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AI-SUPPORTED DIGITAL TRANSFORMATION IN ACADEMIC EVALUATION: A CASE STUDY FROM PALESTINIAN UNIVERSITIES

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Abstract
The study's goal is to analyze the role of AI-enabled digital transformations in improving the educational assessment processes for research published at Palestinian universities in order to improve the quality of assessment, automate the processes of arbitration, enhance educational integrity, and study the effects of AI through the assessment of research. A descriptive analytical approach was adopted. The data were analyzed by appropriate statistical methods such as arithmetic mean, standard deviation, and variance analysis. The study results showed that AI-controlled digital changes had a highly significant positive effect in the improved treatment of academic evaluations since all the dimensions scored a high average, indicating the efficiency of AI in developing evaluation processes in higher education. The statistical analyses conducted also indicated that there were no statistically significant differences relevant to the level of importance ($\alpha > 0.05\%$) due to sex, educational qualifications, and experience variables, thus indicating that the effect of artificial intelligence on educational evaluation was similar across all groups.
Regarding the increased training of faculty members and researchers concerning the use of AI in academic evaluation, this study has also recommended increased integration of AI with educational mediation platforms and the development of a clear ethical policy on the use of these techniques. Finally, this study calls upon further investigations into the role of AI in quality analysis and educational innovation cultivation.
Keywords: Digital transformation, Artificial Intelligence, Academic Evaluation, Academic Integrity, Published Research, Palestinian universities**.**

BACKGROUND

Worldwide, higher education has completely changed digitally in the past two decades, with technology becoming an inseparable part of educational practices, thus bringing about fundamental changes in teaching and evaluating procedures. AI is one of the latest tools that have been in the spotlight for improving educational efficiency, mainly in professional evaluation because it takes a practitioners approach in analyzing research students' data speeding up a development process, reducing human error, and improving educational experience (Lytras et al., 2024).
On the contrary, the Palestinian universities are facing challenges regarding technological changes; one cannot forget the economic barriers that needed to be developed, the lack of technical infrastructure, and the very pressing need for confidence and ethical use of AI in education (Çıraklı, 2019). These hurdles were made harder with the coming of the COVID-19 pandemic, which hastily propelled educational institutions into digital education, thereby pointing to the necessity of developing AI-based electronic assessment systems that would guarantee the accuracy and efficiency of educational evaluations (Abu Mukh & Salahab, 2021).
One of the most important applications of AI is the educational assessment processes in higher education, where the University uses machine learning tools to treat evaluatio and research articles for analysis which enables an accurate and an objective assessment. Furthermore, AI helps provide instant feedback to students improving the quality of learning and student engagement with academic material (Almassaad, Al-Ajlan & Alebaikan, 2024).
However, the application of AI in these educational evaluation systems raises moral and technical questions, which are based mostly on the idea that some research has reported that these systems may harbor biases that negatively affect evaluation accuracy; AI could also help enhance privacy for its use in correcting research that may be unethically plagiaristic in pedagogical stand (Kovari, 2025). Hence, it has become very pertinent to check these methods'

effectiveness and safety when used to evaluate educational research in Palestinian universities, while at the same time being able to identify intervals and challenges that see the integration of artificial intelligence as untenable.

Therefore, this study intends to analyze the role of digital changes backed by artificial intelligence in improving the educational assessment processes related to research published at Palestinian universities, focusing on these educational institutions in using these technologies. The purpose is to understand the possible difference among the educational groups in using these systems and to study the impact of artificial intelligence on the integrity of educational-evaluation and on transparency.

Search problem

Digital alterations have become a vital element accompanying rapid technological development in varied fields, including the higher education sector. Educational assessments are among the arenas that have witnessed fundamental changes as a result of the integration of the AI technologies in evaluation, grading and analysis systems. Evaluation in universities is getting AI units for speeding up educational processes and for improved accuracy, reducing human errors and increased integrity in education (Alotaibi, 2024).

The Palestinian education system, despite these advantages, faces daunting challenges that barricade digital change, among them being the weakness in digital infrastructure, insufficient training for teachers and educational evaluators, and on top of that, the AI assessments are further burdened with ethical concerns about trust and fairness. (Omar, Shaqour, & Khlaif, 2024). Very few studies are available in the literature about the use of AI technologies in academic assessment, especially those conducted in the Palestinian context; this constitutes a research gap, which calls for further investigation to know more accurately the impact of these technologies.

Some researchers suggest that AI could either enhance or hinder the fairness of the academic evaluation if not developed and used well. For example, Barahmeh (2024) stated that the use of AI in academic assessment can speed up its processes and enhance accuracy, but if grading algorithms are not set up to accommodate the academic diversities of students, then such grading would interfere with fairness. According to Fazil, Hakimi, & Shahidzay (2024), many AI systems carry programmed data biases that may produce unfair evaluation of some groups of students.

Based on the foregoing, the research problem is in investigating the role of digital changes powered by AI in enhancing educational evaluation of research published by Palestinian universities, with particular focus of those technologies on academic integrity, and the diffeander and academic experience. centre in researchassessment to identify the challenges met by Palestinian universities in the implementation of AI into processes, and to recommend possible solutions and strategies for overcoming these challenges to use these technologies in the best possible way.

Research Questions

- To what extent will AI-powered digital transformation improve the processing of academic evaluation of research published in Palestinian universities?
- Are there statistically significant differences at the level of significance ($\alpha < 0.05\%$) in the responses of the study sample on digital transformation supported by artificial intelligence to improve the academic evaluation of research published in Palestinian universities due to the gender variable?
- Are there statistically significant differences at the level of significance ($\alpha < 0.05$) in the responses of the study sample on artificial intelligence-supported digital transformation to improve the academic evaluation of research published in Palestinian universities? Attributable to the academic qualification variable?
- Are there statistically significant differences at the level of significance ($\alpha < 0.05$) in the responses of the study sample on digital transformation supported by artificial intelligence to improve the academic evaluation of research published in Palestinian universities? Attributed to the variable of years of experience?

Research Objectives

- This research aims to achieve a set of main objectives that revolve around the role of digital transformation supported by artificial intelligence in improving the academic evaluation of research published in Palestinian universities, and these objectives include the following:
- Analyze the impact of AI-powered digital transformation on academic assessments by exploring how to improve the accuracy and speed of assessments of published research through digital tools and smart systems.
- Identify differences in the impact of AI-powered digital transformation on the academic evaluation of published research according to gender, qualification, and work experience of faculty and academic evaluators.
- Explore the opportunities and challenges facing Palestinian universities in adopting artificial intelligence in the evaluation processes of published research, and provide proposed solutions to overcome technical and human obstacles.
- Provide recommendations for the development of AI integration strategies in the academic evaluation processes of published research to ensure the achievement of academic integrity standards and improve the quality of published scientific research..

Importance of research

First: Scientific Importance

- The research includes in particular the knowledge gap that exists with respect to AI-powered digital transformation and its impact on the academic evaluation of published research in Palestinian higher education institutions.

- The addition is in scientific literature with reference to the entry of AI into the academic evaluation processes of published research, a decision baseline for making informed decisions at academic institutions on the use of these technologies.
- That research will elaborate on how AI tools can help in improving the quality of academic evaluation of research, which may continue to improve outcomes in research conducted in Palestinian universities.

Second: Practical Importance

- The research provides applied solutions, which Palestinian universities will be able to adopt to enhance the use of artificial intelligence in the academic evaluation processes of published research, contributing to increased efficiency of these processes and reduced human errors.
- Presents the possible obstacles that digital transformation might face in academic evaluation of published research and suggestions to overcome these obstacles, increasing preparedness among academic institutions to acquire modern technology.
- This also helps in the construction of education policies that would cause responsible and ethical use of AI in evaluating without compromising the standards of academic integrity and fairness.
- Empowers policymakers in Palestinian universities with evidence-based recommendations on the best practices of using AI techniques in the academic evaluation of published research.

Theoretical Framework: The Role of Digital Transformation Powered by Artificial Intelligence in Improving the Academic Evaluation of Research Published in Palestinian Universities

1. Introduction to Digital Transformation in Higher Education

Palestinian university education continues to experience a series of challenges which negatively affect the quality of education as well as its relief measurement including wars, socio-economic voids and crumbling resources for higher education-strapped (Çıraklı, 2019). Indeed, AI-powered digital transformation is a powerful tool for improving educational assessment processes and developing learning outcomes in Palestinian universities. Innovative solutions come through AI, which could address these voids and provide opportunities for personal learning and strict evaluator (Fazil, Hakimi, & Shahidzay, 2024).

2. Critical Challenges in Palestinian Education

Many of things, problems, which limit the efficiency level of Palestinian education systems due to traditional methods and fragmentations in classrooms and technical infrastructure deficiencies (Almassaad et al., 2024). Further issues complicate the Palestinian education crisis and need extensive improvements, such as teacher training and investment in developing the digital infrastructure. (Alawneh,Y., et al, 2023).

The inadequacies extend also to the Kovid -19 period, which has pressed many universities to change to distance education. Despite the efforts made, it reflects the immediate needs of improving the use of digital technology. In short, this is not working among educational institutions. (Omar, Shaqour, & Khlaif, 2024).

3. **The role of artificial intelligence in improving the academic evaluation of published research**

AI is incrementally shaping the academic evaluation of published research since it utilizes scientific judgment processes efficiently and accurately in developing ways. It is machine learning and application of advanced NLP algorithms that enable AI technology to analyze and evaluate quality educational research from multiple perspectives, including originality, logical harmony, and accuracy of data (Barahmeh, 2024). AI is designed to identify unidentified quotations and thefts of literature as well as enhance the integrity of education and sustain the standards of scientific research (Fazil, Hakimi, & Shahidzay, 2024).

Perhaps the major advantage of AI in academic evaluation is that the whole process of scientific refereeing has been automated: smart algorithms can masterfully sort and classify research according to its pertinent scientific topics, paving the way for nominating the right reviewers for each study based on their research records and academic interests (Kovari, 2025). With these techniques, initial content analysis of a research study could also be provided that would assist referees to make more accurate and objective decisions regarding acceptance or refusal. Additionally, AI improves the verification process in evaluating sources and citations, further minimizing scientific errors and raising the research quality standards within published works (Almassaad, Alajlan, & Alebaikan, 2024).

AI can also provide evidence about the levels of research impact and spread these studies achieve within the academic community by quoting other research within the same field. This is done via citation tracking and by taking input to the effect of citations in other research (Hamamra, Mayaleh, and Khlaif, 2024). In addition to those, it can recommend other references to researchers based on the subjects covered, thereby making research more qualitative and bigger in scope (Jurāne-Brēmane, 2021). AI systems even forecast the chances of research acceptance among leading scientific journals, simply by using data from earlier studies to ease the researcher in refining their research before sending it to publish (Alotaibi, 2024).

For challenges, there are certain obstacles associated with the use of AI in academic evaluation. Noteworthy, one of those challenges relates to the need for algorithms to be transparent and fair to different types of research or researchers (Lytras et al., 2024). Also, overdependence on the machine without human amenability may lead to faults in the analysis when it comes to critical and analytical aspects (Omar, Shaqour, & Khlaif, 2024). However, combining AI

assessment with human arbitration will always serve as the best avenue in achieving the right balance between technical competence and human critical insight (Kılınç, 2024).

Essentially, artificial intelligence is an addition of quality to the academic evaluation process, in that it contributes to speeding up the arbitration process while also improving the quality of research and accountability in academics. As technology continues to advance, it seems that there arises the need to develop regulatory and ethical frameworks within which such technologies could be used to the growth of scientific research and the enhancement of academic knowledge quality. 4. **Key dimensions of the role of artificial intelligence in improving the academic evaluation of published research**

Dimension one: Improving Academic Assessment Quality

Artificial intelligence elevates the level of academic evaluation by means of analyzing scientific texts using NLP techniques and machine learning, which allows the quality of research to be assessed on originality, logical coherence, and accuracy of scientific data in such a manner that human error is reduced and arbitration processes are more accurate and efficient (Barahmeh, 2024).

Dimension Two: Automating Arbitration and Scientific Review Processes

Artificial intelligence solutions automate many processes in academic arbitration, including classifying submitted papers-papers nominated for arbitration based on expertise-and preliminary reviews of research content. All of these speed up the assessment process while lightening reviewers' burdens, and thus healthily contribute to smoothening academics and effective publication (Kovari, 2025).

Dimension Three: Boosting Integrity in Academics while Finding Plagiarism

AI offers very powerful means in order to enable a researcher to pinpoint undocumented citations and plagiarized portions in submitted research in relation to other databases. In this way, academic standards of integrity are maintained and plagiarism avoided, strengthening the reliability of published research (Fazil, Hakimi, & Shahidzay, 2024).

Dimension Four: Impact of Research Analysis and Quality Predictions

AI systems may measure the impact of scientific research by evaluating the number of citations, as well as assessing its relations with other researches in the same field. In addition to this, research can predict how likely it is to get accepted in high-standard scientific journals based on past data patterns, allowing researchers to polish their research before it is submitted for publication (Hamamra, Mayaleh, & Khlaif, 2024).

6. **Challenges in Integrating Artificial Intelligence in Palestinian Education**

Even though the advantages of incorporating AI in academic improvements are quite significant, many challenges inhibit successful adoption of this technology in the Palestinian education system. The most striking of these barriers is the lack of technical proficiency by teachers and students, as most academic institutions lack training programs that would equip individuals to use AI tools efficiently. Popular studies show that the persistence of the digital divide exists within Palestinian universities, preventing students and teachers alike from using current technologies (Fazil, Hakimi, & Shahidzay, 2024).

Additionally, the lack of technical infrastructure at some universities becomes a major hurdle to effective digital transformation. Many educational institutions suffer from limited access to high-speed internet and shortage of modern gadgets, making adoption of AI applications in education more complex (Çıraklı 2019).

Another challenge that confronts the seamless integration of artificial intelligence into Palestinian educational systems would be the ethical considerations surrounding the use of big-data analytics in education. The AI usage in this sector raises concerns over privacy and protection of student data as this data could be misused should such regulation not be put in place. Hence, it becomes urgent that outright policies and procedures be set up to better facilitate ethical application of these technologies while further protecting the interests of students and teachers against data exploitation and misuse (Kovari 2025).

Also, AI algorithms have to stand an accusation of bias, as unfair results from assessments might be achieved in the absence of unbiased data. For example, if automated assessment (grading) is taught with limited data, or data unrepresentative with regard to all groups of students, it will provide not just wrong results but discriminatory ones that will work against the very essence of educational equal opportunity (Fazil, Hakimi, & Shahidzay 2024).

Previous studies

In the study by Kılınç, S. (2024) titled, "Comprehensive AI Assessment Framework: Enhancing Educational Assessment by Integrating Ethical AI," ethical AI integration in education ensures assessment integrity and enhances learning outcomes. The study, based on an extensive literature review and further practical insights, proposed a framework for different educational environments. The study did not deal with a specific sample, as the focus was on generating the framework toward its effective use in diverse environments. The study has confirmed that the proposed framework significantly enhances learning outcomes and assessment integrity and proposes responsible AI use in education**.**

The study by Bsharat, T. R. K., Salah, J. A. M., & Barahmeh, M. Y. (2024) was on the analysis of the educational gap in Palestine. The focus was on analyzing causes contributing to this gap while providing compensatory solutions and measures. The study presented a literature review and analysis of the current educational system in Palestine. The

study, too, did not deal with a specific sample, but rather with the entire situation of educational analysis. The findings indicated that the educational gap in Palestine is triggered by actual conflict, economic restraints, lack of resources, and outdated curriculum. The study also stressed the necessity of reform in areas of teacher training programs, educational policies, and investments in educational infrastructure**.**

In the study by Lytras et al. (2024), a global overview of AI influences in higher education was presented concentrating on contemporary applications enhancing in-person learning, content creation, and distance learning. The study method employed critical review of current literature and analysis of relevant applications within educational field but without dealing with a particular sample, where a variety of smart tools and platforms utilized at higher education were presented. The study has established that AI plays an enormous role in advancing higher education through tools pertaining to personalized learning and promotion of academic success, revealing fascinating shifts in academic research, and writing.

The study of Abu Mukh, Y. & Salahab, R. (2021) elaborated on the challenges that Palestinian universities faced in relation to digital transformation during the COVID-19 pandemic. The study aimed to analyze the challenges related to the use of technology in teaching and the consequences of digital transformation on the university education system. The study took a mixed-methods approach, employing both quantitative and qualitative techniques to analyze data regarding digital transformation in Palestinian universities collected via questionnaires and interviews with professors and students. Survey data involved a selection of professors and students in Palestinian universities. The study revealed that Palestinian universities rapidly adapted to distance education, but gaps in digital transformation pointed toward skill deficiencies of both students and teachers needing spending on improvement of such skills and infrastructure.

InHamamra, B., Mayaleh, A., & Khlaif, Z. N. (2024) explored the impact of ChatGPT use on teaching and assessment methods at Palestinian universities. The study relied on an analysis of articles students penned using ChatGPT while also interviewing students who applied the technique. First, a qualitative analysis was employed to analyze the interviews and the texts composed by students. The sample included four students at An-Najah University National, where data was collected across 24 responses from students in three different attempts. It was shown that the use of ChatGPT has contributed to low participation in class, absenteeism, and little excitement for assessments**.**

The study conducted by Kovari, A. (2025) addressed the challenges and risks that arise through the use of ChatGPT in education while also proposing some strategies aimed at curtailing instances of academic plagiarism and guiding the ethical use of such tools. This investigation was a literature review that looked at the contemporary issues and practices with artificial intelligence application in education. It did not look into specific samples but rather covered a field of literature and current research. The findings reveal that ChatGPT usage in education may enhance student engagement, though this is coupled with a strong threat to the academic integrity of possible plagiarism. Further research is necessary, leading to shorter training programs regarding ethical conduct in educational institutions and improving on the AI-generated text detection strategies.

The study of Almassaad, A., Alajlan, H., and Alebaikan, R. (2024) examined students' perception of generative AI tools use for higher education. The study was cross-sectional and surveyed through questionnaire administration to 859 students. The study analyzed data collected from questionnaires. The sample consisted of 859 college students in Saudi Arabia. The study showed that most students use GenAI toolsfrequently with benefits related to ease of access and saving time. However, students expressed concerns about challenges such as plagiarism and inaccurate information**.**

Aiming Abu Mukh, Y., and Salahab, R. (2021). The findings of this study indicate the challenges that Palestinian universities faced during the outbreak of COVID-19. Technology and the digital style of life have become ramified into everyday existence whereby the pandemic necessitated a shift in how we work and learn under the COVID-19 crisis. Gone are the days when students would sit in classrooms listening to traditional lectures. Duration of education has been transformed into an interactive experience whereby special consideration is given by teachers to the implementation of technology in teaching. Digital transformation stays relevant in a knowledge society with technology being an enabler of students developing the relevant knowledge and skills. As noted, because of these challenges, Palestinian universities participated in very rapid transformations into Internet-based education, which carried on with rapid and heightened educational responses as well as developing an educational and technological infrastructure. The findings of the study further recommend the need to come up with new strategies to integrate digital transformation in education, and further, attain more development in technology to keep abreast with the exigencies of the times**.**

Previous studies underscore the increasing role of AI in improving academic assessment**,** with Kılınç (2024) noting the importance of integrating ethical AI to ensure the integrity of assessment. Lytras et al. (2024) also explained that AI technologies promote personalized learning and improve scientific research and evaluation. Abu Mukh & Salahab (2021) She discussed the challenges faced by Palestinian universities in digital transformation and the importance of developing strategies to support the use of artificial intelligence. Hamamra, Mayaleh, & Khlaif (2024) showed the impact of ChatGPT on academic interaction, highlighting the need to balance AI with scientific integrity. While Kovari (2025) warned of the dangers of academic plagiarism when using AI, Fazil, Hakimi, & Shahidzay (2024) stressed on

the need to minimize bias in evaluation algorithms. These studies reflect the importance of artificial intelligence in academic evaluation with the need to develop policies that ensure integrity and transparency.

Method and procedure

This study uses the descriptive analytical approach, where data will be collected using a questionnaire addressed to faculty members in Palestinian universities. The questionnaire includes multiple questions about the impact of digital transformation powered by artificial intelligence on improving the processing of academic evaluation of research published in Palestinian universities, whereas data will be analyzed using appropriate statistical methods to identify differences between different categories, such as gender, academic qualification, and experience in the use of technology. Aim The study aims to provide comprehensive insights into the impact of AI-powered digital transformation on improving the processing of academic evaluation of published research.

METHODOLOGY

This study took a descriptive and analytical course. Data collection consisted of the questionnaire circulated to faculty members and students in Palestinian universities. The questionnaire was comprised of closed questions aimed at evaluating AI-powered digital transformation on improving academic evaluation processing of published research, as well as determining benefits and challenges surrounding this. Demographic data-gender, academic qualification, and experience-would be collected to analyze differences between different categories. The data would be analyzed using Appropriate statistical methods such as variance analysis and difference tests (ANOVA) to determine the existence of any statistically significant differences between different groups.

Population and sample of the study

The study population is represented by all faculty members in Palestinian universities who deal with academic assessment in their courses. A sample of 86 members was selected out of 88 members, randomly selected to ensure fair representation of various academic disciplines and departments. This sample aims to obtain a comprehensive view of the extent to which artificial intelligence is used in the academic evaluation processes of established research, as well as the benefits and challenges**.**

Table 1 Demographic characteristics of the study sample

CHARACTERISTICS	CATEGORY	ITERATION	PERCENTAGE
GENDER	male	61	70.9%
	female	25	29.1%
QUALIFICATION	Master and below	61	70.9%
	Doctor	25	29.1%
EXPERIENCE	Less than 5 years	34	39.5%
	5 to 10 years	37	43.0%
	More than 10 years	15	17.4%

From the sample results, it seems that the majority of participants are male, representing 70.9% of the sample, whereas females represented 29.1% of the total. The qualification of a master's degree or less thus seems to dominate, with 70.9% of the respondents owning it, while holders of a doctorate made up 29.1%. Regarding their work experience, the differences among categories were as follows: most (43%) have experience falling between 5 and 10 years, while the next category is less than 5 years at 39.5%, and finally comes more than 10 years (17.4%).

Study Tool

The main data collection tool for this study was the questionnaire tool. The questionnaire is designed to include a number of questions aimed at assessing the extent of artificial intelligence application to improve the academic evaluation of research publications in Palestinian universities, challenges, and potential gains of those technologies. The questionnaire was administrated on a sample of faculty members using the random sampling method in order to ensure diversity of answers, and to provide accurate and comprehensive data. The questionnaire was constructed based on previous studies and contained both closed and open questions to provide quantitative and qualitative information on the subject.

Honesty and consistency of the tool

Content Validity: In this research, the tool has been designed in-depth to measure dimensions associated with improving academic assessment through artificial intelligence. Questions used concerned significant areas such as personalized learning, academic exam security, and immediate feedback with technical and ethical challenges. The tool's content validity has been enhanced further by ensuring the fit of the questions to the study issues raised, increasing the credibility of the tool for measuring targeted concepts**.**

Tool validity: The validity of the tool has been checked with specialized reviewers that are knowledgeable in education and artificial intelligence to ensure that all aspects of the topic are covered comprehensively. The tool was further pilot-tested on a faculty member sample so that any unclear questions could be rectified and the ability of the questions in measuring the required concepts could be verified. The process confirmed the tool's honesty in measuring the specified dimensio.

The stability of the instrument is determined by using Cronbach's Alpha coefficient that is widely accepted in measuring the internal consistency of an instrument, and the result indicated the instrument was highly stable. For the different dimensions, improving the quality of academic assessment yielded a Cronbach's Alpha value of 0.788 signifying that the tool has a good level of stability in measuring this dimension. For the automation of the refereeing and scientific review processes, the Cronbach's Alpha estimate was 0.778, which is at an acceptable level for an adequate stability level. Following enhancement of academic integrity and plagiarism detection, a Cronbach's Alpha score of 0.789 was documented, ingesting a strong reliability on this aspect. For dimensions of research impact analysis and quality prediction, a Cronbach's Alpha value of 0.773 was obtained indicating good stability for this dimension as well.

As for the tool at large, a Cronbach's Alpha score of 0.933 was observed, indicating the tool is very highly stable overall. The above values provide proof that the tool is highly stable in data collection, hence increasing its reliability.

Presented Result of the Study:

In this section, the outcomes witnessed are presented and discussed based on the impact of purposely designed AI-supported digital transformation schemas on enhancing academic evaluation at the Palestinian universities. The views of faculty members on the various dimensions of AI-supported digital transformation have been analyzed to see how these dimensions would contribute to enhancing academic assessment processes in Palestinian universities.

Once results were being discussed, the following criterion will be sticking to in accordance with the context of this study: (Alawneh,Y. 2022)

- Scores above 3.5 yield a significant impact level.
- Scores from 2.5 to 3.49 indicate an average impact level.
- Scores lower than 2.5 indicate a low impact level..

The first question is to what extent does AI-powered digital transformation improve the treatment of academic assessment in research published in Palestinian universities?

Further, using appropriate comparison levels for interpretation to derive the arithmetic means and standard deviations for the responses of the study sample members on the role that AI-powered digital transformation plays in improving the academic evaluation of research published in Palestinian universities. The corresponding study dimensions relating to AI-powered digital transformation on improving the academic evaluation of research are presented in Table (2)..

Table (2): Arithmetic averages and standard deviations related to the role of AI-powered digital transformation in improving academic evaluation in Palestinian universities.

Dimension	(Mean)	Std. Deviation	Grade
Improving the quality of academic evaluation	4.30	0.420	Large
Automation of arbitration and scientific review processes	4.30	0.429	Large
Promote academic integrity and plagiarism detection	4.29	0.458	Large
Research impact analysis and quality prediction	4.24	0.443	Large
The impact of AI-powered digital transformation on improving the processing of academic evaluation of published research	4.28	0.396	Large

The study results indicated that digital transforming backed by artificial intelligence has positive effects on improvements to the processing of the academic evaluation of research published from Palestinian universities, with participants indicating a significant effect on specific dimensions of the academic process. Quality academic assessment appears to improve on average 4.30 with a standard deviation of 0.420, representing recognition of AI to customize the assessments and mainly analyze the performance of researchers in more accurate and objective manners, which can be also supported through the provision of flexible assessment environments that minimize human biases in scientific arbitration and improve academic processes in quality.

As for the automation of arbitrating and scientific review processes, this dimension assessed an average of 4.30 with a standard deviation of 0.429, reflecting the effectiveness of artificial intelligence in speeding up arbitration processes

and exerting pressure on human reviewers. These technologies provide intelligent tools for analyzing, classifying, and suggesting suitable reviewers for processing academic texts towards more efficiency in academic arbitration processes.

About improving the scope of academic integrity and anti-plagiarism, this dimension had an average of 4.29 with a standard deviation of 0.458, implying the extent AI enhances academic evaluation via plagiarism detection systems and originality analysis of research. This is in favor of maintaining ethical standards within scientific research and ensuring research published in academic journals' reliability.

On research impact analysis and quality prediction, the average stood at 4.24 with standard deviation at 0.443, revealing that digital transformation through AIs contributes to providing analytical tools in measuring research impact by tracking the number of citations, analyzing research networks, and predicting future scientific research's prevalence and impact. Nevertheless, these findings come with challenges in the areas of the accuracy of algorithms used in assessing the quality and impact of research, which calls for developing these models more contextually adapted to Palestinian research.

The general average showed an indication of the total impacts that AI-powered digital transformation had on improving processing of academic assessment at 4.28 with a standard deviation of 0.396, alluding to a positive and effective impact as reported by the respondents. Almassaad et al., 2024 supports such findings since it confirmed that AI plays an important role in enhancing academic assessment and judging processes by using smart analysis tools. It also supports the findings of Lytras et al. (2024), where he mentioned that the ultimate ability of artificial intelligence is for personalized academic assessments and improvements on the accuracy of research results.

These have been the major results; however, there exist some challenges associated with ethical and technical measurements, like privacy issues and transparency while evaluating such research using artificial intelligence. The study, therefore, recommends the adoption of clear policies for the responsible and fair use of artificial intelligence in the academic evaluation process, concurrently working to improve the accuracy and compatibility of arbitration algorithms according to research and academic standards in Palestinian universities..

The second question is whether there are statistically significant differences at the level of significance ($\alpha < 0.05$)in the responses of the study sample on digital transformation supported by artificial intelligence to improve the academic evaluation of research published in Palestinian universities. Tattributed to the gender variable?

This question regarding the gender variable was answered through the use of Test (t) for two unmatched samples, and as shown in Table (3):

Table (3) Test (t) for two independent samples to indicate the differences in the responses of the study sample on digital transformation supported by artificial intelligence to improve the academic evaluation of research publishedin Palestinian universities. Attributable to the gender variable

Domain	genre	Number	Arithmetic mean	Standard Drift	Value(t)	Significance level(Sig)
Improving the quality of academic evaluation	male	61	4.32	.422	.646	0.52
	Female	25	4.26	.420		
Automation of arbitration and scientific review processes	male	61	4.36	.412	1.952	0.06
	Female	25	4.17	.446		
Promote academic integrity and plagiarism detection	male	61	4.34	.449	1.395	0.16
	Female	25	4.18	.473		
Research impact analysis and quality prediction	male	61	4.27	.423	.963	0.33
	Female	25	4.17	.490		
The impact of AI-powered digital transformation on improving the processing of academic evaluation of published research	male	61	4.32	.385	1.372	0.17
	Female	25	4.19	.415		

The results of the test show that male sample averages 4.32 against female average of 4.26, while t 0.646, level of significance 0.52; a null hypothesis of no significant difference was accepted. The general results of the test indicate no statistically significant difference at the 0.05 significance level between males and females relative to all dimensions analyzed; all p-values (Sig) came above 0.05, which is further indicative of that the differences between sexes are insignificant.

After automating the arbitration and scientific review processes, the results showed an average of 4.36 for males compared to 4.17 for females, with a value of (t) of 1.952 and a significance level of 0.06, indicating that there were no significant differences although there existed slight differences in arithmetic averages. Also, in the dimension of

enhancing academic integrity and detecting plagiarism, males scored an average of 4.34 versus 4.18 for females, with a value of (t) of 1.395 and a significance level of 0.16, which means that there is no significant difference between the sexes in This aspect too.

Instructions for assessing the recent research data with a view to predicting its quality indicate, on average, 4.27 against 4.17 by females, with a value of (t) 0.963 and a level of significance of 0.33, most likely reinforcing earlier results where there were no statistically significant differences between genders in terms of the responses on this dimension.

For the overall impact of AI-powered digital transformation on improved processing of academic evaluation of published research, males scored 4.32 compared with 4.19 for females, and t value is 1.372, whereas the significance level is 0.17, showing that there is no statistically significant difference in terms of gender.

These outcomes indicate that AI-inspired digital transformation is not a factor of gender in its effect on the betterment of academic evaluation over research in Palestinian universities since male and female responses show no difference in all dimensions looked at. This finding may in part be attributed to the fact that technologies of academic assessment have been applied to the whole student body without consideration for their gender, and also, skills of using artificial intelligence in the academic processes have equally pervaded both sexes.

These are congruent with some earlier studies, such as Omar et al. (2024), which indicated that the impact of AI on education is gender neutral since digital assessment techniques are based on scientific criteria established not by demographic factors. Some literature, however, suggests that there may be individual differences in the way gender interacts with technology, which may further warrant investigation.

It then ensues from these findings that the configuration of artificial intelligence-driven digital transformation is such that a level playing field is created, where students become equal, regardless of gender. Such must hold while advancing other areas such as the need to enhance skills of using the technologies in question and strategizing on ways that these technologies can be integrated within academic assessment in Palestinian universities..

Third question: Are there statistically significant differences at the level of significance ($\alpha < 0.05$)in the responses of the study sample on digital transformation supported by artificial intelligence to improve the academic evaluation of research published in Palestinian universities? Attributable to the variable of academic qualification?

For that matter, this question regarding academic qualification is addressed through Test (t) for two independent samples using Table (4).

Table (4) Test (t) for two independent samples to indicate the differences in the responses of the study sample on digital transformation supported by artificial intelligence on improving the academic evaluation of research published in Palestinian universities due to the variable of academic qualification

Domain	genre	Number	Arithmetic mean	Standard Drift	Value(t)	Significance level(Sig)
Improving the quality of academic evaluation	Master and below	61	4.29	.449	-.480-	0.63
	Doctor	25	4.34	.344		
Automation of arbitration and scientific review processes	Master and below	61	4.30	.464	-.292-	0.77
	Doctor	25	4.33	.335		
Promote academic integrity and plagiarism detection	Master and below	61	4.30	.511	.156	0.57
	Doctor	25	4.28	.300		
Research impact analysis and quality prediction	Master and below	61	4.26	.489	.761	0.44
	Doctor	25	4.18	.304		
The impact of AI-powered digital transformation on improving the processing of academic evaluation of published research	Master and below	61	4.28	.442	.051	0.95
	Doctor	25	4.28	.258		

The results of the (t) test indicated that no significant statistical differences were found at the significance level ($\alpha < 0.05$) between the respondents that hold a master's degree and below and those that hold a doctoral degree across all dimensions that were analyzed, because all p-values (Sig) were above 0.05, indicating that there are statistically significant differences between both groups. Concerning the dimension improving the quality of academic evaluation, the arithmetic average score for master's holders and below was 4.29 points compared to 4.34 for doctorates, with a value of (t) equal to -0.480 and significance level of 0.63, which indicates that there is no statistically significant difference between the two categories in this regard. There were no differentiating discrepancies for the dimension regarding the automation of the arbitration and scientific review processes; the average of respondents who hold a

master's degree and below was 4.30 versus 4.33 of those who hold a doctorate with a (t)-value of -0.292 and a significance level of 0.77, indicating major convergence of opinion between both categories.

With regard to the dimension of enhancing academic integrity and detecting plagiarism, master's holders and lower responded with an average of 4.30 compared to 4.28 among doctoral holders, with a value of (t) at 0.156 and significance level at 0.57, reflecting that not a single difference existed in either of the two categories being analyzed in their responses on this issue.

As concerns the analysis of research influence and the predicting of its quality, the arithmetic average scores of respondents holding master's degrees and below were 4.26, while that for doctoral holders was lower at 4.18. This produced a (t) value of 0.761 with a level of significance pegged at 0.44, confirming the non-difference between the two categories on recognizing the effect of artificial intelligence on research analysis.

As concerns the overall effect of AI-powered digital transformation in improving the processing of academic evaluation of published research, a mean of 4.28 was recorded across both groups, pointing to no significant differences, as the value of (t) was 0.051 and the significance level was 0.95, far from the level necessary to interpret as statistically significant the differences.

These results indicate that the effects of AI-powered digital transformation on improving academic evaluations of research in Palestinian universities do not change with education attained by the participants, as shown by no statistically significant differences in any dimensions studied between holders of a master's degree or lower and those possessing doctorates. This is explained by the fact that all academic groups, regardless of their qualifications, are equally subjected to digital transformation technologies, whether through teaching, scientific research, or the use of smart assessment tools in academic institutions.

These findings are also in agreement with previous studies such as that of Almassaad et al. (2024), which concluded that technology including artificial intelligence has uniform use among various levels of academics, with more successful integration of these technologies into the education process depending on the presence of appropriate training rather than qualification.

Fourth question: Are there statistically significant differences at the level of significance ($\alpha < 0.05$) in the responses of the study sample on digital transformation supported by artificial intelligence to improve the academic evaluation of research published in Palestinian universities. Attributed to the variable of years of experience?

In answering this question related to the variable of years of experience, Anova analysis was used for this.:

Table (5) Variance test to indicate differences in the responses of the study sample on digital transformation supported by artificial intelligence to improve the academic evaluation of research published in Palestinian universities. Due to the variable of years of experience

Variables		Sum of squares	Degrees of freedom	Average squares	F test	P-value
Improving the quality of academic evaluation	Between groups	.156	2	.078	.437	.647
	Inside groups	14.824	83	.179		
	Total	14.981	85			
Automation of arbitration and scientific review processes	Between groups	.244	2	.122	.658	.521
	Inside groups	15.398	83	.186		
	Total	15.642	85			
Research impact analysis and quality prediction	Between groups	.191	2	.096	.449	.640
	Inside groups	17.672	83	.213		
	Total	17.863	85			
Research impact analysis and quality prediction	Between groups	.101	2	.051	.254	.777
	Inside groups	16.587	83	.200		
	Total	16.688	85			
The impact of AI-powered digital transformation on improving the processing of academic evaluation of published research	Between groups	.104	2	.052	.328	.722
	Inside groups	13.200	83	.159		
	Total	13.304	85			

Table (5) illustrates the results of applying the F test for the "Years of Experience" variable. All the results of the F test indicated that there were no statistically significant differences at the level of significance (($\alpha < 0.05$) in all the dimensions analyzed, where all probabilities (Sig) values came higher than 0.05, indicating that there existed no

significant differences of any kind, under varying years of experience, regarding the impact attributed by individuals to AI-powered digital transformations in academic assessments.

In terms of the dimension improving the quality of academic assessment, the F test value was 0.437 and significance level was at 0.647 indicating that statistically there are no differences between the cases with respect to participant differences in years of experience. No significant differences were also identified in the aspect of automation of arbitration processes and scientific review, where the value of F was recorded at 0.658, with a level of significance of 0.521, which indicated that AI has equal effects on the automation of academic arbitration on all categories, regardless of the number of years of experience.

In the dimension of further enhancing academic integrity and detecting plagiarism, the value of programmed F was 0.449 and the respective significance level was 0.640, meaning that AI has the same effect on the integrity standing of academic assessments for all participants regardless of the years of employment. Further, no significant differences were recorded across the dimension on research impact analysis and prediction quality, with an F of 0.254 and significance level fixed at 0.777, meaning that all categories are in agreement that AI enhances research evaluation without much dependency on the years of experience.

As for the overall effect of AI-powered digital transformation on improving the processing of academic evaluation of published research, the value of F was 0.328 and its significance level was 0.722, which confirms that there are no statistically significant differences between individuals with different years of experience. This means AI affects all groups equally regardless of their work experience.

These results imply that the years of experience have no significant impact on the perception of improving academic evaluation through AI-powered digital transformation. This may be because all academic categories, irrespective of the years of experience, are similarly subjected to the impacts of these digital technologies in business and research environments, resulting in converging effects across all categories..

The use of artificial intelligence tools has been made available to every person, regardless of level of experience, due to its proliferation in higher education, since everybody can access all smart tools and platforms without requiring many years of experience to use them effectively.

These results agree with previous studies-such as Almassaad et al. (2024)-indicating the impacts of technology in education having similar influences to all occupational groups in the end, because their success in adopting the technology depends more on availability and training of digital tools than years of experience itself..

Recommendations:

.1. Palestinian universities should establish tailored training programs for faculty members and academic reviewers on the usage of AI tools for academic assessment process such as arbitration, plagiarism detection, judicious research quality assessment, etc.

2- Institutional regulations and standards should be issued to explain the use of artificial intelligence in academic assessment with respect to integrity, transparency, and privacy issues, thereby preventing unethical acts as automatic plagiarism or meddling in research evaluation.

3. Universities should integrate AI tools to research management systems and scientific journals for better refereeing efficiency and consequently relieve the burden on the reviewers, speeding up publication and improving the quality of research outputs.4.

There should be clear policies concerning ethical problems that arise because of the use of AI in education, including safeguarding personal data and preventing academic plagiarism.

5. Deeper future studies are recommended to explore the impact of AI on more detailed aspects of academic assessment, such as algorithmic biases analysis, the impact of AI on feedback quality, and AI's role in promoting research innovation.

6. Universities should create a culture of digital learning in researchers, professors, and students so that they benefit equally from what AI has to offer for academic assessment and ensure both technical and non-technical assistance to promote adoption of these technologies.

CONCLUSION:

Evidence from the analysis indicates that AI-enabled digitization has a positive implication toward improvement of academic evaluation in respect to research published in Palestinian universities. Average impact ranged high across various dimensions studied, including improvements in the quality of evaluation, automation of the arbitration processes, enhancement of academic integrity, and analyzing the impact of research as per statistics. Also, statistical analysis indicated no statistically significant difference at the level (α% 3C 0.05) pertaining to its variables-gender, educational qualification, and years of experience. This implies that the impact of digital transformation and artificial intelligence is uniform among all sample groups.

The above findings give credence to the assertion that AI systems can provide spectacular opportunities for improving the efficiency and precision of academic assessment while providing the guide necessary to joint-the optimal use of

and to avoid emerging related challenges because of the academic integrity dilemma and ethics. Therefore, it becomes imperative to position more integrated strategies so that AI will serve to enhance the quality of education.

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