Mechanisms to activate artificial intelligence in the educational process- Requirements and challenges

آليات تفعيل الذكاء الاصطناعي في العملية التعليمية - المتطلبات والتحديات

Affaf Bellil*

Associate Professor A, University m'sila

affafbellil@univ-msila.dz

Received date : 16/07/2025 Accepted Date : 28/10/2025 Published date : 07/12/2025

Abstract: Artificial intelligence is considered the talk of the hour, especially in the educational field, as it has become a powerful tool for developing the educational process and improving its quality by contributing to improving evaluation methods and facilitating the self-learning process through smart platforms capable of interacting with learners and directing them, and To achieve the maximum benefit from artificial intelligence in education, it is necessary Activating specific mechanisms that facilitate the process of its application, and based on the descriptive approach, in this research paper we will discuss the definition of artificial intelligence and its origins We will reveal its roles in the educational process, and we will also shed light on its requirements, mechanisms, and the challenges facing its application in education.

Keywords: Artificial intelligence, activation mechanisms, development, educational process.

- **الملخص:** يعتبر الذكاء الاصطناعي حديث الساعة لاسيما في المجال التربوي، حيث أصبح أداة قوية لتطوير العملية التعليمية وتحسين جودتها من خلال المساهمة في تحسين أساليب التقييم وتسهيل عملية التعلم الذاتي من خلال منصات ذكية قادرة على التفاعل مع المتعلمين وتوجيههم ،ولتحقيق الاستفادة القصوى من الذكاء الاصطناعي في التعليم من الضروري تفعيل آليات محددة تسهل عملية تطبيقه، وسنتناول في هذه الورقة البحثية تعريف الذكاء الاصطناعي ونشأته، وسنكشف عن أدواره في العملية التعليمية، كما سنسلط الضوء على متطلباته وآلياته والتحديات الي تواجه تطبيقه في التعليم.

الكلمات المفتاحية: الذكاء الاصطناعي، آليات التفعيل، تطوير، العملية التعليمية.

- Research Problem.

Artificial intelligence has witnessed significant and increasing development in our time, and this development has been reflected in all fields. The use of artificial intelligence applications is not limited to industry and services, but has extended to education, which is considered one of the most important fields witnessing widespread use of artificial intelligence. Therefore, it is impossible to ignore the societal

*-Corresponding author

transformations and new opportunities that digital transformations in education offer.

It is also impossible to ignore the importance that artificial intelligence is gaining in all sectors. Even if it has not officially invaded our schools, it is present and evolving, especially through smartphone applications and search engines used daily by students and teachers (Karsenti, 2018, p. 113).

The concept of education has shifted from being a rote process to a dynamic system in which modern technologies interact with the needs of learners and their changing environments. In this context, artificial intelligence has emerged as a promising tool for reshaping education by developing more personalized educational models that improve the quality of education, reduce administrative burdens on teachers, facilitate assessment processes, predict student academic performance, support educational decision-making, and automate administrative tasks.

Based on the above, we ask the following questions:

1. What is the concept of artificial intelligence in education?

2. What is the role of artificial intelligence in education?

3. What are the requirements for implementing artificial intelligence in education?

4. What are the challenges facing the application of artificial intelligence in education?

5. What are the mechanisms for implementing artificial intelligence in education?

Study's significance

- The studies addressing the role of artificial intelligence in the educational process are few.

- The importance of this study stems from the pivotal role artificial intelligence plays in education and the resulting fundamental transformations in teaching methods, learning styles, and assessment.

- It provides a comprehensive vision that helps decision-makers, researchers, and professors understand how to effectively employ artificial intelligence within the educational environment.

- The growing global trend toward employing artificial intelligence in classrooms

- Study objectives

- Understand the concept of artificial intelligence, its origins, characteristics, areas of application, and benefits.
- Explore the role of artificial intelligence in education.
- Identify the technical, human, and financial requirements necessary for its successful implementation in educational institutions.
- Identify the most significant challenges hindering the use of artificial intelligence in education.
- Explore mechanisms for using artificial intelligence to support education and teaching.

- Study concepts

1. Artificial intelligence: The use of computer technologies, systems, and algorithms capable of simulating human mental abilities, such as learning and thinking. This helps improve student learning by adapting content and teaching methods based on learners' needs and enhancing the educational process in general.

2. The educational process: is the system that includes all educational activities aimed at transferring knowledge, skills, and values from teacher to learner through organized interaction between teacher and learner, utilizing curricula, educational tools, and the educational environment.

3. Activation mechanisms: These are the tools, methods, and procedures used to implement artificial intelligence within the education system with the aim of improving educational and pedagogical performance.

- Previous Studies

1.A study by Mi'ad bint Abdullah bin Saad Al Namlan (2024): entitled "Application of Artificial Intelligence in Education Administrations". The study aimed to explore the reality of the performance of education department leaders in light of artificial intelligence in the dimensions of decision-making, problem-solving, teaching, and performance management. The study adopted a descriptive approach, using a questionnaire as a tool for data collection. The sample consisted of 2055

individuals, including education department directors and their assistants, department directors in education departments in the cities of Riyadh, Asir, and Najran, as well as their education directors and assistants, as well as education office supervisors for those departments. The study concluded that, from their perspective, the performance of education department leaders in light of artificial intelligence achieved an average score across all dimensions of the questionnaire. The decision-making and problem-solving dimension topped the three dimensions, followed by the performance management dimension, followed by the training dimension in last place.

2.A study by Duaa Muhammad and Ahmed Dasouki (2024) entitled "The Role of Artificial Intelligence in Developing the School Management System." The study aimed to identify the role of artificial intelligence in developing the school administration system in Egypt and to examine the theoretical foundations of artificial intelligence based on contemporary literature and the intellectual framework of the school administration system in Egypt. The study relied on a descriptive approach. Among its most important findings was the presence of some obstacles facing the application of artificial intelligence in the field of school administration. These obstacles include the lack of awareness and familiarity of the administration with the importance of employing modern technologies in school work, coupled with the lack of financial support available to schools, despite the importance of artificial intelligence applications in the field of school work and administration, and its role in improving the quality of school work and developing administrative practices.

3.A study by Lulua bint Saleh bin Ibrahim (2024): The role of artificial intelligence in the professional development of faculty members in emerging Saudi universities: A proposed vision. The study aimed to investigate the role of artificial intelligence in the professional development of faculty members, reveal the reality of its use, identify the challenges and obstacles facing it, and develop a proposed vision for improving its use in developing faculty members' skills. A descriptive-analytical approach was used, with a questionnaire distributed to 371 faculty members. The study

revealed the average level of use of artificial intelligence in the targeted universities and highlighted the importance of its use in developing professional knowledge and improving the quality of the teaching process.

4.A study by Naima bint Ali bin Saud Al-Rahbi and Ahmed bin Yasser bin Hamoud Al-Ruqaishi (2024): School administration's use of artificial intelligence and its relationship to achieving a competitive advantage in government schools in the Sultanate of Oman. The study aimed to identify the degree of administrative use of artificial intelligence and its relationship to achieving a competitive advantage in government schools in the Sultanate of Oman. The study used a descriptive correlational approach, using a questionnaire as a data collection tool. The questionnaire was administered to a sample of 376 male and female teachers. The results revealed no statistically significant differences in the sample members' responses regarding the degree of artificial intelligence use attributed to variables (gender, job title, educational governorate). The degree of competitive advantage in government schools in the Sultanate of Oman, from the teachers' perspective, was high across all dimensions. The study also revealed no significant differences in the degree of competitive advantage across all dimensions attributed to the study variables. It also revealed a significant correlation between administrative use of artificial intelligence and the degree of competitive advantage achieved in government schools, a strong and direct relationship.

5.Ali Al-Ansari's (2023) study: The role of management in promoting the culture of artificial intelligence among public education students in the State of Kuwait. The study aimed to identify the role of school administration in promoting a culture of artificial intelligence among public education students in the State of Kuwait and to uncover differences among the study sample according to variables (gender, educational level, years of experience, and educational district). The researcher used a descriptive survey approach through a questionnaire administered to a sample of 496 male and female teachers. The study concluded that the role of school administration

in promoting a culture of artificial intelligence was moderate. The results also showed statistically significant differences between the sample response averages attributed to the variable of years of experience, in favor of the study sample (10/15 years). There were no differences attributed to the variables of gender and educational district.

6.A study by Ali Saeed Salim Al-Matari and Amina bint Rashid Al-Rasibiya (2023) on the role of artificial intelligence in developing supervisory practices among first-line supervisors and school administration supervisors in the Sultanate of Oman. The study aimed to identify the role of artificial intelligence in developing supervisory practices among first-line supervisors and school administration supervisors in the Sultanate of Oman. A descriptive-analytical approach was adopted, with a questionnaire distributed to a sample of first-line supervisors and school administration supervisors. The study sample consisted of 9 first-line supervisors and 46 administration supervisors. The study results showed that the overall score for the use of artificial intelligence technologies by first-line supervisors and administration supervisors in the supervisory process in the Sultanate of Oman was low, with an arithmetic mean of 2.41. The results also showed no significant differences in the use of artificial intelligence technologies by supervisors attributable to the study variables.

- Evaluation of Previous Studies:

After reviewing the previous studies, we will proceed to discuss them by highlighting the point of similarity and difference among them**:**

study	Title	approach	Sample Study	Tool	Results
Mi'ad bint Abdullah bin Saad Al Namlan (2024)	Application of Artificial Intelligence in Education Administrations	Descriptive	2055 individuals	Questionnaire	The study concluded that, from their perspective, the performance of education department leaders in light of artificial intelligence achieved an average score

					across all dimensions of the questionnaire.
Duaa Muhammad and Ahmed Dasouki (2024)	The Role of Artificial Intelligence in Developing the School Management System	Descriptive		Questionnaire	These obstacles include the lack of awareness and familiarity of the administration with the importance of employing modern technologies in school work, coupled with the lack of financial support available to schools.
Lulua bint Saleh bin Ibrahim (2024)	The role of artificial intelligence in the professional development of faculty members in emerging Saudi Universities	Descriptive	371	Questionnaire	The study revealed the average level of use of artificial intelligence in the targeted universities and highlighted the importance of its use in developing professional knowledge and improving the quality of the teaching process.
Naima bint Ali bin Saud Al-Rahbi and Ahmed bin Yasser bin Hamoud Al-Ruqaishi (2024)	School administration's use of artificial intelligence and its relationship to achieving a competitive advantage	Descriptive	376	Questionnaire	The study also revealed no significant differences in the degree of competitive advantage across all dimensions attributed to the study variables

Ali Al-Ansari's (2023)	The role of management in promoting the culture of artificial intelligence among public education	Descriptive	496	Questionnaire	The results also showed statistically significant differences between the sample response averages attributed to the variable of years of experience, in favor of the study sample (10/15 years).
Ali Saeed Salim Al-Matari and Amina bint Rashid Al-Rasibiya (2023)	the role of artificial intelligence in developing supervisory practices among first-line supervisors and school administration supervisors in the Sultanate of Oman	Descriptive	9 supervisors and46 administration supervisors.	Questionnaire	The study results showed that the overall score for the use of artificial intelligence technologies by first-line supervisors and administration supervisors in the supervisory process in the Sultanate of Oman was low.

- Theoretical Framework:

- The Origins of Artificial Intelligence:

The term "artificial intelligence" emerged in the 1950s, specifically in 1956, when Alan Test presented what is known as the Turing Test, which assessed the intelligence of a computer and classified it as intelligent if it could simulate the human mind. The concept of artificial intelligence was officially announced by John Macarthy at a two-month workshop that brought together researchers interested in artificial neural networks. The concept of artificial intelligence went through the following stages:

1.The first stage: Automated models were developed that could perform simple behaviors, such as learning, but failed to perform complex behaviors. These models relied on neural networks.

2.The second stage: In the 1970s, the process of knowledge engineering began at the Stanford Research Institute, led by **Edward Feagin**, one of the most prominent artificial intelligence scientists and a member of the Robotics Association.

3.The third stage: In the 1980s, the machine learning movement began, and the programming process of acquiring and extracting knowledge and putting it into machines began.

4.The fourth stage: In the 1990s, due to the tremendous development of computers in terms of speed and storage capacity, as well as the development of psychology in the field of intelligence, scientists redirected artificial intelligence to neural networks and the development of neuroscience networks.

5.The Fifth Stage: In 2000, artificial intelligence entered a new phase of development. It achieved greater successes that changed the fate of humanity. This development is attributed to several factors, including researchers' commitment to mathematical methods and strong, rigorous scientific standards, which led to increased computer power. It also focused on creating new relationships between artificial intelligence and specific subfields, where it became used in medical diagnosis.

6.The sixth stage: From 2011 to the present day, artificial intelligence has entered advanced and flourishing stages and has been applied to various areas of life. The concept of deep neural networks has emerged in robotics, natural language processing, and research in robotics, virtual learning, and augmented reality based on artificial intelligence has developed. (Al-Ghamdi, 2024, p. 11).

Thus, the concept of artificial intelligence (AI) emerged and has evolved over the years to become one of the most prominent technologies of the twenty-first century. Its primary goal is to simulate human mental abilities for thinking, analysis, and learning through computer systems. (Al-Aliwi, 2023, p. 1)

-Definition of intelligence: Intelligence is a word taken from the Latin word "intelligentia," which means the ability to understand and connect elements. There are multiple types of intelligence: mathematical, visual, spatial, linguistic, verbal, bodily-kinesthetic, and musical. (Mathivet, 2014, p. 19)

- Definition of Artificial Intelligence:

- Rabai'iah (2009) defined artificial intelligence as the study of intellectual abilities through the use of computer models, which focuses on simulating human thinking. **(**Al-Faraj, 2024 p.180)

- Qatami views artificial intelligence as the science that seeks to develop computer systems that operate with a high level of efficiency similar to that of an expert human. That is, it is the machine's ability to imitate and simulate human motor and mental processes, the way the mind works in thinking, deduction, and the use of previous experiences and intelligent reactions. It emulates the human mind and performs its role. (Al-Ghamdi, 2024, p.1)

- Andreas Kaplan and Michael Heinlein define it as the ability of a system to correctly interpret personal data, learn from this data, and use those lessons to achieve specific goals and tasks through flexible adaptation (Al-Ghamdi, 2024, p. 12).

- Artificial intelligence is a branch of computer science concerned with designing systems capable of performing tasks that typically require human intelligence, such as learning, reasoning, and decision-making (Al-Raqeba, 2024, p. 101).

- Raviprolu defined it as a theory of the evolution of computer systems' ability to perform tasks that typically require artificial intelligence, such as decision-making and translation into another language, as a rational and intelligent device **(**Al-Namlan, 2024).

- It was defined by Feigenbaum, Simon, and Winston as the science of the future.

- Artificial intelligence aims to enable computers to perform tasks at which humans currently outperform machines (Malliot, Schiex, Brisset, 2002, p. 35).

- Definition of artificial intelligence in education

-Artificial intelligence in education is the use of intelligence within educational institutions to develop modern tools and methods that keep pace with global developments in the field of education.

- It is the use of artificial intelligence in classrooms or at the level of educational institutions to provide tools and methods that can support teaching and teachers, assess learning or teaching, provide lifelong learning opportunities, and develop skills necessary for life and work.

The importance of artificial intelligence:

Artificial intelligence is emerging as a key enabler and enabler, particularly in vital fields such as medicine, law, education, and security. It contributes to diagnosing diseases, prescribing treatment, providing legal and professional advice, enhancing interactive education, and supporting security and military operations. (Al-Faraj, 2024, p.182)

- It contributes to simplifying teaching to ensure every student receives a quality education.

- Artificial intelligence applications can alleviate the burden of teachers' workloads, such as grading exams and evaluating assignments, thereby freeing up time for research and developing educational content for students. (Al-Ghamdi: 2024, p. 28)

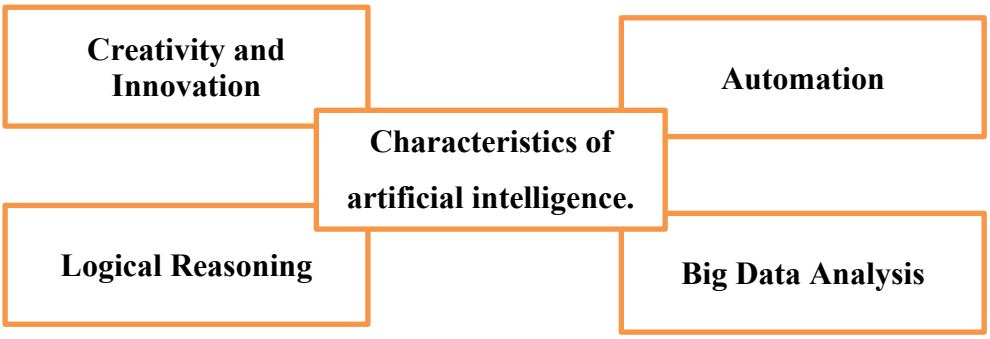
- Characteristics of artificial intelligence.

1.Automation: AI has the ability to perform repetitive and complex tasks faster and with greater accuracy, increasing efficiency and saving time and resources.

2. Creativity and Innovation: AI can generate new ideas and innovative solutions based on data analysis and provide recommendations based on self-learning and cognitive processing.

3. Big Data Analysis: AI can process and analyze massive amounts of data very quickly, extracting patterns from complex data in a short time.

4. Logical Reasoning: Artificial intelligence has the ability to analyze information and reach logical conclusions based on available data. (Mohamed, Dasouki, 2024, p.908)



A figure representing the characteristics of artificial intelligence

- Types of Artificial Intelligence:

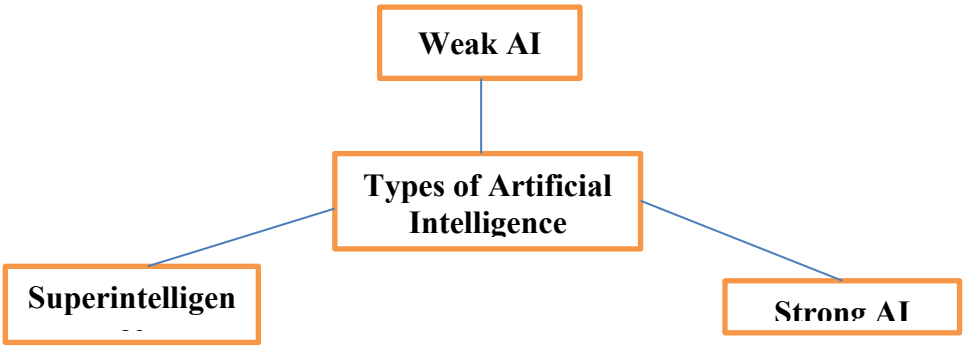
Artificial intelligence experts have agreed on three types:

1.Weak AI: This is the simplest type of artificial intelligence, where the computer is programmed to perform specific tasks, programs, and algorithms in specific fields and can only operate under specific environmental conditions.

2.Strong AI: This type of intelligence can collect and analyze information and data, and accumulate experiences from the situations it acquires, enabling it to make decisions with autonomy and independence.

3.Superintelligence: Super AI. This type is relatively new and still experimental. It aims to simulate humans. Two basic types can be distinguished:

The first attempts to understand human thoughts and emotions that influence human behavior and possess specific skills in interacting and communicating socially with humans. The second is a model of the theory of mind that enables one to predict the feelings and attitudes of others and interact with them (Al-Ghamdi, 2024, p.18).



A figure representing the types of artificial intelligence

- Benefits of artificial intelligence: The benefits of artificial intelligence include the following:

1.Improving efficiency and increasing productivity: Robots and intelligent systems can perform tasks faster and more accurately than previously deployed in many sectors, helping to increase productivity and reduce costs. They perform tasks with quality, reducing risks and increasing production speed.

2. Medical field: Artificial intelligence is useful in disease identification and medical diagnosis. It helps doctors diagnose and detect diseases in their early stages, allowing for rapid and appropriate treatment. It also helps doctors accurately diagnose diseases. Artificial intelligence also helps doctors perform delicate and complex surgeries, reducing surgical risks and speeding up recovery times.

3. Psychological support: Robots and applications using intelligence have been developed to provide psychological support and mental training for people suffering from mental disorders.

4. Field of scientific research: Artificial intelligence helps serve and accelerate scientific progress. Intelligent systems are used to analyze large amounts of data and conduct scientific experiments, accelerating the pace of discovery. This helps researchers extract valuable information related to their research. It also facilitates researchers' implementation of experiments, achieving more accurate results, and

identifying duplicate or duplicate research. Statistical analysis tools based on artificial intelligence help researchers analyze their results more effectively.

5. Education: Artificial intelligence systems enable the delivery of an individualized learning experience based on each student's needs and learning style. By analyzing student performance and responses, learning materials can be adapted to suit their individual needs. Educational resources can also be analyzed and evaluated to meet individual needs, as well as to analyze and evaluate educational materials and provide recommendations for improvement or modification. Artificial intelligence is also used to create new educational content that meets modern requirements and provides educational tools tailored to individual needs. Artificial intelligence also improves the quality of education by assisting in assessing student performance. It is expected that more applications will be added to help achieve a more effective and inclusive learning environment.

6.Improving the quality of decision-making support: In the face of the increasing challenges and problems facing individuals and institutions in various fields, everyone is striving to improve and enhance the quality of decisions. This is possible through the provision of tools and technologies capable of supporting and enhancing the decision-making process. Intelligence systems also provide recommendations and suggestions based on analysis, helping decision-makers reach the appropriate decision. Therefore, artificial intelligence has become an important tool in supporting decision-making, whether at the individual or institutional level.

- Areas of application of artificial intelligence:

The following are among the areas that have benefited most from artificial intelligence applications:

1.Medical field: Artificial intelligence is used to analyze medical data and assist doctors in diagnosing diseases and recommending the best treatments.

2.In the business field: Intelligent systems analyze financial data, suggest investment strategies, and detect financial fraud.

3.In the transportation field: It has been used in the development of self-driving cars and smart transportation systems that improve road safety and efficiency.

4.In the marketing and sales field: Artificial intelligence enables the transformation of consumer data and the development of better targeted advertising in the marketing and sales field. (Alawi, 2023, p. 17).

- The Role of Artificial Intelligence in Education:

The contributions of artificial intelligence in education are extremely significant and have brought many benefits to both teachers and learners. This field combines the sciences of artificial intelligence and educational technology, with the goal of deepening both teachers' and learners' understanding of how learning works and making the impact of external factors more visible and comprehensive, with the support of artificial intelligence technology (Hazza, 2023, p. 74).

- Providing personalized education to teachers and learners based on their needs.
- Automated grading of coursework, freeing up teachers' time for other tasks.
- Providing smart teaching platforms for distance learning.
- Offering new ways to interact with information.
- Expanding opportunities for learners to communicate and collaborate.

- Making distance learning easier as learners can learn anywhere and anytime.
- Providing assistance to teachers with homework

- Data collection, storage, and storage
- Expanding self-learning opportunities for students and making them active participants in the educational process. It also supports students' innovation and creativity.
- Artificial intelligence is considered the most important mechanism for utilizing technological development in the educational field. It creates a space for communication and interaction between teachers and students, and helps students learn in the easiest ways and with the least possible effort and time.

- Reducing the burden on learners, such as correcting exams and evaluating assignments, and devoting more time to students through the use of artificial intelligence technologies.
- These technologies can solve the problem of the information explosion and technological and cognitive development. It is expected that the validity of knowledge and information learned by humans in the future will reach five years. Therefore, the process of developing scientific curricula and textbooks will take five years. These technologies are also capable of identifying and presenting lessons to students in a manner that suits their needs and abilities.
- These AI-based self-paced programs can help students adapt to and understand the educational material and acquire life skills through the use of diverse educational media.
- AI applications help facilitate teachers' work with their students by providing feedback, assessing student performance, and identifying strengths and weaknesses in the lesson, which contributes to the development of the educational process.
- These technologies eliminate boredom and routine in teaching and add fun and freshness to classrooms.
- They contribute to increasing the efficiency of administrative and educational work. (Al-Ghamdi, 2024, p. 2).

- Requirements for employing artificial intelligence in education

1.Technical Requirements: These include:

- Holding workshops to train teaching staff on the application of artificial intelligence in the educational process.
- Issuing laws requiring teaching staff to apply artificial intelligence in the educational process.

- Working to update traditional policies in the educational process and striving to spread and consolidate the culture of artificial intelligence among teaching staff and students.

2.Human Requirements: These include:

- An intelligent and knowledgeable administrative leadership capable of providing qualified trainers to train teaching staff and providing experts capable of designing and developing AI applications.
- Management familiar with the rules and regulations governing the application of artificial intelligence in the educational process.
- The availability of technicians to maintain and troubleshoot computers and network malfunctions.

3.Financial requirements: These include:

- Providing financial allocations to attract experts in the field of artificial intelligence to train and qualify educational staff.
- Allocating funds to purchase computers and determining the cost of their periodic maintenance.
- Providing financial allocations to purchase new programs and applications for the teaching process and determining the cost of their development. (Al-Ghamdi: 2024, p.34).

- Challenges Facing the Use of Artificial Intelligence in Education:

- Lack of trained and specialized personnel in the field of artificial intelligence and its applications in education.
- Lack of the necessary environment to support artificial intelligence applications in education, such as wireless communication networks, computers, and advanced software compatible with the requirements of these applications.

- Rehabilitating trainers and developing their teaching skills to suit artificial intelligence technologies by providing them with the knowledge and methods that help them use these applications effectively in the teaching and learning process.
- Lack of awareness among learners and administrators of the importance of employing AI applications and the benefits they can bring to increasing the efficiency and quality of the teaching and learning process and improving educational outcomes.
- Some teachers' lack of desire to incorporate AI into their training and their lack of conviction about its importance.
- Lack of teacher training programs that utilize AI applications in education.
- Lack of financial allocations for the use of AI in education, which includes the costs of purchasing, maintaining, and updating hardware and software, training trainers, and monitoring, evaluating, and improving systems. (Al-Ghamdi, 2024).
- Lack of computer and software infrastructure
- Lack of financial allocations for the implementation of AI applications
- Lack of interest among professors and administration and their lack of conviction in its importance. (Al-Faraj, 2024, p. 186).
- Cognitive challenges, including difficulty trusting information from AI applications, as they sometimes contain misleading and unreliable data, in addition to weak oversight of plagiarism in AI applications. (Muhammad, Al-Dasouqi, 2024, p. 186)

- Mechanisms for Activating Artificial Intelligence in Education:

- Designing training programs for school principals on how to use artificial intelligence applications in administrative work.

- Providing the necessary financial resources to implement artificial intelligence applications in all areas of school work in general and administrative work in particular.
- Implementing awareness campaigns for teachers and administrators at various educational levels on the importance of using artificial intelligence to improve education.
- Establishing an efficient and high-speed internet network in schools (Mohamed, Dasouki, 2024, p. 926).
- Developing and nurturing specialized scientific competencies in artificial intelligence.
- The necessity of establishing a code of ethics for artificial intelligence in education and adhering to ethical controls for its use in education.

- Conclusion: In light of the global technological advancements, artificial intelligence (AI) is emerging as one of the key factors reshaping education in our current era. It has become imperative to integrate AI technologies into educational institutions to keep pace with changes and meet learners' needs. It is a supportive tool that can enhance teachers' capabilities and open new horizons for learning, provided it is employed rationally and in a way that serves a clear educational vision that takes into account the needs of individuals and communities.

This research paper recommended a set of recommendations, which are as follows:

- Strengthening the technological infrastructure in various educational institutions and providing high-speed internet access.
- Training professors and educational staff and enhancing their skills in using artificial intelligence in the educational process.
- The necessity of leveraging artificial intelligence applications in curriculum design.
- Relying on artificial intelligence applications to evaluate student performance and enhance their strengths.
- Conducting further studies on artificial intelligence in education.

- References:

- Al-Ruqaiba, Abdullah bin Ahmed (2024). The Role of Artificial Intelligence in Improving the Efficiency of Administrative Processes, Journal of Educational and Human Sciences, Issue 40, pp. 101-111

- Al-Faraj, Lulua bint Saleh bin Ibrahim (2024): Artificial Intelligence in the Professional Development of Faculty Members in Emerging Saudi Universities: A Proposed Concept, Journal of Educational Administration, N° 42

- Al-Ghamdi, Muhammad bin Fawzi (2024). Artificial Intelligence in Education, 1st ed., Fahd National Library.

-Dasouki, Duaa Muhammad Ahmad (2024). The Role of Artificial Intelligence in Developing the School Administration System: Opportunities and Challenges, Journal of Educational and Social Studies, Jilwan University, pp. 30-937.

- Alawi, Maryam Qais (2023): Artificial Intelligence, Its Development, Applications, and Challenges, Lulab for Strategic Studies, a peer-reviewed journal issued by the Center for Artificial Intelligence Studies, N°20.

-bint hazza, Mashael (2023). Improving the Administrative Performance of Secondary School Principals in Hafar Al-Batin Governorate in Light of Artificial Intelligence Requirements, Journal of the Al-Jazeera Center for Educational and Human Research, Volume 2, N°17.

- Al Namlan, Mayad bint Abdullah bin Saeed (2024). Application of Artificial Intelligence in Education Departments, Journal of Arts, Literature, Humanities and Social Sciences, N°112.

- J.Malliot, T.Schiex, P.Brisset , F. Garcia, Intelligence artificielle &Informatique théorique, 2ed, cépadues éditions.

-Stuart Russell & Peter Norvig (2022). Artificial Intelligence a Modern Aproach,4th ed.

-Thierry Karsenti (2018). En éducation, L'urgence de préparer les futurs enseignants aujourd'hui pour l'école de demain, université de Montréal.

-Virginie Mathivet (2014). L'Intelligence Artificielle pour les développeurs concepts et implémentations, Edition ENI.