supports self-directed learning. AI "It enables them to improve their academic achievement" with an arithmetic mean of 3.67. This indicates that students believe AI contributes positively to their academic performance. This is attributed to AI's ability to provide personalized resources, practical exercises, and corrective paths, which ultimately enhances results.

The use of AIT contributes to improving students' academic achievement by providing them with individually tailored knowledge and educational resources that are expanded to meet their specific needs and abilities. These (AIT) also make the learning process fun and motivating, offering innovative educational games and engaging interactive features. AIT facilitates communication between students and their teachers through innovative tools, such as converting handwritten texts into digital print formats. Furthermore, these (AIT) enhance student interaction through collaborative learning activities and enable teachers to monitor students' strengths and weaknesses through automatic analysis of their notes (Al-Jeraisy, 2023).

FM also indicated that AI "allows them to learn while taking into account their differences," with an average response rate of 3.63. This result is consistent with the findings of Alhawery and Aljamali (2021), who showed that AI-powered learning platforms cater to students' varying learning styles and speeds. Taking individual differences into account is one of the most prominent features of these (AIT), as they provide customized educational programs, tests, and learning materials based on student data and specific academic needs (Alhawery & AlJamali, 2021). This trend toward personalized learning is a fundamental pillar of contemporary teaching methods and inclusive educational practices.

The fifth item in the study showed a high mean of 3.98, indicating students' awareness of the importance of AI as a source of independent self-learning outside the formal curriculum. This reflects a clear shift toward an inquiry-based and independent learning

environment, supported by modern (AIT). AI also contributes to enhancing students' motivation and desire to learn by providing engaging educational activities, including interactive games and multimedia, while supporting continuous learning by offering immediate answers to questions and providing relevant references at any time (Aljerais, 2023). The mean for the item "It enables them to learn through the use of diverse teaching methods" (3.67) indicates that students benefit from the diversity of AI, as it offers multiple formats such as videos, simulations, and gamified learning. This multimodal approach can cater to diverse learning preferences and deepen understanding. AIT also enables students to access academic material easily, anytime, anywhere. Furthermore, the use of AIT improves students' understanding of the course material, due to the simple exercises and illustrations it provides (Aljerais, 2023). The mean for the item "It develops their research skills" (3.51) indicates that AI supports the development of research skills. This result is consistent with those of Alatal et al. (2021), which is likely explained by the tools that aid information retrieval, data analysis, and access to references. However, the relatively high standard deviation (1.28) indicates a difference between FM's views of students. The mean for item 12, "Provides them with correct answers to their questions and inquiries," was 3.53. This result confirms that students rely on AI as a reliable source of information. This reliability helps reduce confusion and enhance confidence in independent learning. The mean for item 12, "It enriches their vocabulary," was 3.47, indicating that AI contributes meaningfully to language development, perhaps through context-based learning, glossaries, or intelligent suggestions. This is particularly useful in language-intensive disciplines. The mean for item 12, "It positively affects their relationship with the teacher," was 3.51, indicating that teachers believe AI can support communication and interaction with teachers, perhaps by reducing routine tasks and allowing teachers more time for meaningful engagement. The results show that FM perceived AI's impact as moderate, with a mean score of 3.30 on the item "It enhances collaboration among them." This suggests that while AI supports individual intelligence well, its role in enhancing collaboration is less influential. This may indicate the need for improved integration of collaborative AI tools. The impact of AI on developing critical thinking skills was moderate, with a mean score of 3.14, indicating a limited perceived impact. This may suggest that the AI tools used focus more on memorization or factual content than on enhancing analytical or evaluative thinking. The mean score of 3.26 on the item "improves their study skills" suggests that AI may help develop study habits through tools such as planners or reminders, although the effect is not significant. Educational strategies that link AI with cognitive training can improve this outcome. Similarly, the mean score of 3.30 for the item "Improves their time management skills" places this item at a moderate level, indicating that while AI can provide scheduling tools, its impact on effective time management may depend on student engagement and external guidance.

The high overall average score of 3.54 indicates that the Education Department generally views AI as a tool with a positive impact on enhancing student learning. This result can be attributed to the fact that AIT offers unlimited educational opportunities, expanding students' knowledge, developing their skills, and enhancing their academic achievement. It also helps students identify areas for improvement in their academic performance.

The results showed that the use of AIT at INU had a tangible positive impact on the performance of the Education Department, with an average score of 3.72. This impact can be attributed to AI's ability to support teachers in developing their teaching skills and competencies, as well as enhancing their knowledge of modern teaching strategies and methods. The use of these (AIT) also contributes to saving time and reducing administrative and teaching workloads, which positively impacts professional performance and enhances job satisfaction and well-being among education department employees.

Second Results of the second question

Q2: What are the effects of using AIT at INU on FM, from the FM's perspective?

The means and standard deviations of participants' responses to the items on the impact of using AIT at INU on FM are presented in Table 3.

Table 3

Effects of using AIT at INU on FM

No	Paragraph	Mean	SD	Rank level
1.	It enables me to determine each student's current academic achievement level accurately	3.79	0.76	high
2.	It enables me to gain insight into each student's unique learning needs	3.72	0.84	high
3.	It allows me to track each student's progress accurately	3.44	0.97	high
4.	Provides me with effective feedback on my teaching performance	3.53	0.97	high
5.	choose effective teaching strategies Allows me to	3.77	1.01	high
6.	It allows me to make effective learning plans	3.81	0.99	high
7.	Saves time to complete tasks	3.91	0.91	high
8.	It lightens my workload	3.84	0.89	high
9.	It work Allows automatic and accurate editing of student work to check compliance with grammar rules	3.70	0.85	high
10.	Provides me with reliable academic references	3.58	0.81	high
11.	It develops me professionally by providing access to practical online courses	3.79	0.82	high
12.	'geted subjects Allows me to ensure that all target curricula are covered during the semester	3.79	0.88	high
Total		3.72		high

The results in Table 3 indicate that the use of AI has a significant impact on enabling teachers to accurately determine their students' current academic achievement levels ($M = 3.79$), consistent with Khadragy et al.'s study (2024). This indicates teachers' confidence in their ability to accurately assess student performance, which is crucial for making informed instructional decisions. Furthermore, a high level of agreement ($M = 3.72$) was found regarding the role of AI in helping teachers understand each student's learning needs. This

suggests that AI supports personalized instruction by providing teachers with valuable insights into each student's individual needs. Relatively lower mean scores were recorded for the ability to accurately track student progress ($M = 3.44$, $SD = 0.97$). The higher standard deviation here indicates some variability in responses, which may reflect differences in how effectively teachers monitor progress based on their subject, the tools used, or the diversity of students. Teachers also acknowledged that AI provided effective and reliable feedback on their teaching performance ($M = 3.53$, $SD = 0.97$), a finding consistent with Khadragy et al. (2024). This is essential for reflective practice and continuous improvement, although the variance again indicates some inconsistencies in perceived effectiveness across different contexts. Regarding instructional planning, teachers strongly agreed that AI helps them choose effective teaching strategies ($M = 3.77$, $SD = 1.01$) and develop effective academic plans ($M = 3.81$, $SD = 0.99$). These findings underscore the importance of AI in informing pedagogical decision-making and structured lesson design. The highest mean score ($M = 3.91$, $SD = 0.91$) reflects strong agreement that AI saves time on teaching tasks. Time efficiency is a critical factor for teachers juggling multiple responsibilities, and this result underscores the system's practical utility.

Similarly, AI appears to reduce teachers' workload ($M = 3.84$, $SD = 0.89$), a finding that suggests the technology's potential to support teachers' well-being by automating or simplifying routine tasks. This finding is consistent with the study by Khadragy et al. (2024). An important benefit reported by teachers is the tool's ability to automatically and accurately edit students' work to check for grammatical consistency ($M = 3.70$, $SD = 0.85$). This functionality helps maintain academic writing standards while reducing the need for manual corrections. The tool also appears to provide reliable academic references ($M = 3.58$, $SD = 0.81$), helping teachers access up-to-date and reliable materials for lesson planning and research. Although this result is slightly lower than others, it is still within a high range. Professional development was another area positively impacted, with a mean score of 3.79 ($SD = 0.82$), indicating that AI facilitates teachers' access to valuable online training opportunities. This supports teachers' ongoing learning and skill development.

Teachers also agreed that AI ensures that all course content or curriculum objectives are covered during the semester ($M = 3.79$, $SD = 0.88$), reinforcing its role in promoting curriculum alignment and completeness. Finally, the overall mean score of 3.72 ($SD = 0.89$) confirms that teachers find the tool highly useful in various aspects of teaching and learning. Although there is some variability, the consistently high scores demonstrate its effectiveness in supporting teaching quality and student outcomes.

Third: Results related to the following questions:

Does the impact of using AIT at INU on students differ depending on the gender of the responding FM?

Q4. Does the impact of using AIT at INU on students differ depending on the type of FM college they attend (scientific or humanities)?

Q5. Does the impact of using AIT at INU on FM differ by the gender of the responding FM?

Q6. Does the impact of using AIT at INU on FM differ depending on the type of FM college they attend (scientific or humanities)?

To answer these questions, a one-way analysis of variance (ANOVA) was used to examine the significance of differences and the table 2 present the means, standard deviations, and F values.

Table 4

Differences in faculty responses regarding the effects of using AIT on INU students and FM according to their demographic variables (gender and college type)

Dimension	Variable	V ariable Description	Number	M	SD	F	Significance
First	Sex	male	87	3.49	0.81	1.29	0.258
		female	42	3.66	0.83		
	College type	Scientific	33	3.80	0.68	4.37	0.039
		Humanity	96	3.46	0.85		
Second	Sex	male	87	3.77	0.69	0.61	0.438
		female	42	3.66	0.71		
	College type	Scientific	33	3.91	0.62	2.93	0.089
		Humanity	96	3.67	0.71		

Table 4 showed no statistically significant differences between the responses of male FM ($M = 3.49$, $SD = 0.81$) and female FM ($M = 3.66$, $SD = 0.83$) in their perceptions of students' AI use ($F = 1.29$, $P = 0.258$). This suggests that faculty gender does not significantly influence how students experience or benefit from AIT. One possible explanation is the increasing normalization and accessibility of AI tools among students in both academic and personal contexts. Students, regardless of their instructor's gender, are likely to have similar access to AI platforms (such as ChatGPT, translation tools, or learning assistants), reducing the likelihood of significant gender-based disparity. However, when comparing the types of colleges attended by both students and faculty, a significant difference emerged ($F = 4.37$, $P = 0.039$). Students in science faculties scored higher ($M = 3.80$, $SD = 0.68$) than those in humanities faculties ($M = 3.46$, $SD = 0.85$). This difference is attributed to the nature of the curriculum in science fields, which often includes data-driven, technical, or computational elements. As a result, students in these programs may interact more directly with AI applications, such as programming, simulations, or data analysis tools. In contrast, humanities students may have less exposure to these tools or may encounter AI in limited and indirect ways, leading to a lower perceived impact or importance.

Regarding the impact of AIT on FM at Irbid Private University, the gender differences in FM were not statistically significant ($F=0.61$, significance= 0.438), although male professors ($M=3.77$, $SD=0.69$) scored slightly higher than female professors ($M=3.66$, $SD=0.70$). This slight difference suggests that professional experience and access to AI in academic settings may be relatively equal among students at INU, regardless of the gender of their faculty. The academic environment may provide equal opportunities for male and female FM to experience AI or integrate it into their teaching or research practices. Furthermore, science FM again benefited from AI, with higher mean scores ($M = 3.91$, $SD = 0.62$)

compared to humanities FM ($M = 3.67$, $SD = 0.71$), although this difference did not reach statistical significance ($F = 2.932$, $P = 0.089$). This trend may reflect varying levels of familiarity with AI and its practical applications across different disciplines. Science FM is more likely to interact with AI as part of their research (e.g., data processing, machine learning, automation) or teaching methods (e.g., programming platforms, intelligent tutoring systems), which may lead to a stronger perception of its usefulness. Meanwhile, humanities professors may face challenges in meaningfully integrating AI into interpretive or discursive topics, which contributes to a more cautious and neutral view of its benefits.

Conclusion

The study results showed that the use of AIT at INU has had multiple positive effects, both for students and for FM University. Students' use of these (AIT) contributed to the development of their critical thinking and scientific research skills, enabling them to access, analyze, and draw conclusions from data independently. AIT also provided immediate and reliable feedback to each student on their academic performance, enabling them to accurately diagnose problems, identify errors, and analyze them, helping them identify their strengths and weaknesses. These (AIT) also contributed to raising students' academic achievement by providing them with an unlimited number of educational resources and references.

At FM University, AIT helped accurately assess students' academic achievement levels and provide a comprehensive picture of their learning needs, leveraging tools such as automated scoring and student response analysis. They also enabled faculty members to obtain reliable feedback on their performance by analyzing student opinions and identifying areas for improvement. Additionally, AIT helped teachers select the most suitable teaching strategies based on the nature of the content, curriculum, and student characteristics, thereby enhancing the effectiveness of their teaching practices. It also contributed to improving academic planning processes by developing study plans based on accurate data related to student levels, course content, and the time allocated to each study unit.

Recommendations:

Based on the findings of the study, the researcher recommends the following:

1. Organize specialized training courses for students and school principals to enhance their skills in using artificial intelligence applications and software in the educational process.
2. Develop and design appropriate artificial intelligence applications that support the teaching and learning processes, targeting both students and school principals to meet their academic and administrative needs.

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