

Faculty Members' Perceptions in Palestinian Universities Regarding the Employment of Artificial Intelligence in Improving University Teaching Strategies: A Qualitative Study

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Abstract:

The study aimed to identify the perceptions of faculty members in Palestinian universities regarding the employment of artificial intelligence applications in improving university teaching strategies. In order to achieve this, the study relied on the qualitative approach, where a purposive sample of faculty members in Palestinian universities consisting of (15) faculty members was selected through purposive sampling. The semi-structured interview was used with them as a tool for collecting data, and in their selection, different specializations, diverse scientific experiences, and diverse academic degrees were taken into account. The data were analyzed according to their topics (themes) to reveal the common and different patterns and perceptions. The results revealed that there is a growing awareness of the use of artificial intelligence tools among faculty members, with a clear variation in a deep understanding of the practical applications of artificial intelligence. The participants in the study believe that artificial intelligence provides promising opportunities for developing education, providing immediate feedback, continuously developing educational content, and freeing faculty members from repetitive administrative tasks and focusing instead on directing and guiding students. On the other hand, important challenges appeared, represented in ethical concerns related to privatization and algorithmic bias, resistance to change, and lack of digital skills, in addition to obstacles related to infrastructure and limited institutional support in the Palestinian reality. The results of the study also showed that the roles of faculty members and students will be reshaped through integrating them with artificial intelligence, and this requires developing new competencies. The study also emphasized the importance of understanding the multiple perceptions of faculty members in order to effectively guide initiatives and policies of artificial intelligence integration in Palestinian higher education institutions, in a way that ensures achieving the desired benefits while reducing the severity of potential risks. The study concluded that the success of this digital transformation is linked to setting specific and clear strategies, providing the necessary and continuous training, while taking into account building the supportive infrastructure that responds to the Palestinian educational reality. Understanding the viewpoints of faculty members is a crucial step toward a thoughtful and sustainable adoption of technological transformation.

Introduction:

Artificial intelligence is leading an accelerating scientific revolution witnessed by the world recently through reshaping the features of its various vital sectors, the most important of which is the higher education sector. Artificial intelligence applications are no longer limited to merely theoretical concepts, but have become a tangible reality manifested in adaptive learning systems, virtual assistants, educational data analysis tools, and platforms for creating innovative educational content. Artificial intelligence technologies have brought about a qualitative shift in teaching and learning methods through providing customized educational experiences that meet the individual differences among students and their needs, enhance interaction and participation, and provide effective and immediate assessment tools, which opens new horizons for improving the quality of educational outcomes and helps students acquire twenty-first-century skills effectively.

In light of the global transformation, universities find themselves before an urgent necessity to explore the possibilities of artificial intelligence and integrate it into their educational systems. However, adopting any new technology does not depend only on its inherent advantages, but is decisively affected by the perceptions of faculty members who will work on using and applying it. The faculty member is considered an essential element in the teaching-learning process, where their attitudes and perceptions play a pivotal role in the success or failure of any initiative aimed at developing educational practices in understanding the opportunities offered by artificial intelligence and their awareness of the challenges that may accompany its application, and their readiness to adapt their traditional roles. All these are factors that determine the extent of the effectiveness of absorbing this technology in the university academic environment (Verboom, 2025).

Despite the increasing global interest in the role of artificial intelligence in education, the studies that addressed this subject from the perspective of faculty members in the Palestinian context are still limited, and most available research focuses on the technical aspects or reviews case studies from university environments that differ radically from the Palestinian reality. Some local studies indicate that faculty members realize the existence of major problems in the current educational reality, which may affect their readiness to adopt new technologies (Omar & Khlaif, 2024). Consequently, a large knowledge gap emerges, represented in the absence of a deep and qualitative understanding of the perceptions of this main segment in university life, which is considered the main criterion for any process of academic educational development in universities.

From the educational perspective, the employment of artificial intelligence intersects with the principles of constructivist learning and student-centered learning, as it provides learning environments rich in context, multimodal interactions, and expanded opportunities for experimentation and inquiry, in a way that supports the development of twenty-first-century skills such as critical thinking, creativity, problem-solving, and cooperation (UNESCO, 2024). Research evidence also shows that the effective integration of artificial intelligence contributes to improving indicators of achievement and participation and reduces learning gaps through adapting to the different patterns of learners (Bond & et al., 2024). However, these gains are not inevitable; as they depend on the quality of educational design, the extent of alignment of

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the tools with the objectives of the course, and the ability of the faculty member to employ them in a critical and conscious employment (Selwyn, 2022).

The subject of faculty members' perceptions regarding the use of artificial intelligence in teaching acquires special importance in the Palestinian university environment, especially as it works within difficult and complex political and economic conditions that cast their shadows on all aspects of life, including all sectors of Palestinian higher education (Isaac and et al, 2019). This sector faces unique challenges related to limited resources, the aging of infrastructure sometimes, and the continuous need to adapt to a changing and volatile reality (Smith, 2023). In this field, artificial intelligence is viewed as a powerful tool to overcome some of these obstacles, enhance the flexibility of the educational system in Palestinian universities, and connect students with global academic standards. On the other hand, it may also be viewed as an additional burden that increases the digital gap and requires investments and training that may not be easily and conveniently available.

Despite the promising potentials, the integration of artificial intelligence in university education faces a package of cognitive, professional, and ethical challenges. On the one hand, recent studies indicate the existence of a gap between the available technical potentials and the level of their actual employment inside classrooms, which is attributed to the lack of digital and pedagogical competencies, and the weakness of sustainable professional development programs (Crompton & Burke, 2023; Tan,& et al 2025). On the other hand, issues emerge related to academic integrity, reliability of outputs, algorithmic biases, and intellectual property rights, which requires governing frameworks and clear institutional policies (UNESCO, 2024). Also, faculty members' perceptions and attitudes represent a decisive factor in adopting these technologies or resisting them; positive attitudes enhance innovation and experimentation, while concerns and conceptual ambiguities lead to slowing down actual integration (Selwyn, 2022; de Silva et al,2026).

In educational contexts that suffer from constraints in digital infrastructure and disparity in opportunities for access to technology, the challenges related to employing artificial intelligence technologies in university education increase noticeably. The matter is not limited to the limitation of technical resources, such as weak Internet networks or the lack of digital equipment, but extends to include the absence of integration between educational policies and actual applications within academic institutions, which limits the effectiveness of digital transformation initiatives. The disparity in the level of digital competencies among faculty members also contributes to deepening the gap between the available potentials and the actual application of these technologies in teaching practices.

In the Palestinian case in particular, these challenges intertwine with the specificity of the political and economic context, which imposes additional constraints on developing the digital infrastructure and modernizing higher education systems. In light of the increasing need to improve the quality of university education and keep pace with global standards, employing artificial intelligence emerges as a promising strategic option. However, the success of this direction is linked to a large degree to the extent of faculty members' awareness of the

potentials of these technologies, their perception of their limits, and their ability to integrate them within effective and ethical teaching strategies.

Accordingly, understanding faculty members' perceptions is not limited to being a description of their attitudes, but rather represents an essential analytical entry point for interpreting patterns of adoption or resistance toward the use of artificial intelligence in education. It also contributes to revealing the actual needs for building professional capacities, guiding the design of specialized training programs, and supporting the formulation of integrated educational policies that enhance the responsible and effective use of these technologies, in a way that contributes to developing the quality of university education and ensuring the sustainability of innovation in it.

Study Problem

Despite the rapid progress in artificial intelligence technologies and the promising potentials they provide for improving the quality of university education and developing teaching strategies, the employment of these technologies within the academic environment still faces multiple challenges. Recent studies have confirmed that artificial intelligence, especially generative artificial intelligence, possesses a great ability to support customized learning, enhance interaction, and improve the design of educational activities. However, the actual benefit from it in higher education is still below the expected level (Kasneci & et al.2023; UNESCO,2024). Recent reports also indicate that the gap between technical potentials and actual application represents one of the most prominent challenges in integrating artificial intelligence into university education (Crompton & Burke, 2023; Tan, 2025).

From here, the study problem crystallizes in the need for a deeper understanding of the perceptions of faculty members in Palestinian universities regarding the employment of artificial intelligence in improving university teaching strategies, considering that these perceptions represent an important factor in adopting these technologies or resisting their use. The absence of a clear understanding of these perceptions may hinder the design of effective training interventions or the development of educational policies capable of supporting the optimal use of artificial intelligence. Accordingly, this study seeks to answer the main question represented in:

What are the perceptions of faculty members in Palestinian universities regarding the employment of artificial intelligence in improving university teaching strategies?

Study Objectives:

This study aims to understand how faculty members view the use of artificial intelligence in university education, through:

1. Identifying the awareness of faculty members in Palestinian universities of artificial intelligence and what they have of concepts of its applications in the field of teaching.

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2. Exploring the opportunities that faculty members in Palestinian universities perceive as possible when using artificial intelligence in improving the quality of teaching and enhancing the students' learning experience.
3. Identifying the challenges and difficulties that may hinder the application of these technologies within the Palestinian university environment, as perceived by faculty members in Palestinian universities.
4. Understanding how the use of artificial intelligence can affect the roles of both the faculty member and the student compared with traditional roles.
5. Determining the requirements of application, the needs and procedures necessary to ensure the effective application of artificial intelligence in the educational environment in Palestinian universities.

Study Methodology:

The study adopted the interpretive approach that focuses on understanding the perceptions of faculty members toward employing artificial intelligence tools in university teaching, due to the nature of this complex phenomenon affected by individual and institutional fields. This approach focuses on interpreting the meanings that individuals give to their experiences, which allows a deep understanding of their viewpoints instead of measuring them quantitatively. In harmony with that, the qualitative method was adopted as an applied procedural framework for the study, due to what it provides of ability to collect rich and detailed data through direct interaction with the participants. Based on the above, this method allowed the exploration of multiple dimensions of faculty members' perceptions, such as the level of awareness, expectations of opportunities and challenges, and potential changes in educational roles, which are aspects that are difficult to address accurately using quantitative methods.

Study Population and Sample

The study population consists of all academic faculty members working in Palestinian universities in the West Bank during the academic year (2025–2026). Due to the nature of the qualitative study, which does not aim to generalize the results using statistical methods as much as it seeks to achieve an in-depth understanding of the phenomenon under study, the purposive sampling method was adopted to select the participants, in a way that ensures obtaining rich and diverse data that reflect different experiences and opinions.

The participants were selected based on a set of criteria that aim to enhance the diversity of the sample and enrich the extracted information. First, diversity in academic specializations was taken into account, through involving faculty members from multiple fields including humanities, applied sciences, health sciences, engineering, and information technology, in a way that allows a broader understanding of the difference in perceptions according to the different fields of knowledge. Diversity in academic ranks and years of experience was also taken into account, as the sample included members from different academic degrees (professor, associate professor, assistant professor, and lecturer), and with different teaching experiences, which contributes to highlighting the variation in professional experiences and their effect on perceptions. In addition to that, diversity in affiliation with universities was taken into

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consideration, through selecting participants from public, governmental, and private universities, with the aim of a broader representation of the Palestinian academic context and the differences in its organizational environments.

The final sample size reached (15) faculty members, which is a suitable size for the nature of qualitative research that focuses on the depth and quality of data more than its size. The stage of theoretical saturation was reached after the twelfth interview, where information and ideas began to recur without the emergence of substantially new contents or dimensions. To ensure confidentiality and privacy, identification codes were used instead of the real names of the participants, such as: (1. A.H.) (2. A.T.) when presenting and analyzing the results.

Study Tool:

The two researchers adopted the semi-structured interview for the purposes of data collection as a main tool in this study, due to its ability to achieve balance between organization and flexibility. This tool depends on a set of questions prepared in advance to ensure covering all the axes of the study, while allowing the researcher to ask clarifying questions according to the course of the participants' answers, in order to achieve a deep understanding and explore new dimensions of the subject.

This type of interviews allowed conducting in-depth interactive discussions with the participants, which enabled reaching their perceptions, experiences, and opinions in a freer and richer manner, away from the restrictions that may be imposed by quantitative tools.

The interview guide was developed based on a comprehensive review of the literature related to the subject, in addition to the objectives and questions of the study, so that it directly reflects the main fields of the study. The interview guide contained five main fields, each of which included a set of open questions that were carefully formulated to be clear, non-directive, and to allow the participant to express his opinions freely. These fields were represented in:

1. Awareness and basic concepts: with the aim of exploring the participants' level of knowledge of artificial intelligence and the sources of acquiring this knowledge.
2. Perceived opportunities: to identify the potentials and benefits they see in employing artificial intelligence in the teaching process.
3. Challenges and obstacles: to reveal the difficulties and concerns that may hinder the application of these technologies.
4. Effects on roles: to understand their perceptions regarding the potential changes in the roles of both the faculty member and the student.
5. Application requirements: to determine the needs and procedures necessary to ensure the effective application of artificial intelligence in the Palestinian university context.

To ensure the validity of the tool, the interview guide in its initial form was presented to a group of arbitrators specialized in the fields of educational technology, curricula, and teaching methods, where their comments were taken into account and the necessary modifications were made to the wording and organization of the questions. A pilot interview was also conducted

with one faculty member from outside the study sample, with the aim of verifying the clarity of the questions, their suitability, and their logical sequence, which contributed to improving the quality of the tool before its final application.

Study Procedures and Data Analysis

After obtaining the necessary official approvals from the concerned bodies, the faculty members nominated to participate in the study were contacted, where the objectives and nature of the study were clarified, and the confidentiality of the information and the privacy of the participants were emphasized, in addition to obtaining their informed consent to participate.

The interviews were conducted individually, either in person (face to face) or through virtual meeting platforms, according to what suited the participants' circumstances. The duration of each interview ranged between (45–60) minutes, and it was audio-recorded after obtaining the participants' consent, with the aim of ensuring the accuracy of the data and the integrity of its transfer.

After completing the data collection process, all audio recordings were transcribed into a complete and accurate textual transcription, in a way that ensures preserving the content of the participants' answers without distortion. To analyze these data, the thematic analysis approach was adopted, which is considered one of the methodological methods adopted in qualitative research to extract the patterns and main themes latent in the data. The data analysis process passed through several sequential and organized stages, represented in the following:

1. Familiarization with the data: reading the transcribed texts several times with the aim of forming a comprehensive and deep understanding of their content.
2. Initial coding: coding the data systematically through identifying the meaningful passages and giving them initial codes.
3. Building themes: grouping similar codes within broader categories to form initial themes.
4. Reviewing themes: verifying the extent of consistency of the themes with the data and reorganizing them when needed.
5. Naming themes: determining clear and expressive final names for the main and sub-themes.
6. Presenting the results: presenting the results in a narrative form supported by direct quotations from the participants to enhance the depth of analysis.

Study Trustworthiness:

The current study was based on the trustworthiness framework in qualitative research presented by Lincoln & Guba (1985), which is considered one of the most adopted frameworks in qualitative studies, as it includes four main criteria: credibility, dependability, transferability, and confirmability. These criteria were enhanced in the current study as follows:

1. **Credibility:** The credibility of the study was enhanced through:

1. Using semi-structured interviews that allowed collecting deep and detailed data.
2. Reviewing the interview guide by specialized arbitrators.
3. Conducting a pilot interview before the actual application.
4. Presenting some initial interpretations to the participants to ensure the accuracy of representing their opinions.
2. **Dependability:** Dependability was achieved through:
 1. Documenting all research steps in a systematic and clear manner.
 2. Describing the procedures of data collection and analysis accurately.
 3. Following organized thematic analysis steps that can be tracked and reapplied.
3. **Transferability:** The transferability of the study results was enhanced through:
 1. Providing a detailed description of the study context (Palestinian universities).
 2. Clarifying the characteristics of the sample and the criteria for its selection.
 3. Presenting the results in a way that allows other researchers to compare them with similar contexts.
4. **Confirmability:** The objectivity of the results was ensured through:
 1. Relying directly on the participants' data.
 2. Using verbatim quotations to support the analysis.
 3. Reducing the researcher's personal bias as much as possible during interpretation.

Based on the above, the quality criteria in qualitative research were adhered to, which enhances the trustworthiness of the results and their usability in developing knowledge in the field of employing artificial intelligence in university education.

Presentation and Analysis of Results

This section addresses the presentation and analysis of the results through analyzing the data of the semi-structured interviews that were conducted with faculty members in Palestinian universities, whose number reached (15) participants. The presentation of the results was organized according to the five main fields on which the interview guide was built, so that in each field the participants' responses are analyzed and their main patterns explored, while supporting this with direct textual quotations that accurately reflect their experiences and perceptions, which enhances the depth and credibility of the analysis.

The First Field: Awareness and Basic Concepts of Artificial Intelligence

This field aimed to explore the level of awareness among faculty members of the concept of artificial intelligence, in addition to identifying the sources of their knowledge of it, and their understanding of its potential applications in the field of Palestinian university teaching:

The First Question: What comes to your mind when hearing the term "artificial intelligence"?

The results of the analysis showed the existence of a noticeable variation in the participants'

perceptions of the concept of artificial intelligence, as their responses ranged between an advanced technical understanding, general perceptions of a cultural nature, and others focusing on daily practical uses. These perceptions could be classified within three main directions:

First: Advanced Technical Understanding

A number of participants, especially those with backgrounds in engineering, information technology, and applied sciences, expressed a deep and specific understanding of artificial intelligence, as they focused on its nature as a scientific field that aims to develop systems capable of simulating human mental abilities, such as learning, analysis, and decision-making. One participant (1.A.T.) referred to this by saying: "Artificial intelligence is the science and engineering of designing intelligent systems and software capable of learning from data and adapting to it to make decisions or perform tasks that previously required human intervention."

This perception reflects an advanced level of conceptual awareness linked to the academic specialization and technical experience of the concept of artificial intelligence.

Second: General Perceptions of a Future Nature

In contrast, the responses of some participants, especially from humanities and social sciences specializations, showed a more general understanding, often influenced by the common mental images in media and popular culture, where the concept of artificial intelligence for them was associated with robots, autonomous systems, and future developments that may bring about radical changes in human life. One participant (2.A.H.) expressed this by saying: "When I hear artificial intelligence, I think of robots that speak and think like humans, a world resembling science fiction films where the machine does everything." This pattern of perceptions indicates the influence of awareness by non-academic sources, which reflects a relative knowledge gap in specialized understanding.

This result differs from what the study of (Salhab,2025) reached, which showed that most professors hold positive perceptions toward artificial intelligence, as they view it as a multimedia, useful, and interesting educational tool.

Third: Focus on Practical Applications

A third group of participants tended to define artificial intelligence through its daily uses, as they linked the concept to the applications they deal with continuously, such as digital assistants, search engines, and recommendation systems. In this context, one participant (3.A.A.) indicated that: "Artificial intelligence is the tools we use daily, such as Google Maps that suggests the best routes, or viewing platforms that suggest content suitable for my interests." This direction reflects a practical understanding of artificial intelligence as a present reality, and not merely a theoretical or future concept.

The Second Question: From where do you derive your information about artificial intelligence and its developments?

The results of the analysis showed a noticeable diversity in the sources of knowledge on which faculty members rely in following the developments of artificial intelligence, which reflects the difference in their interests, academic backgrounds, and level of involvement in the field. These sources could be classified within four main patterns:

First: Specialized Academic Sources

Participants from scientific and technological specializations indicated that they rely mainly on official academic sources, such as research published in refereed scientific journals, international conferences, and specialized books. This pattern reflects the connection of artificial intelligence with their academic and research field of work, which imposes on them continuous follow-up of recent developments. In this field, one participant (4.T.A.) mentioned: "My follow-up of this field is part of my academic work; I read research papers and participate in scientific seminars to remain informed of the latest developments." This direction shows a high level of specialization and precise scientific awareness.

Second: Media and Digital Platforms

General and specialized media formed a main source of information for a wide segment of participants, as they indicated their reliance on articles published on technical websites, documentary programs, in addition to educational content through digital platforms such as (YouTube) and (TED Talks). One participant (5.H.A.) clarified this by saying: "I follow channels on YouTube that explain these concepts in a simplified way, and I read articles that address the impact of artificial intelligence on society." This source reflects a knowledge pattern that depends on simplification and transferring knowledge in a non-academic way, but it is widespread and easy to access.

Third: Experience-Based Learning

A number of participants indicated that their understanding of artificial intelligence is formed to a large degree through the direct use of its tools, such as (ChatGPT), (Midjourney), and others, where practical interaction with these applications is considered an effective means for acquiring knowledge. In this framework, one participant (6.A.A.) mentioned: "The best way to understand artificial intelligence is to actually use it; my experience with ChatGPT gave me a deeper understanding of its capabilities and limits." This direction reflects the transition of knowledge from the theoretical nature to practical application, which enhances the functional understanding of the technologies.

Fourth: Social Interaction and Professional Discussions

Some participants indicated that informal discussions with colleagues or even students are considered an important source for exchanging knowledge about artificial intelligence, as these dialogues contribute to exchanging experiences and expanding perceptions through multiple viewpoints. In this context, one participant (7.T.A.) referred to this by saying: "Much of the information I acquire about artificial intelligence comes from discussions with colleagues in

the department, sometimes during meetings or even informally. Also, students sometimes present tools or new ideas that I was not aware of, and this opens different horizons for me to understand the subject.”

This result differed from what was stated in the study of (Young,2025).

The Third Question: How do faculty members perceive the role of artificial intelligence in university education, and what are the justifications for this perception?

The results of the analysis showed the existence of almost collective agreement among the participants that artificial intelligence has a pivotal and growing role in the future of Palestinian university education. Despite this general agreement, variation emerged in their perceptions of the nature and limits of this role, as their opinions differed between those who view it as a supportive tool for the educational process, and those who expect it to have a transformative role that radically reshapes teaching practices. The participants based their adoption of this positive direction on a set of main justifications, which can be summarized as follows:

First: The Inevitability of Technological Transformation

A number of participants indicated that adopting artificial intelligence in education is no longer an option, but has become a necessity imposed by the nature of the accelerating global transformations. They considered that educational institutions are required to keep pace with this development to ensure the continuity of their role and effectiveness.

In this field, one participant (I.T.A.) explained: “Institutions that do not keep pace with this development will decline, because education is connected to reality, and today’s reality is led by technology.” This perception reflects a strategic awareness of the role of artificial intelligence as an essential element in modernizing Palestinian university education.

Second: Enhancing the Quality of the Educational Process

The participants highlighted the potentials provided by artificial intelligence in improving the quality of education, especially through supporting customized learning, providing immediate feedback, and providing interactive learning environments.

One participant (7.H.A.) expressed this by saying: “Artificial intelligence can help in understanding the needs of each student individually and providing appropriate content for him, and this may make a great difference in the level of learning.” This direction indicates the perception of artificial intelligence as a supportive tool for developing more flexible teaching practices that respond to students’ needs.

Third: Raising Efficiency and Reducing the Functional Burden

A number of participants addressed the potential role of artificial intelligence in automating routine tasks, such as correcting some types of tests, managing courses, and organizing

schedules, which contributes to reducing the administrative burdens on faculty members. In this field, one participant (3.A.A.) indicated that: "If artificial intelligence helps me accomplish routine tasks, I will be able to focus more on interacting with students and developing their thinking." This perception reflects a tendency toward redirecting the role of the faculty member in Palestinian universities from procedural tasks to deep educational roles.

The Second Field: Potential Opportunities for Integrating Artificial Intelligence into Teaching

This field aims to explore faculty members' perceptions regarding the opportunities and potentials that the employment of artificial intelligence can provide in improving Palestinian university teaching strategies and enhancing the students' learning experience. The participants' answers focused on the applied dimensions of using these technologies inside lectures, in a way that reflects a transition from theoretical understanding to practical perception of the potentials of artificial intelligence.

The First Question: How, from your point of view, can artificial intelligence contribute to designing and developing educational content?

The results of the analysis showed diversity in the participants' perceptions, but they met around a central idea that artificial intelligence can constitute an active partner in developing educational content, and not merely an assisting tool. The most prominent opportunities they referred to could be classified within three main axes:

First: Generating Ideas and Initial Materials

A large number of participants referred to the role that generative artificial intelligence tools can play in supporting the planning stage of educational content, through generating new ideas and suggesting diverse forms for presenting topics, as they can be used in preparing lesson plans, designing educational activities, or formulating case studies and applied examples.

In this field, one participant (6.A.A.) explained: "I deal with tools such as ChatGPT as a means for brainstorming; I present the lecture topic and ask for suggestions of different ways to explain it or activities related to it, and this opens new ideas for me." This use reflects a tendency toward employing artificial intelligence as a tool supporting educational creativity and expanding the horizons of thinking for the faculty member in Palestinian universities.

Second: Customizing Content According to Students' Needs

The participants highlighted the ability of artificial intelligence to adapt educational content in a way that suits the individual differences among students, through analyzing their performance and providing customized content that suits the level of each learner. This direction is considered one of the most prominent applications that can contribute to improving the quality of learning and enhancing its effectiveness. One participant (7.H.A.) expressed this by saying: "Artificial intelligence can provide each student with content that suits his level, whether in

terms of the difficulty of examples or the depth of explanation, and this may change the way of teaching significantly.” This perception indicates an advanced awareness of the potentials of artificial intelligence in supporting student-centered learning.

Third: Producing Multimedia and Interactive Content

Some participants drew attention to the great potentials of artificial intelligence in producing educational content in diverse forms, such as illustrative images, video clips, and interactive simulations, which contributes to increasing the attractiveness of the educational material and motivating students to learn. In this field, one participant (2.H.A.) indicated that: “These tools can transform texts into images or interactive scenes, and this makes the material more lively and easier to understand for students.” This direction reflects interest in enhancing the visual and interactive aspect in the educational process, in line with modern learning patterns.

The Second Question: How do faculty members perceive the potential roles of artificial intelligence in assessment processes and providing feedback to students?

The results of the analysis showed the existence of broad agreement among the participants that the field of assessment and feedback is considered one of the most applicable fields for employing artificial intelligence effectively within university education. Their perceptions revolved around a set of main roles that reflect the potentials of these technologies in improving the efficiency and quality of the assessment process, and they can be summarized in the following axes:

First: Automating Correction Processes and Enhancing Efficiency

Most participants emphasized the important role that artificial intelligence can play in automating the correction of tests with objective answers, such as multiple-choice and true-and-false questions, in addition to some types of short assignments. The participants believe that this type of automation contributes to reducing the administrative burden placed on the faculty member and allows him to direct his efforts toward more complex and deeper educational tasks. In this field, one participant (4.T.A.) indicated that: “The time consumed in correcting repetitive tasks can be invested better in interacting with students, and if there are accurate systems that perform this role, this provides a great benefit for both parties.”

Second: Providing Immediate Feedback Supportive of Learning

Immediate feedback emerged as one of the most prominent advantages of employing artificial intelligence in assessment, as the participants pointed to the ability of these systems to provide students with direct responses to their answers, including clarification of errors and providing explanations or additional sources that help understanding. One participant (5.H.A.) expressed this by saying: “The real benefit is when the student receives feedback at the same moment of learning, because that helps him correct his understanding immediately instead of waiting.” This perception reflects an awareness of the importance of timing in the learning process, and the role of artificial intelligence in enhancing it.

Third: Analyzing Performance Data and Extracting Educational Patterns

Some participants referred to the advanced analytical potentials of artificial intelligence, especially in dealing with large amounts of students' performance data, with the aim of revealing educational patterns and identifying common points of weakness among them. In this field, one participant (I.T.A.) explained: "Intelligent systems can identify the concepts in which students face difficulty, and this helps me reconsider my method of explanation or focus on certain points in the coming lectures." This direction indicates a shift in the function of assessment, from being only a tool for measuring performance, to an analytical tool that contributes to improving teaching and making data-based educational decisions.

These results agree with a number of recent studies that confirmed the growing role of assessment systems based on artificial intelligence in providing immediate feedback and analyzing learning data, as the study of Kasneci et al. (2023) indicated that generative language models allow providing immediate and personalized comments to students. The study of Qian (2025) also clarified that artificial intelligence applications contribute to improving the quality of feedback and enhancing customized learning, and the study of de Silva et al. (2026) confirmed the role of these technologies in developing assessment practices within higher education.

The Third Question: To what extent can artificial intelligence contribute to supporting interaction and communication within the university educational environment?

The results of the analysis showed a noticeable variation in the participants' perceptions regarding the role of artificial intelligence in enhancing interaction and communication within the educational environment in Palestinian universities. While some participants adopted a positive vision that highlights the potentials provided by these technologies in improving and organizing communication channels, others showed a degree of reservation, especially with regard to their potential effect on the nature of human interaction. These results are consistent with what recent studies indicated, confirming that the effect of artificial intelligence on educational interaction depends to a large extent on the nature of its pedagogical employment.

First: Facilitating Communication and Organizing Discussions

The optimistic group indicated that artificial intelligence can play an effective role in organizing communication processes, especially in courses with large numbers, through using chatbots to answer repeated inquiries and provide continuous support to students. Intelligent systems can also analyze interactions within learning platforms and highlight the most important issues. In this field, one participant (3.A.A.) explained: "The presence of a virtual assistant available around the clock can help students answer their quick questions, and it can also analyze discussions and alert me to issues that need intervention." This result is consistent with what the study of Qian (2025) reached, which indicated that interactive artificial intelligence systems contribute to enhancing academic communication through providing immediate support and organizing interactive content. UNESCO reports (2024) also confirmed

the role of these technologies in improving the efficiency of managing interaction within digital educational environments.

Second: Supporting Intelligent Collaborative Learning

Some participants perceived the potentials of artificial intelligence in enhancing collaborative learning, through forming balanced student groups based on analytical criteria, such as level of performance or learning patterns, in addition to following up the dynamics of interaction within these groups. This vision is in harmony with what recent studies (2024–2025) indicated, which showed that artificial intelligence systems based on educational data analysis contribute to improving the quality of participatory learning through providing recommendations based on the actual performance of students (Tan, 2025).

Third: Reservations Related to Human Interaction

In contrast, a number of participants expressed their concerns that excessive reliance on artificial intelligence may lead to reducing the quality of human interaction, which may negatively affect the emotional and social aspects of learning. One participant (2.H.A.) expressed this by saying: "Education is a human process in its essence, and I fear that reliance on these technologies may reduce the real interaction between the professor and the student." These concerns are consistent with what Selwyn (2022) indicated regarding the necessity of preserving the human dimension in education. The study of de Silva et al. (2026) also confirmed that the main challenge does not lie in the technology itself, but in how to achieve a balance between digital interaction and human interaction.

The Third Field: Expected Challenges and Obstacles to Employing Artificial Intelligence in University Teaching

This field focuses on exploring faculty members' perceptions regarding the challenges and obstacles that may face the employment of artificial intelligence in the educational environment in Palestinian universities. The results of the analysis showed that the participants, despite their awareness of the opportunities provided by these technologies, express a set of intertwined challenges with technical, educational, ethical, and institutional dimensions.

The First Question: What are the most prominent challenges that may hinder the employment of artificial intelligence in university teaching in Palestine?

The participants' responses revealed a set of obstacles that can be classified within the following axes:

First: Technical Challenges and Infrastructure

A large number of participants indicated that the weakness of digital infrastructure represents one of the most prominent obstacles to employing artificial intelligence, including the limitation of Internet speed, the lack of technical equipment, and the unavailability of advanced

educational systems that support these applications. In this context, one participant (2.T.A.) mentioned: "Even if these technologies are globally available, their application needs a ready technical environment, and this is what we sometimes lack." This result is consistent with what UNESCO reports (2024) indicated, which confirmed that the success of integrating artificial intelligence depends largely on the readiness of the digital infrastructure.

Second: Lack of Digital Competencies and Professional Training

Many participants expressed their concern about the limited skills of faculty members in using artificial intelligence technologies, in addition to the lack of specialized training programs that support this transformation. In this framework, one participant (5.A.A.) indicated that: "Many faculty members do not have sufficient experience to deal with these tools, and this may limit their use even if they are available." This result is in harmony with what the study of Tan (2025) reached, which confirmed that the lack of digital competencies represents one of the most prominent challenges in adopting artificial intelligence in education.

Third: Ethical and Academic Challenges

The participants showed clear concerns related to the ethical aspects of using artificial intelligence, especially with regard to academic integrity, such as excessive reliance on generative tools in accomplishing tasks, and the difficulty of verifying the originality of students' works. One participant (3.H.A.) expressed this by saying: "I fear that students may rely completely on these tools, which may affect their real skills in thinking and analysis." These concerns are consistent with what recent studies (2024–2026) indicated regarding the ethical challenges associated with using artificial intelligence in education (de Silva et al., 2026), (Romano,2024).

Fourth: Absence of Clear Institutional Policies

Some participants indicated that the absence of a clear regulatory framework within Palestinian universities that defines the mechanisms of using artificial intelligence represents an additional obstacle, as this leads to a state of hesitation or unorganized use. In this context, one participant (6.T.A.) mentioned: "We need clear policies that define what is allowed and what is not allowed in using these tools inside the university."

Fifth: Resistance to Change and Anxiety About Transformation

The results of the analysis showed the existence of a degree of hesitation among some faculty members toward adopting artificial intelligence technologies, and this is linked to the nature of the transformations that these technologies impose on traditional roles within the university environment. The participants expressed concerns related to the decline of the role of the university professor in Palestine as a main source of knowledge, and his transformation into a facilitator of the educational process. Other concerns also emerged related to the lack of full trust in the outputs of artificial intelligence, due to the possibility that they may contain errors or biases, in addition to psychological and professional factors such as fear of losing control or

weak technical competence, especially in light of the lack of training and the absence of clear institutional frameworks.

These results agree with the reports of (Jafari,2024) and the study of (De Silva and et al, 2026), whose results indicated that the success of integrating artificial intelligence in education depends on the availability of a supportive environment that combines technical readiness, human qualification, and the regulatory framework.

The Second Question: What are the challenges associated with faculty members and students in employing artificial intelligence?

The study reached that the challenges associated with employing artificial intelligence in university education are not one-dimensional, but rather represent an intertwined system of technical, human, and institutional factors that affect, in an integrated manner, the level of adoption of these technologies and the effectiveness of their use. The results showed that the success of integrating artificial intelligence does not depend only on the availability of tools and technologies, but requires the availability of a supportive educational environment in which technical readiness integrates with human preparedness and the regulatory framework in universities.

At the technical level, digital infrastructure emerged as a basic condition for enabling the use of artificial intelligence, as weak technical capabilities or limited access to digital resources constitutes a direct obstacle to the actual application of these technologies. One participant expressed this by saying: "Even if the tools are globally available, we need a ready technical environment so that we can actually use them" (2.T.A.). However, the results indicated that technical challenges, despite their importance, do not represent the most prominent challenges, but rather intertwine with more influential human challenges related to the attitudes and orientations of the users themselves.

In this field, the results showed that resistance to change and lack of digital competencies among faculty members represent one of the most prominent hindering factors, as the acceptance of artificial intelligence is linked to the degree of awareness of it and the level of confidence in its capabilities. One participant referred to this by saying: "Convincing some professors to use these technologies is not easy, because they are accustomed to certain methods and feel comfortable with them" (5.H.A.). Also, the fear of reshaping the traditional role of the faculty member reinforces this hesitation, as one participant expressed this concern by saying: "There is a feeling that these technologies may reduce the role of the professor or change its nature significantly" (8.T.A.).

These results agree with what Selwyn (2022) indicated about that the challenge in integrating modern technologies does not lie in their availability, but in redefining the educational roles associated with them. UNESCO reports (2024) also confirm that building human capacities represents an important element in the success of digital transformation in education.

On the other hand, the results showed that students, despite their high acceptance of technology, face challenges related to weak conscious use of these tools, as excessive reliance on artificial intelligence may lead to reducing the level of critical thinking. One participant clarified this by saying: "The challenge is not in the availability of the tool, but in how to use it, because some students rely on it without trying to understand" (4.T.A.).

This indicates that integrating these technologies requires educational guidance that focuses on using them as a supportive tool for learning and not as a substitute for it, which is supported by recent studies such as the study of (Qian, 2025) and the study of (Kasneji and et al. 2023).

In addition to that, the issue of the digital gap emerged as an influential factor in achieving educational justice, as the disparity in opportunities for access to technology may lead to deepening the differences among students. One participant referred to this by saying: "Not all students have the same capabilities, and this may create a greater gap if we rely completely on these technologies" (7.A.A.).

At the institutional level, the results showed that the absence of clear regulatory policies constitutes an additional obstacle, as this leads to a state of hesitation and uncertainty among faculty members. In this context, one participant indicated that: "We need clear policies that define how to use these tools inside the university" (6.T.A.). Also, the absence of a clear governance framework reinforces the concerns related to academic integrity. These results agree with the study of Costa (Costa, & et al. 2025), whose results indicated that the challenges associated with employing artificial intelligence in university education represent an interconnected system, where the weakness of one of its components leads to weakening the system as a whole. Infrastructure without sufficient training will not achieve effective use, training without clear policies will not guarantee sustainability, and the availability of tools without educational awareness may lead to opposite results.

Question 3: What are the ethical concerns raised for you by the uses of artificial intelligence in education?

Ethical issues formed an important axis in the participants' discussions, and reflected a deep awareness of the potential side effects of these technologies. The most prominent concerns focused on the following issues:

First: Integrity and Academic Cheating:

This was the most prominent and urgent ethical concern among all participants. With the ease of using generative artificial intelligence tools in writing essays and solving problems, the difficulty of verifying the originality of students' work increases. One participant (8.H.A.) reported this concern by saying: "How can I be sure that this essay is from the student's effort and not produced by ChatGPT? This strikes the credibility of the assessment process at its core."

Second: Data Security and Privacy:

Some participants, especially those with a technical background, raised serious concerns about how students' data are collected and used by artificial intelligence systems. They wondered about the party that owns these data, how they are protected from misuse or hacking, and whether they are used for commercial purposes without the students' knowledge. In this field, one participant (I.T.A.) reported: "When we use an intelligent system that analyzes the performance of each student, we collect a huge amount of sensitive data about him. There must be clear and transparent policies to ensure the privacy of these data."

Third: Algorithm Bias:

A small number of participants referred to the problem of bias in artificial intelligence algorithms. These algorithms learn from pre-existing data, and if these data reflect societal biases (racial, gender, or class), then the system will repeat and reinforce these biases in its decisions, such as evaluating students or providing recommendations to them, which may lead to unfair results.

These results agree with the study of (Costa, & et al. 2025) and the study of (De Silva and et al, 2026), whose results indicated the necessity of integrating ethical considerations in the design and application of artificial intelligence technologies in education, including protecting privacy, ensuring academic integrity, and reducing biases.

The Fourth Field: Expected Effects on the Roles of the Faculty Member and the Student:

This field aims to explore the participants' perceptions regarding the way in which employing artificial intelligence can contribute to reshaping the traditional roles of both the faculty member and the student within the educational process. The results showed the existence of general agreement that these roles will not disappear, but will witness qualitative transformations toward more complex and deeper roles.

The First Question: How will the role of the faculty member change in light of employing artificial intelligence?

The participants agreed that the role of the faculty member will shift from being a transmitter of knowledge to a more interactive and strategic role, which can be summarized in the following axes:

First: The shift from "indoctrinator" to "guide and facilitator":

The participants indicated that the ease of access to information through artificial intelligence technologies will reduce the centrality of the university professor as the only source of knowledge, so that his role becomes a guide for the learning process, focusing on developing critical thinking skills and helping students evaluate and construct information.

In this field, one participant (6.A.A.) indicated: "My role is no longer to provide answers, but to help students reach them by themselves and evaluate them."

Second: The shift to a designer of educational experiences:

All participants reported that the faculty member will play a greater role in designing interactive learning experiences, based on employing artificial intelligence tools in solving real problems, which enhances learning based on practical application more than memorization and recall.

Third: Enhancing the ethical and educational role:

A number of participants emphasized the importance of the role of the university professor in guiding the ethical use of artificial intelligence, through developing students' awareness of the risks associated with it, such as bias and misleading information. One participant (2.H.A.) reported this by saying: "One of my most important roles in the future will be guiding students to use these tools responsibly and developing their critical thinking."

In general, the results of the current study agree with what the study of (Young, 2025) reached, which indicated that the adoption of artificial intelligence in higher education institutions does not depend only on its technical capabilities, but is greatly affected by the perceptions of leaders and decision-makers.

The Second Question: How will the role of the student change?

The results showed that the role of the student will shift from a passive recipient to an active participant in the learning process, through:

First: The shift from consumer to producer of knowledge:

The student has become, according to the participants' perceptions, able to use artificial intelligence tools to explore, analyze, and produce knowledge, which enhances his role as a partner in the educational process.

One participant (4.T.A.) indicated that: "I expect students to come to the lecture prepared with discussions and ideas based on their research using artificial intelligence."

Second: Enhancing self-learning and individual responsibility:

Artificial intelligence provides students with advanced learning tools, which increases their responsibility in managing their learning, determining their goals, and choosing the appropriate learning strategies.

Third: Developing critical thinking skills:

In light of the abundance of information, the need emerges to develop students' ability to evaluate and analyze the quality of information, and distinguish between what is reliable and what is unreliable, which makes critical thinking an essential skill in the digital age.

This result agreed with what the study of (Han, & et al. 2025) reached, whose results indicated reducing student autonomy, which reflects a reshaping of his role within the educational environment, so that he becomes more dependent on artificial intelligence tools instead of relying on his own efforts in analysis and critical thinking.

The Third Question: Does artificial intelligence enhance human interaction or reduce it?

The results showed variation in the participants' opinions, as they were divided into two main directions:

First: The reserved direction (reducing interaction):

Some participants expressed their fears that excessive reliance on intelligent systems may lead to reducing opportunities for human interaction, which may affect the development of social skills among students. In this direction, one participant (7.H.A.) warned by saying: "There is a danger that real interaction between students and professors may decrease if technology becomes the main mediator."

Second: The positive direction (enhancing interaction):

In contrast, other participants saw that artificial intelligence can contribute to enhancing interaction, through reducing the routine burdens on the faculty member, which allows him to devote himself to deep human interaction with students.

One participant (3.A.A.) explained: "Artificial intelligence can provide me with more time to interact with students, and this may enhance the educational relationship."

The Fifth Field: Requirements for Successful Application of Employing Artificial Intelligence in Palestinian Universities

This field focuses on identifying the conditions and requirements that faculty members see as necessary to ensure the employment of artificial intelligence in an effective and sustainable manner within Palestinian universities. The results showed that the success of this direction requires integration between building human capacities, institutional support, and phased strategic planning. The results of analyzing this field were included through the following questions:

The First Question: What type of training and support is required for faculty members?

The participants agreed that training is considered a basic condition for the success of integrating artificial intelligence, and not an additional option. They also emphasized the necessity that training be multidimensional, and include the following:

First: Applied Technical Training

The participants emphasized the importance of moving from theoretical presentation to direct practical training on specific tools and applications that can be used in teaching. In this field, one participant (6.A.A.) indicated that: "We need practical training that explains how these tools can be used inside the course, and not merely a theoretical explanation about them."

Second: Educational Training

The participants highlighted that possessing technical skills alone is not sufficient, but rather the focus must be on how to employ these tools within effective teaching strategies that achieve the objectives of university education in Palestine.

Third: Continuous Support and Professional Communities

The participants indicated the importance of providing continuous support that goes beyond temporary workshops, through establishing professional learning communities that allow exchanging experiences and discussing challenges, in addition to providing technical and educational support when needed.

The Second Question: What is the role of university administration in supporting this direction?

The results showed that the success of employing artificial intelligence requires a clear leadership role by university administrations, represented in the following axes:

First: Setting a Strategic Vision and Clear Policies

The participants emphasized the necessity of having a clear institutional direction that determines the objectives of using artificial intelligence and organizes its practices, especially with regard to ethical aspects. One participant (5.H.A.) reported this by saying: "We need a clear vision from the administration that determines the general direction and rules of use."

Second: Investing in Infrastructure and Resources:

The application of artificial intelligence requires providing sufficient technical and financial resources, including developing digital infrastructure, providing tools and software, and supporting training programs.

Third: Stimulating Innovation and Enhancing the Culture of Change

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The participants indicated the importance of motivating faculty members to adopt modern technologies, through incentives and appreciation, and linking these efforts to professional development and academic promotions.

These results agreed with the results of the study of (País, & et al,2025), which reached the importance of training faculty members and developing institutional policies in order to benefit from the advantages of artificial intelligence in university education, while addressing the challenges and concerns associated with its application.

The Third Question: What is the first step to activate artificial intelligence in the Palestinian context?

The participants' answers crystallized around two integrated paths that must be worked on in parallel:

First: Spreading Awareness and Building Capacities:

The participants considered that raising the level of awareness among all parties of the educational process represents the basic starting point, followed by developing directed training programs.

In this field, one participant (A.T.1) indicated that: "The real investment must be in building the capacities of individuals before investing in tools."

Second: Implementing Phased Pilot Projects:

The participants suggested starting with limited-scope experiments in some departments or courses, with the aim of testing the effectiveness of the tools and determining the best practices before expanding the application. One participant (8.H.A.) explained: "It is better to start with small and well-studied steps, then expand based on the results."

Discussion of Results:

This study aimed to explore the perceptions of faculty members in Palestinian universities regarding the employment of artificial intelligence in improving university teaching strategies, through analyzing their experiences and visions. These results are discussed through linking them with theoretical frameworks and previous literature, while giving special attention to the specificity of the Palestinian environment and the determinants and challenges it imposes.

The results showed a clear variation in the level of awareness among faculty members toward artificial intelligence, as this awareness ranged between basic perception focusing on automating tasks, and advanced understanding that includes applications of adaptive learning and analysis of educational data. This variation can be interpreted in light of what the literature related to adopting technological innovations indicates, which confirms that the early stages of adoption are often characterized by variation in knowledge and experience, affected by factors

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such as academic specialization, previous experience, and exposure to technology. In this field, a noticeable difference emerged between specializations, as faculty members in scientific and technical fields showed a deeper understanding of the practical applications of artificial intelligence tools, while their counterparts in the humanities focused on the educational and ethical dimensions, which reflects plurality in the angles of looking at this technology.

At the level of opportunities, the participants expressed a positive direction toward the potentials of artificial intelligence, especially in the fields of customizing learning, providing immediate feedback, and reducing administrative burdens. This perception reflects an adoption of the idea of the “enhanced teacher,” whose role moves from transmitting knowledge to guiding learning and deepening understanding. These results are consistent with global trends that see artificial intelligence as a tool for improving the efficiency and effectiveness of education. However, this optimism was not absolute, but was linked to a clear perception of the existence of challenges that may limit the achievement of these potentials.

With regard to challenges, the results revealed a complex overlap between human, technical, and institutional factors, as these dimensions cannot be separated from one another. Despite the importance of technical challenges, such as weak digital infrastructure and limited resources, human challenges such as resistance to change and lack of digital competencies emerged as more influential factors in hindering adoption. This reflects what recent literature indicated, that the real challenge in digital transformation does not lie in the availability of technology as much as it is linked to the extent of the readiness of individuals and institutions to adopt it.

This dimension acquires special importance in the Palestinian environment, where technical challenges are exacerbated by structural factors, such as weak Internet networks, power outages, and economic restrictions, which makes the process of integrating advanced technologies more complex compared with more stable environments. These conditions also affect the infrastructure, and extend to form an environment alert toward change, in addition to reinforcing hesitation in adopting technological innovations.

The results also showed that students, despite their high acceptance of technology, face challenges related to the unconscious use of artificial intelligence, as excessive reliance on it may lead to weakening different thinking skills, especially critical thinking. This indicates that integrating these technologies requires conscious educational guidance that ensures their use as a tool to enhance learning, and not as a substitute for it.

As for the results related to the expected effects on roles, the participants' opinions agreed that artificial intelligence will not cancel the role of the faculty member, but will reshape it, as he will shift from a transmitter of knowledge to a guide and designer of different learning experiences. This is a transformation that requires developing new skills that go beyond the technical aspect to include critical thinking, educational design, and ethical guidance. In contrast, the role of the student will shift to an active learner responsible for his learning, which enhances the importance of developing self-regulation and analytical thinking skills.

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As for the results related to application requirements, they emphasized that the success of integrating artificial intelligence requires the existence of a clear institutional strategic vision, supported by investments in infrastructure, continuous training programs, and regulatory and ethical policies that determine the mechanisms of use. The participants also highlighted the importance of adopting a gradual approach based on pilot projects, and adapting technological solutions in a way that suits the specificity of the Palestinian environment.

Based on the above, it can be said that employing artificial intelligence in Palestinian university education does not represent merely the adoption of a new technology, but constitutes a comprehensive transformation process that requires an integrated rebuilding of the educational system, taking into account the interaction between technical, human, and institutional factors. Accordingly, the success of this transformation depends on the ability of universities to achieve balance between investing in technological potentials and preserving the educational and human values that form the essence of the educational process.

Conclusion:

This study aimed to explore the perceptions of faculty members in Palestinian universities regarding the employment of artificial intelligence in improving university teaching strategies, in light of the local context and the challenges and opportunities it imposes. The results showed the existence of a growing awareness of the potentials of artificial intelligence, accompanied by a cautious positive direction toward adopting it, as it is viewed as a promising tool for enhancing the quality of education through customizing learning, improving teaching efficiency, and reshaping educational roles.

In contrast, the results revealed a set of intertwined challenges that hinder effective application, including technical, human, institutional, and ethical fields, reflecting the complexity of the digital transformation process in Palestinian higher education. It became clear that these challenges cannot be dealt with separately, but require an integrative approach that takes into account the interaction between infrastructure, human readiness, and the institutional regulatory framework.

The study also highlighted that employing artificial intelligence does not mean replacing the role of the faculty member or the student, but rather reshaping these roles toward more interactive and flexible models, based on student-centered learning, enhancing critical thinking, and bearing responsibility in building knowledge, so that the faculty member becomes a guide and designer of learning experiences, while the student turns into an active partner in the teaching-learning process.

The study concluded that integrating artificial intelligence into Palestinian university education represents a strategic opportunity to improve the quality of Palestinian university education strategies. However, achieving this opportunity requires adopting a comprehensive institutional vision based on building human capacities, developing infrastructure, and enhancing regulatory and ethical frameworks. Accordingly, the success of this transformation depends on the ability of the educational system to achieve a delicate balance between

benefiting from technological potentials and preserving the educational and human values that form the essence of the educational process.

Recommendations

Based on the results of the study and its discussion, the two researchers developed a set of recommendations that may contribute to supporting the effective and sustainable employment of artificial intelligence technologies in the field of university education, as follows:

1. The necessity of formulating a comprehensive strategic vision for integrating artificial intelligence into university education, including determining objectives, priorities, and mechanisms of implementation, in a way that ensures directing efforts in an organized and integrated manner.
2. Working on developing the technological infrastructure, through improving the quality of Internet connection, providing modern technical equipment, and ensuring the continuity of the digital services necessary to support artificial intelligence applications.
3. Regulatory policies and guiding principles governing the use of artificial intelligence in education, with a focus on protecting privacy, data security, enhancing academic integrity, and ensuring the responsible use of technologies.
4. Designing and implementing continuous and specialized training programs that focus on developing technical and educational competencies, in a way that enables employing artificial intelligence tools effectively in designing curricula and teaching strategies.
5. Providing integrated support environments that include technical and educational guidance, in a way that helps address applied challenges and supports the actual use of technologies within the educational process.
6. Supporting research initiatives that aim to develop innovative educational applications based on artificial intelligence, with a focus on producing solutions that suit the Palestinian specificity and local environment.
7. Establishing an institutional culture that encourages experimentation and exchange of experiences, and supports adopting modern educational practices, in a way that contributes to developing academic performance and improving the quality of Palestinian university education.
8. Reviewing and developing teaching and assessment methods in a way that is compatible with the requirements of the digital age, with a focus on developing critical thinking skills, self-learning, and the conscious use of technology.
9. Starting to implement limited-scope pilot projects to evaluate the effectiveness of using artificial intelligence in university teaching, and benefiting from their results in well-studied gradual expansion.
10. Working on reducing the digital gap among learners, through providing equal opportunities to access tools and technologies, in a way that ensures achieving the principle of equal educational opportunities.
11. Encouraging the conduct of quantitative and experimental studies to complete the qualitative understanding, analyze usage trends, and measure the effect of artificial intelligence applications on learning outcomes in different contexts.

References:

- Bond, M., Khosravi, H., De Laat, M., Bergdahl, N., Negrea, V., Oxley, E., ... & Siemens, G. (2024). A meta systematic review of artificial intelligence in higher education: A call for increased ethics, collaboration, and rigour. *International journal of educational technology in higher education*, 21(4). <https://doi.org/10.1186/s41239-023-00436-z>
- Costa, M. F. B., Tinoco, G. O., Corrêa, N. D. S. F., Botelho, P. C., & Fontainha, T. C. (2025). Challenges and Opportunities of Artificial Intelligence in Higher Education: Perceptions of Faculty in the University Environment. *Avaliação: Revista da Avaliação da Educação Superior (Campinas)*, 30. <https://doi.org/10.1590/1982-57652025v30id286435>
- Crompton, H., & Burke, D. (2023). Artificial intelligence in higher education: The state of the field. *International journal of educational technology in higher education*, 20(1), 1-22. <https://doi.org/10.1186/s41239-023-00392-8>
- De silva, A., Song, H. J., Yang, H., & Humayoun, S. R. (2026). STEM Faculty Perspectives on Generative AI in Higher Education. *Computers and Education: Artificial Intelligence*, 7, 100220. <https://doi.org/10.48550/arXiv.2603.04001>
- Han, B., Nawaz, S., Buchanan, G., & McKay, D. (2025). Students' perceptions: exploring the interplay of ethical and pedagogical impacts for adopting AI in higher education. *International journal of artificial intelligence in education*, 35(4), 1887-1912. <https://doi.org/10.1007/s40593-024-00456-4>
- Isaac, J., Jemmali, H., Fallah, B., Al-Issa, F., Istanbuli, A., Qamar, M. A., & Al Azzeh, A. (2019). Study of higher education and research in Palestine. *Arij*, August, 1-259.
- Jafari, F., & Keykha, A. (2024). Identifying the opportunities and challenges of artificial intelligence in higher education: A qualitative study. *Journal of Applied Research in Higher Education*. <https://doi.org/10.1108/JARHE-09-2023-0426>
- Kasneci, E., et al. (2023). ChatGPT for good? On opportunities and challenges of large language models for education. *Learning and Individual Differences*, 103, 102274. <https://doi.org/10.1016/j.lindif.2023.102274>
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage Publications.
- Omar, A., Shaqour, A., & Khlaif, Z. (2024). Attitudes of faculty members in Palestinian universities toward employing artificial intelligence applications in higher education: Opportunities and challenges. *Frontiers in Education*. <https://doi.org/10.3389/feduc.2024.1414606>
- País, M. R., Vitoria, R. V., Salazar, C. M., & Quiroz, J. S. (2025). Towards AI education: qualitative analysis of the perceptions of professors at a regional public university. *Social Sciences & Humanities Open*, 12, 101668. <https://doi.org/10.1016/j.ssaho.2025.101668>
- Qian, Y. (2025). Pedagogical applications of generative AI in higher education. *TechTrends*, 69(2), 345–358. <https://doi.org/10.1007/s11528-025-01100-1>

Faculty Members' Perceptions in Palestinian Universities Regarding the Employment of Artificial Intelligence in Improving University Teaching Strategies: A Qualitative Study

- Romano, L., & Khumalo, Z. (2024). Faculty perspectives on artificial intelligence in higher education: A qualitative study. *European Journal of Social Sciences and Humanities*.
- Salhab, R. (2025). Adoption of artificial intelligence applications in higher education: An investigation of faculty perceptions. In *Artificial Intelligence in Education*, Springer. https://doi.org/10.1007/978-3-031-56848-0_5
- Selwyn, N. (2019). *Should robots replace teachers? AI and the Future of Education*. (1st ed.) Polity Press.
- Smith, M., & Scott, H. (2023). Distance education under oppression: The case of Palestinian higher education. *Education Sciences*, 13(7), 729. <https://doi.org/10.3390/educsci13070729>
- Tan, X., Cheng, G., & Ling, M. H. (2025). Artificial intelligence in teaching and teacher professional development: A systematic review. *Computers and Education: Artificial Intelligence*, 8, 100355. <https://doi.org/10.1016/j.caeai.2025.100355>.
- UNESCO. (2024). *Guidance for generative AI in education and research*. UNESCO Publishing.
- Verboom, A., Pais, L., Zijlstra, F., & Oswald, F. (2025). Perceptions of artificial intelligence in academic teaching and research. *International Journal of Educational Technology in Higher Education*, 22(46). <https://doi.org/10.1186/s41239-025-00546-w>
- Young, A. (2025). *Promise or pitfall? Leadership's perception of using AI tools in higher education* (Doctoral dissertation). ProQuest.