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The Acceleration of AI Integration: A Closer Look at Al Quds University Students' applying Artificial Intelligence in the Learning process

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Abstract

The current study aimed to uncover the mechanism of increasing the use of artificial intelligence applications and its impact on the learning process of students at Al-Quds University. This research follows the phenomenological approach as one of the qualitative research methods and uses interviews as a data collection instrument. The study was conducted on a sample of (10) students. The study found that the use of artificial intelligence techniques in learning can have a significant positive impact on students' learning experiences. This impact includes improving the understanding of difficult concepts, increasing motivation and engagement, improving academic performance, and overcoming concerns related to the use of technology in learning. The results also showed the diversity of tools and applications used by students, highlighting their ability to diversify learning methods and effectively use technology to achieve their educational goals. The positive interaction between students and artificial intelligence applications highlights the urgent need to develop stimulating learning environments and educational technology that enhance interaction and motivate students to learn and innovate. The results also suggest that artificial intelligence techniques can be valuable tools to improve the quality of education and meet the diverse and effective needs of students. The study recommended working on designing and developing artificial intelligence applications dedicated to learning,

focusing on innovative and effective artificial intelligence applications that target improving the learning experience for students in various educational fieldsm. (Qualitative research)

Keywords: Artificial intelligence, students, Al-Quds University, learning process.

*** Introduction**

Nowadays cultures are experiencing a massive scientific and technological revolution, which has resulted in rapid advances in a wide range of areas. One of the most prominent manifestations of this transition is in the academic realm, where artificial intelligence has become an integral part of the classroom, playing an essential role in improving students' learning capacities. Teachers and faculty members at universities have begun to alter their efforts and goals to keep up with and capitalize on this trend. Information technology has enabled the necessary adjustments to the education industry and educational system, saving time and effort while boosting educational quality.

Education is more than just obtaining knowledge; it is also about acquiring and improving learning skills, as well as the ability to apply them to improve educational abilities. Artificial intelligence has begun to penetrate different facets of human existence, expanding its applications beyond information storage and transmission to relying on it in more particular and specialized areas. It has also grown into previously believed fields, such as healthcare and education, turning from an assisting to an active tool.

Wadhwa (2018) authored an article in which he argued that online open courses were expected to revolutionize education, but despite its significance, they failed to meet expectations. Teachers were placed in front of cameras and recorded, exactly as early TV shows did with radio stars and microphones. However, this is set to change with the help of virtual reality, artificial intelligence, and sensing devices.

*** Research Problem**

Artificial intelligence is improving students' abilities, as well as their life and practical skills. As a result, the current study aimed to investigate the motivation for using artificial intelligence in education, how to employ its special tools and programs in the same context, as well as the impact of artificial intelligence applications on the performance and achievement of students, and their opinion on how to overcome the fears that they may face. How might artificial intelligence approaches be

used to promote innovation and creativity? What are the most important recommendations that students may make to professors and officials based on their experiences using artificial intelligence to improve the educational process?

The problem of the current study lies in knowing the mechanism of increasing the use of the application of artificial intelligence and its impact on the students of Al-Quds University in the learning process, as artificial intelligence has become a proven science and contains programs characterized by characteristics that make them simulate human mental abilities, and one of its most important characteristics is the ability to learn, so artificial intelligence must be employed. In developing learning skills to improve the quality of the educational process, how can we not use it when it facilitates the burden of educational content for the learner and even makes him enjoy and navigate learning? The researcher also believes that many studies have recommended keeping pace with development and technology in the field of education because of its significant impact on students.

*** Research Questions**

1- What prompted you to use artificial intelligence programs in the learning process?

2- How do you employ artificial intelligence tools or programs in the learning process?

3- Do you use special tools and programs for applying artificial intelligence programs in education? If so, mention the names of the programs and applications that you use in this context.

4- How have artificial intelligence applications affected your academic performance and achievement?

5- How do you overcome the fears you face as a student about using artificial intelligence programs in learning?

6- In your opinion, how can artificial intelligence technologies be tools that help in innovation and creativity?

7- What recommendations can you make to professors and officials based on your experience in using artificial intelligence to improve the education process?

*** Objectives of the Study**

The current study aims to investigate the motivation to use artificial intelligence and its increase in education, as well as how to employ its special tools and programs in the same context, as well as the impact of artificial intelligence

applications on student performance and achievement, and their opinion on how to overcome the fears that they may face, and how artificial intelligence techniques can be used as tools to aid in innovation and creativity. What are the most important recommendations that students may make to professors and officials based on their experiences using artificial intelligence to improve the educational process? This helps to explain the impact of knowledge on the degree to which students employ artificial intelligence and how it affects the educational process.

The importance of the current study is underscored by the issue, which is the growing use of artificial intelligence applications and their impact on Al-Quds University students' learning processes. The current study gives a broad theoretical framework for enhancing Arab and international libraries in general, addressing the key aspects. It also paves the way for more scientific studies to be conducted. On the practical side, we can benefit from the results of the current study and its recommendations to conduct subsequent studies covering other variables that were not addressed in the current research, in addition to benefiting from them in implementing programs and rehabilitation courses that contribute to identifying the correct use mechanism and reducing risks and benefiting from them. Including as much as possible in developing the educational process and developing and improving individual skills, and it is also possible to benefit from current research tools in similar research and studies.

*** The Limitations of the Study**

1- Topic: Artificial Intelligence/Education.

2- Location: Al-Quds University.

3- Timing: In the second semester of 2024.

4- Humanity: Students of Al-Quds University.

5- The results of the current research can be generalized according to the psychometric properties of the tools used, and the extent of the sincerity of the study sample members' response to this tool.

6- The possibility of generalizing its results to similar societies.

The use of artificial intelligence programs to facilitate teacher discussion and exchange of ideas, as well as to learn about contemporary educational approaches and their problems, has resulted in an improvement in the educational learning process overall. This has sparked the interest of

educators and those in charge of education in the modern era in using artificial intelligence technology to transfer its effectiveness, as it has become important to note that it contributes to creating the right conditions for learning, where communication technologies are used in a way that suits the learner's environment outside of the classroom. This raises achievement rates away from rote memorization and narration, changing the student's role from that of information receiver. to communicate with the learning environment (Shelley, 2022).

Artificial intelligence refers to a science that involves computer programs possessing specific characteristics that enable them to simulate human mental capabilities, with one of its most important features being the ability to learn (Russell1and Norvig, 2016). It is a branch of computer science that makes machines think like humans, meaning that a computer has a mind and is known to mimic human mental abilities and work patterns. One of its key characteristics is the ability to learn, deduce, and react to situations that the machine was not programmed for. These systems are considered to mimic human intelligence to perform tasks and can improve themselves based on the collected information (Muhammad, 2021).

*** Theoretical Framework**

The advancements in modern technology and the information revolution have played a crucial role in making significant breakthroughs in the field of education and elevating it to a new level of development. The educational environment has focused on integrating modern technology as its foundation, making it easier for all students to access computers, mobile phones, and electronic applications. Consequently, the utilization of information technology, artificial intelligence, and their applications in educational settings contributes to the development and enhancement of students' abilities and skills.

The significance of artificial intelligence in education stems from the availability of ready-made software meant for self-learning or assisting teachers, which relies on knowledge transfer via the internet. Furthermore, the wide range of research, studies, and e-books available on the internet allows teachers to use them for their own professional growth, methods of instruction, and skill enhancement. Furthermore, artificial intelligence enhances teacher talks and idea exchanges, allowing them to address

issues while remaining in touch with modern educational practices. This, in turn, has an impact on the general growth of the teaching and learning process, attracting the attention of educators and educational administrators at this moment in time. The use of artificial intelligence technology in the educational process has become an irrefutable aspect of creating conducive learning environments by adopting communication tactics that are relevant to the learner's external situations outside of the classroom. This improvement in adaptability improves academic achievement by shifting the student's position from a passive receiver of information to an active participant in the educational environment (Shelly, 2022).

Artificial intelligence indicates that it is a science that contains computer programs that have certain characteristics that make them simulate human mental capabilities and one of its most important characteristics is the ability to learn (Russell1and Norvig, 2016). It is a branch of computer science that makes machines think like humans, that is, a computer that has a mind and is known to mimic human mental abilities and their work patterns. One of its most important characteristics is the ability to learn, deduce, and react to situations for which the machine has not been programmed, as they are considered systems that mimic human intelligence to perform tasks. Which can improve itself based on the information collected (Muhammad, 2021).

Artificial intelligence and its use in educational platforms, as described in numerous publications and studies, including Al-Subhi's (2020) research, comprise several major applications. These include chatbots, which are computer programs that intelligently replicate human communication and allow contact via text, speech, or both. Augmented Reality enhances real-world environments by changing text, photos, or static shapes into dynamic features when seen with a smartphone camera. Virtual Reality provides an interactive computer simulation of real-life settings, allowing students to participate in activities like laboratory experiments or virtual trips to other environments. Expert Systems replicate human expert behavior by using computer programs to provide judgments, inference rules, and problem solutions. Educational robotics incorporates electromechanical units that conduct tasks based on stored instructions and play a variety of functions in educational activities.

Finally, Intelligent Adaptive Learning uses AI algorithms to customize educational materials and activities to learners' cognitive needs based on how they respond to questions. These applications enhance the educational experience by providing tailored and interactive learning possibilities.

Therefore, the future of education is, in its essence, largely linked to progress in smart technologies. Therefore, the educational community faces the opportunities and challenges posed by constantly evolving artificial intelligence technologies, which can fundamentally change the structure, operation, and management of educational institutions. It is also undeniable that the educational sector is greatly influenced by artificial intelligence, as applications of artificial intelligence in education (AlEd) are widely used by learners and teachers nowadays and include various tools and applications, for example: intelligent teaching systems, teaching robots, and adaptive learning systems, as artificial intelligence It supports learning that occurs in both traditional classrooms and workplaces by combining artificial intelligence and various sciences to stimulate and develop flexible AI-based educational applications (Chen et al., 2020).

Several studies, including Gaˇsevi'c et al. (2023), Al Ka'bi (2023), Guan et al. (2020), Pikhart (2020), and Halagatti et al. (2023), highlight the importance of using artificial intelligence applications to improve students' self-directed learning skills and assess cognitive levels. Sanusi's study (2022) emphasized the need to improve learners' competencies in online learning, particularly with the advent of current technologies such as AI, given that competency extends beyond cognitive factors to encompass skills and appropriate personal characteristics for the course. Furthermore, there is a need to investigate the function of these abilities in assisting learners in developing relevant material utilizing tools and applications that are matched with technological advances. According to Halagatti et al.'s (2023) study, the use of artificial intelligence contributed to assessing students' performance, predicting early activities that teachers would adopt, and providing insights into students' learning progress and the assistance they require to achieve their educational objectives. Furthermore, AI-based analytics make quick decisions and indicate

needed curriculum adjustments. AI can also use specialized assessment tools to evaluate various student capabilities including involvement, flexibility, confidence, and leadership. Despite the favorable impact of AI on educational progress, it might also have a negative effect. Tools such as digital writing and text impersonation can lead to academic dishonesty, in which the author's intellectual product is passed off or presented as their own (Helgesson & Eriksson, 2015), or through misattribution, in which information belonging to another is presented without proper citation (Perkins et al., 2018).

*** Previous Studies**

Previous studies have aimed to elucidate the role of artificial intelligence (AI) applications in enhancing educational strategies in higher education. Al-Maliki's study (2023) focused on the strategic benefits educational institutions can gain from integrating AI, such as improving administrative functions, educational capabilities, research capacities, and enhanced learning environments. The study also addressed potential obstacles to implementation, such as resistance to change and technical limitations. Employing a narrative literature review methodology, the study relied on twenty studies and concluded that AI plays a significant role in enhancing teachers' roles, improving learners' performance, and making the learning process more efficient. Results also emphasized the urgent need to raise awareness among education stakeholders about the importance of using AI applications in educational strategies and not allowing challenges to hinder their implementation.

Similarly, Al-Hakami and Madawi 's study (2023) aimed to explore and analyze the reality of AI applications in general education in Saudi Arabia, focusing on influential factors and challenges facing these applications. The study utilized a descriptive methodology with an analytical approach, relying on secondary sources such as books, studies, peer-reviewed journals, digital libraries, government reports, and historical documents as data collection tools. The results indicated the kingdom's awareness of the importance of AI technology in improving education and its outcomes. Moreover, the results highlighted the interplay of religious, geographical, political, and economic factors in shaping educational trends and development, emphasizing the importance of synergy among these factors to achieve sustainable

improvement in the education system and invest in technology and AI for the kingdom's educational and economic future.

Meanwhile, Abu Khatwa (2022) aimed to determine the relative importance of using AI applications in educational institutions in the United Arab Emirates (UAE) and their role in ensuring the quality of education considering internationally recognized standards. The study emphasized that utilizing AI tools in classrooms can better prepare students for their personal and professional lives. To provide students with the best possible foundation, teachers should not rely on traditional teaching models based on rote memorization but instead, provide students with tools to find creative solutions to future problems. By creating a balance between technology and humanity, educators may motivate students to solve problems that robots cannot and to make a difference in the world, resulting in sustainable education. The study concluded that using AI technologies in educational institutions improves education quality by (89.3)%. Notably, (96)% of research participants stated that AI would eventually be a part of every employment, therefore kids' experience with it in the classroom will prepare them for their professional lives.

Zhai et al. (2021) provided a content analysis of studies that aim to reveal how AI is applied to the education sector and explore research trends and potential challenges for AI in education. A total of (100) papers were selected from the Education and Educational Research category in the Social Sciences Citation Index database from 2010 to 2020. Content analysis showed that learning through AI is easier, and cost-effective, students acquire learning skills, and enhances students' understanding of Construction and mechanics processes in learning science. Simulation and brain function technology can also sense and understand human cognitive behaviors, improving human cognition and performance. Chen et al. (2020) aimed to evaluate the impact of artificial intelligence on education. Based on a narrative and framework for evaluating AI identified through a preliminary analysis, the scope of the study was limited to the application and impacts of AI in management, teaching, and learning. Using a qualitative approach, the study confirmed that artificial intelligence has been widely adopted and used in education,

especially by educational institutions and in various forms. Artificial intelligence also initially took the form of computer-related technologies, and moved to Internet-based smart education systems, eventually using embedded computer systems, and then using human robots and chatbots to perform duties. Teachers were also able to perform various administrative functions using these platforms, such as reviewing and Classifying students' tasks more effectively and efficiently, and achieve higher quality in their educational activities. Thus, improving the learners' experience and the overall quality of learning.

Al-Subhi (2020) aimed to identify the reality of faculty members' use of artificial intelligence applications at Najran University, which can be employed in the educational process, along with the challenges they face and the relationship with some variables (such as gender and academic degree). The study employed a descriptive (analytical) methodology and a descriptive (survey) methodology to suit their nature and achieve their objectives. A questionnaire was administered to a sample of 301 faculty members at Najran University for the first semester of the academic year 1442 AH. The results indicated that the use of artificial intelligence applications by faculty members at Najran University for education purposes was very low. There was a significant consensus on the presence of many challenges that hinder the use of these applications. Additionally, the results showed no significant impact on the reality of faculty members' use of artificial intelligence applications attributed to the variables of gender or academic degree, nor was there an impact on the challenges they face in using artificial intelligence applications attributed to the aforementioned variables. Through reviewing previous studies, the researcher found clear variation in the results of these studies, whether in terms of objectives, variables addressed, or results reached. It became apparent that the subjects of the current study variables were linked with different variables, and within the researcher's limits of knowledge, there was a shortage of studies that explored the subjects of the study, emphasizing the need for further research. This study is distinguished from its predecessors by the size and nature of the sample on which the tool will be applied, as there has been no study so far that has examined the combined variables as in the current study.

*** Methodology and Procedures**

This chapter will cover a description of the methodology used in this study, a description of the study sample, an introduction to the study tools, methods for ensuring its validity and stability, and the statistical treatments that will be used in extracting the results.

*** Methodology**

This part aims to clarify the methodology used in the study, including a description of the sample and study tools, and the procedures that were taken to ensure the validity and reliability of the data, in addition to the statistical treatments that were used in analyzing the data and extracting results related to the problem of the study. This research follows the phenomenological approach as one Qualitative research method and through the use of interviews as a data collection tool. This method provides an opportunity to understand and interpret students' experiences and opinions regarding the use of artificial intelligence applications in the learning process.

*** Procedures**

To obtain data and reach answers related to the study questions, the researcher conducted the following: -

1- Identify study participants and arrange interview sessions with them.

2- Organizing interview questions and preparing the necessary materials and tools to record interviews.

3- Remote conduct using the Zoom platform with students according to the appointments that were previously scheduled.

4- Recording interviews and documenting important notes and answers.

5- Analyzing the interviews and extracting the results using the MAXQDA program.

6- Writing the final report and documenting the findings and recommendations.

*** Statistical Processors and Data Analysis**

Content analysis via MAXQDA was used to analyze the data extracted from interviews, as this analysis enables a deep understanding of students' opinions and interpretations of their experiences regarding the application of artificial intelligence in the learning process. The use of MAXQDA not only enhances the rigor and efficiency of qualitative data analysis but also enables researchers to uncover nuanced insights that contribute to a deeper understanding of the research phenomenon (Friese, 2019). Furthermore, it helps extract patterns and key themes, and to analyze the

obtained data, initially, the data obtained from the interviews were organized and classified according to the questions posed in tables to facilitate analysis and understanding. Then, all answers were reviewed, categorized according to paragraphs and questions, and divided into categories. The researcher analyzed the content that was collected and then worked on summarizing the main results obtained from the analysis of the interviews and presenting the conclusions in descriptive tables in the results chapter to facilitate understanding.

*** Study Community and Sample**

The study community includes all students of Al-Quds University. A sample of (10) students was selected to represent this community through the Snowball sampling method. This method begins with the identification of initial participants, often referred to as "seeds," who meet the criteria for the study. After interviewing these initial participants, researchers ask them to refer other potential participants who meet the study's criteria. These newly referred participants are then interviewed, and the process continues iteratively, with each participant potentially referring additional participants (Berg, 2007). The researcher conducted this method to inform the students that she longed to interview some of them for study purposes, therefore, she created a post on the Facebook platform through a group specified for university students. The post had all the information needed about the research as well as the contact details. The students' responses led to others till the interviews reached ten.

*** Description of Study Tools**

*** Interviews**

The researcher prepared targeted interview questions intending to understand students' opinions and experiences in using artificial intelligence applications in the learning context. These questions require interaction with students to explore the impact of these applications on their learning process and to understand their attitudes and opinions toward them.

*** Ensure the validity and Reliability of the Data**

The validity of the data was confirmed by presenting the tool to three arbitrators. Two of them work as professors at the Language Center/Al-Quds University, and the third is a supervisor and expert researcher in educational research. Through this step, the questions were amended, deleted, added to, and revised by the recommendations of the experts. Then the interview was conducted with one of the students to

measure the appropriateness of the interview questions. The reliability of the data was verified by carefully recording and documenting the interviews and using analytical methods to ensure the reproducibility and reliability of the results.

*** Data analysis**

Semi-structured interviews with the students were conducted to address the acceleration mechanism of the use of artificial intelligence applications and its impact on the learning process of students at Al-Quds University. The primary data collected from semi-structured interviews was coded to investigate and examine the information closely. From all the coded data, interrelated codes were clustered into cohesive units. A closer examination of individual groups revealed heuristic themes of every homogeneous group of codes to come up with the themes as Figure (1) shows:

*** Matrix for coding qualitative data and categorising it into themes**

*** The results**

The data collected through interviews with a sample of (10) students from Al-Quds University was analyzed to understand their experiences and opinions about the use of artificial intelligence applications in the learning process. Below are the schedules and results of the interviews:

Answering the first question, which states: "What prompted you to use artificial intelligence programs in the learning process?"

Table (1): The reasons behind using artificial intelligence programs in the learning process

The Reason	Number of Students who Gave Reasons	Percentage
Greater motivation and involvement in the learning process	9	90%
Find different and fun learning experiences	8	80%
Improvement in understanding difficult concepts	7	70%
It increases effectiveness and efficiency in studying subjects	5	50%

The previous table illustrates the main reasons that led students to use artificial intelligence techniques in the learning process. The results show a wide variation in the mentioned reasons, including increased motivation and engagement in the educational process, students' desire to explore different and enjoyable learning experiences, improvement in understanding difficult concepts, as well as enhanced effectiveness and efficiency. This diversity highlights the importance of implementing technology to enhance and improve the learning process, helping to meet the needs and preferences of students comprehensively and effectively.

This result may be attributed to the importance of artificial intelligence, which is one of the most important technological developments that the world has witnessed in recent decades, as this technology has contributed to improving many aspects of our daily lives, whether in health, industrial, or other fields and one of the most prominent uses of artificial intelligence is its use. There are applied programs that make life easier and enhance efficiency in many sectors.

Artificial intelligence programs contribute to raising the level of efficiency in work by allowing tasks to be completed faster and more accurately than humans. They also contribute to reducing human errors, which raises the level of accuracy of results in computational and analytical operations. In addition, it saves time and effort through... Improving daily operations and reducing stress on individuals, also predicts human behavior and guides decisions based on these expectations.

Answering the second question, which is: "How do you employ artificial intelligence tools or programs in the learning process?"

Table (2): Utilization of Artificial Intelligence Tools and Programs in the Learning Process

Using Artificial Intelligence Applications in Learning	Number of Students	Percentage
Use interactive learning applications and participate in online lessons for their flexibility and ease of use.	8	80%
Follows online courses, solves interactive questions, and interacts with the materials effectively.	6	60%
Uses language learning apps such as Duo Lingo and Rosetta Stone to improve foreign language skills.	5	50%
Artificial intelligence is used to prepare notes and memos and understand difficult material faster and easier.	5	50%
Use interactive learning games and simulations to develop skills and knowledge in different subjects.	4	40%

The table shows some of how students employ artificial intelligence tools and programs in the learning process. The results show that there are a variety of applications and tools used by students, including language learning applications, interactive learning games, online learning applications, and online educational courses.

The table also shows that students appreciate the use of artificial intelligence to improve their understanding of difficult subjects and develop their skills in multiple fields. This diversity in the use of technology in learning reflects the growing interest in innovative learning, which enhances the learning experience and contributes to developing students' skills in effective ways.

Students' awareness of the importance of artificial intelligence is an important matter because they are part of the future and will live in an

era dominated by technology, as the impact of artificial intelligence on students is to develop their thinking skills and modify learning methods. It also affects their orientation in choosing future jobs and can enhance their awareness of the importance of artificial intelligence. Sponsor the importance of artificial intelligence by including artificial intelligence concepts in school curricula, organizing workshops and seminars on artificial intelligence, and encouraging students to use technology and learn how to interact with it.

The answer to the third question, which states: "Do you use special tools and programs for applying artificial intelligence programs in education? If so, mention the names of the programs and applications that you use in this context?"

Table (3): Tools and programs that are used to apply artificial intelligence programs in education

Tools and programs	Number of Students	Percentage
AI's generative models like ChatGPT and Bard google	9	90%
Simulation and experimental programs in scientific and technical subjects	7	70%
Self-learning apps like Quizlet and Khan Academy	6	60%
Interactive and motivational education games	5	50%
Language learning apps like Duo Lingo and Rosetta Stone	4	40%

The table shows the tools and programs that students use to apply artificial intelligence programs in education. The table shows that students' answers varied in their use of a range of tools and programs, including AI's generative models, language learning applications, self-education applications, simulation and experimental programs, and interactive educational games. It is clear from the table that students use these tools and programs to raise their understanding of the material and develop their learning skills in different ways. This diversity in the tools and programs used reflects students' interaction with artificial intelligence technology and their effective use of it to achieve learning goals and develop their skills.

This diversity in the use of applications and tools for artificial intelligence may be attributed to the role of e-learning in increasing the use of applications that provide students with an opportunity to learn many skills, as learning through these applications contributes to improving the level of thinking among students, and is also attributed to the ease of using these applications. They can be accessed through smartphones and computers, in addition to the diversity of students' needs resulting in a diversity of these applications to meet all desires and trends, as there are applications for learning languages, others for learning mathematics, and

many other applications that depend on specific educational fields.

Answering the fourth question, which states: "How have artificial intelligence Applications affected your performance and academic achievement?"

Table (4): The impact of artificial intelligence applications on students' performance and achievement

The impact of AI on students' performance and achievement	Number of Students	Percentage
Motivating students and increasing their interaction and willingness to learn	9	90%
Improving performance and raising the level of academic achievement	8	80%
Promote self-learning and mental flexibility	7	70%
Reducing the level of stress and psychological tension	6	60%

The table shows the impact of students' performance and achievement in different ways. It appears that these applications have had a positive impact on student's performance and raised their level of academic achievement, as (80)% of students confirmed improved performance and raised their level of academic achievement due to the use of these applications. In addition, (90)% of students indicated that AI applications motivate them and increase their engagement and willingness to learn. (60)% of students confirmed that using these applications reduces their level of stress and psychological tension because tasks are made easier for them, which enhances the positive learning experience.

This is because artificial intelligence technologies are among the most prominent technologies used in various fields, including education, and artificial intelligence applications have played an important role in improving the educational process and enhancing academic achievement, through its role in improving the educational process according to what suits the needs of students. It also works to provide immediate responses to students, provide directions and recommendations to them according to their performance, and allocate educational resources and support to each student according to his or her needs.

The answer to the fifth question, which states: "How do you overcome the fears that you face as a student regarding the use of artificial intelligence programs in learning?"

Table (5): How to overcome fears related to the use of artificial intelligence programs

Overcoming fears by using artificial intelligence programs	Number of Students	Percentage
Learn from trials and errors and gain personal experience	8	80%
Develop construction and critical thinking skills	8	80%
Participate in discussions and educational events about technology	7	70%
Rely on guidance and support from teachers and coaches	6	60%

The previous table shows how students overcome fears associated with using artificial intelligence programs. Despite the positives of using artificial intelligence, there are many caveats, including the feeling of anxiety and fear among people due to its impact on the individual and society. The table shows that the various methods that students use to overcome this fear include relying on guidance and support from teachers and trainers, and continuous development of critical thinking and problem-solving skills. , engaging in discussions and educational activities about technology, as well as learning from trials, errors, and errors. And gain experience. This diversity of smart strategies and positive thinking reflects students' ability to confront and overcome potential fears that may arise from the use of technology in the educational process. Artificial intelligence is an advanced technology that requires careful handling and a degree of responsibility.

Answering the sixth question, which states: "How can artificial intelligence techniques be tools to aid innovation and creativity?"

Table (6): The Role of Artificial Intelligence Techniques in Innovation and Creativity

The role of artificial intelligence technologies in innovation and creativity	Number of Students	Percentage
Artificial Intelligence technologies enhance creativity by providing advanced and powerful analytical tools to understand problems and develop solutions.	7	70%
Artificial intelligence technologies enable the use of data more intelligently, which enhances innovation and development processes in various fields.	7	70%
Artificial intelligence can contribute to finding creative solutions to the technical and social challenges facing society.	6	60%
Artificial intelligence technologies can be a tool for generating new ideas and solving problems more effectively.	5	50%

The table demonstrates that artificial intelligence techniques play a significant role in fostering innovation and creativity among students. The results indicate that artificial intelligence techniques can be an effective tool for generating new ideas and solving problems more efficiently, in addition to providing advanced analytical tools for understanding problems and developing solutions. Furthermore, artificial intelligence enhances the smart use of data, thereby supporting innovation and development processes in various fields and contributing to finding creative solutions to the technical and social challenges facing society.

This result is because artificial intelligence tools are artificial intelligence systems that simulate human mental capabilities, enabling them to perform complex tasks and provide highly intelligent solutions.

Through its various tools, it contributes to enhancing creativity via the Internet, whether in the field of design, writing, or even interactive arts. , which achieves a revolution in global creativity, by improving artistic production processes and unique innovative experiences.

Answering the seventh question, which states: "What recommendations can you offer to teachers and administrators based on your experience using artificial intelligence to improve the learning process?"

Table (7): Recommendations provided by students to teachers and administrators to enhance the learning process:

Recommendations submitted by students	Number of Students	Percentage
Accepting AI assistance and answers by professors	10	100%
Creating an educational environment that encourages interaction and effective participation among students	8	80%
Providing more training and workshops on the use of educational technology	7	70%
Adopting encouraging policies to enhance the integration of technology into the educational process	7	70%
Developing assessment and evaluation techniques to suit artificial intelligence applications	6	60%

The table shows the recommendations that students made to professors and administrators to improve the learning process using artificial intelligence technologies. The recommendations indicate the need to accept AI assistance and answers from professors and provide more training and workshops on the use of educational technology, which helps professors develop their skills in using technical tools in education. In addition, students stress the importance of creating an educational environment conducive to effective participation among students, developing assessment and evaluation techniques to suit artificial intelligence applications, and adopting encouraging policies to enhance the integration of technology into the educational process. Which reflects students' aspirations towards improving the quality of education.

The previous tables explain the results and answers extracted from the interviews, which indicate students' experiences and opinions about using artificial intelligence applications in the learning process, and how this affects their performance and academic achievement, in addition to their recommendations for improving the learning process using smart technology.

* Conclusion

The study's findings indicated the key reasons why students choose to adopt artificial intelligence technology in the learning process. These reasons included a better understanding of challenging topics, more motivation and involvement in the educational process, increased efficacy and efficiency, and students' willingness to try new and exciting

learning activities. This diversity highlights the necessity of using technology to enrich and improve the learning process, as well as to fulfill students' requirements and preferences completely and effectively.

This result is in line with Al-Maliki's (2023) study, which demonstrated the crucial role of artificial intelligence in enhancing teachers' roles, improving learners' performance, and making the learning process more efficient. In addition, the study by Al-Hakami and Madawi (2023) emphasized the importance of awareness of the importance of artificial intelligence technology in improving education and enhancing its outcomes. The researcher believes that this result is due to the progress and development of societies in various fields and sectors, most notably education. Therefore, programs and applications make life easier for them and serve them better. Accordingly, artificial intelligence, in turn, today raises the level of efficiency of the individual through speed and accuracy that exceed human ability, in addition to It achieves accuracy in calculations, saves time and effort, and reduces errors that people may commit.

Moreover, the study showed that students use a variety of applications to learn and interact online, but they appreciate the use of artificial intelligence to improve their understanding of difficult subjects and develop their skills in various fields. This diversity in the use of technology in learning reflects the growing interest in innovative learning, which enhances the learning experience and contributes to the effective development of students' skills. Chen et al. (2020) noted that artificial intelligence is widely used in education, especially by educational institutions in various forms. Initially, artificial intelligence took the form of computer-related technologies, then moved to Internet-based intelligent learning systems and, finally, through the use of embedded computer systems. In addition, robots and human-like robots have been used to perform assignments, enabling teachers to effectively perform various administrative functions, such as reviewing and grading students' assignments more efficiently, thus achieving higher quality in their teaching activities and improving learners' experience and overall learning quality. The researcher also feels that students should be made aware of the relevance of artificial intelligence since it is a part of the future and they will live in a

technologically dominated period, which will affect their thinking abilities and change their learning techniques. Today, he is also in charge of their direction in selecting future jobs. We may also enhance these principles by incorporating artificial intelligence into the school curriculum, arranging workshops and seminars on how to utilize it effectively to maximize its benefits, and encouraging kids to use technology and learn how to engage with it.

The results also showed the tools and programs that students use to apply artificial intelligence programs in education. Differences were found in students' answers and their use of a range of tools and programs, including generative models of artificial intelligence, language learning applications, self-education applications, simulation and experimental programs, and interactive educational games. It became clear that they use these tools and programs to increase their understanding of the subject and develop their educational skills in different ways. This diversity in the use of applications and tools for artificial intelligence may be attributed to the role of e-learning in increasing the use of applications that provide students with an opportunity to learn many skills, as learning through these applications contributes to improving the level of thinking among students, and is also attributed to the ease of using these applications. It can be accessed through smartphones and computers, in addition to the diversity of student needs, which has led to the diversity of these applications to meet all desires and trends.

The study's findings revealed that artificial intelligence apps affect students' performance and academic accomplishment in a variety of ways. It has been demonstrated that students experience anxiety and fear as a result of the impact on the individual and society and that the various methods used by students to overcome this fear include relying on guidance and support from teachers and trainers, as well as continuous development of critical thinking and problem-solving skills. Engage in technology-related debates and educational activities, as well as learn from mistakes. And get experience. This variety of clever techniques and optimistic thinking demonstrates students' capacity to tackle and overcome possible worries associated with the usage of technology in the educational process.

However, on the other hand, we see that these applications

positively affected students' performance and enhanced their academic achievement, as (80)% of students reported an improvement in performance and academic achievement due to the use of these applications. In addition, (90)% of students stated that AI applications motivate them and increase their engagement and willingness to learn. Moreover, (60)% of students confirmed that using these apps reduces their stress levels by making tasks easier for them, thus promoting a positive learning experience. This result is in line with Abu Khatwa's study (2022), which confirmed that the use of artificial intelligence applications in educational institutions increases the quality of education by (89.3)%. Notably, (96)% of research participants believe that AI will soon become part of every job, so students' knowledge of working with it in the classroom will prepare them for their careers.

In addition, the researcher believes that artificial intelligence technologies play an important role in enhancing students' originality and creativity. It is a useful tool for generating new ideas and solving problems more efficiently, thanks to its advanced analytical capabilities to understand problems and find solutions. Moreover, AI improves the consumption of smart data, enhances innovation and development processes in a variety of disciplines, and helps discover innovative solutions to society's technical and social difficulties.

As for the recommendations that students presented to teachers and administrators to improve the learning process using artificial intelligence technologies, they stressed the need to provide more training and workshops on the use of educational technology. This helps teachers develop their skills in using technological tools in education. In addition, the students emphasized the importance of creating an educational environment conducive to effective student participation and developing assessment and evaluation techniques to be in line with artificial intelligence applications. Moreover, it was considered necessary to adopt encouraging policies to enhance the integration of technology into the educational process. These recommendations reflect students' aspirations toward improving the quality of education.

*** Recommendations**

Through the results reached from the interviews with students, the researcher recommends the following: -

1- Work on conducting a study on the impact of artificial intelligence applications on the student learning experience in various educational contexts.

2- Work on designing and developing artificial intelligence applications dedicated to learning. It is possible to focus on developing innovative and effective artificial intelligence applications aimed at improving the learning experience for students in various educational fields.

3- Work on studying the challenges and obstacles in adopting artificial intelligence technologies in education. The research can address the challenges facing the adoption of artificial intelligence technologies in learning environments and the appropriate ways to overcome these challenges.

4- Work on studying the interaction between students and artificial intelligence technologies, which helps in exploring how students interact with artificial intelligence technologies and the factors that affect their adoption of these technologies in the learning process.

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