Journal of Posthumanism
2025
Volume: 5, No: 3, pp. 843–858
ISSN: 2634-3576 (Print) | ISSN 2634-3584 (Online)
posthumanism.co.uk

DOI: https://doi.org/10.63332/joph.v5i3.804

The Level of Knowledge of Vocational Education Teachers About Employing Artificial Intelligence Applications in the Educational Process

Mohammad Omar Al-Momani[1]

Abstract

In this era of media convergence with rapid technological development, broadcasting practitioners are faced with the problem of how to use new technologies to enhance news dissemination and turn dilemmas into opportunities. This study uses media convergence theory and Chinese broadcasting theory to conduct a collective case study of positive examples of barrier-breaking, analyzing different presenters and their programs. It analyses the impact of changes in how audiences receive information, the relative lag in the speed of communication, the limitations of the form of communication, and the decline in the influence of communication on the communication of broadcasters and presenters. It puts forward positive suggestions in terms of guiding public opinion, strengthening one's influence, adapting to the form of communication, and transforming the language style. This will inform the career development of radio and television industry practitioners in the era of media convergence.

Keywords: *Knowledge, Vocational Education Teacher, Employment Degree, Artificial Intelligence, Artificial Intelligence Applications, School Education.*

Introduction

Human intelligence is a term that expresses the quality of the mind that gives humans the ability to acquire and retain information and knowledge from experiences to adapt to different situations in life, the ability to understand and process abstract concepts, and the ability to use knowledge to bring about change in the environment. Intelligence is not an absolute cognitive or mental process but rather a selective combination of processes that include effective adaptation to make a change in order to deal effectively with what is required. (Robert,2022; Leung et.al,2023; Alissa& Hamadneh, 2023); Accordingly, scientists and specialists realized the importance of intelligence in humans and worked to transfer this trait to others. The machine that lacks it will have a major role when applied to it, especially since the machine does not get bored or tired; thus, this feature is called artificial intelligence. (Qirqaji, 2023; Alammari, 2024).

The coming era is definitely the era of artificial intelligence, as it has imposed itself on almost all fields, and the field of education is at the forefront of it, of course, as artificial intelligence technologies are reshaping the educational landscape. Therefore, all those interested in the field of education should keep pace with the data of the modern artificial intelligence revolution and try to learn about artificial intelligence and delve into it in order to include it in the stages of education and benefit from its advantages.

[1] Department of Applied Sciences, Al-Huson University College, Al-Balqa Applied University, Jordan. Email: m.o.e.m@bau.edu.jo. https://orcid.org/0000-0003-3871-0254.

The world is currently witnessing rapid development and increasing application of artificial intelligence systems (AI) in various fields, where the use of artificial intelligence techniques is not limited to the field of manufacturing or providing services but goes beyond that to improving and developing education as a method and tools, as education is one of the most important fields that is witnessing increasing use of artificial intelligence applications and also has broad prospects for developing this use in the future. The role of intelligence is embodied as He pursues education with two goals, the first of which is to make people better suited as workers and responsible citizens in a world shaped by artificial intelligence systems. The second goal focuses on providing artificial intelligence with great potential to permanently improve and develop education and training (Akcan et.al,2023; Manca et.al, 2023; Triberti et.al, 2024; Liu et.al, 2024; Zawacki et.al, 2019)

Artificial intelligence is one of the important fields that has attracted the attention of many scientists and researchers, as this field has witnessed successive developments that have achieved important positive effects at all levels. To enable people to help and participate in various tasks that affect their professional, social, economic, health, and other lives (Al-Mutairi,2019; Peng et.al, 2023; Dec et.al, 2022)

Artificial intelligence is one of the types of modern science that has spread widely recently and has entered many industrial and research fields, most notably robots and smart services for governments and companies.

New patterns, methods, and artificial intelligence systems have emerged, such as smart teaching systems, expert systems, and adaptive learning. These patterns are considered an integrated system that can be used to develop the educational process and apply e-learning in education. (Fahmirad & Kotamjani, 2018; Qirqaji, 2023; Cortez et.al, 2024)

Applications of artificial intelligence in the educational process can be used in many matters by employing them in providing smart content, providing feedback to the teacher and learner, automating grades and for assessment and evaluation purposes, and automating administrative tasks. (School and classroom), and employing personal learning for the learner, providing adaptive learning environments suitable for learners, having flexible communication between all parties concerned with the educational process, and providing virtual mediators for learners. (Qirqaji, 2023; Dimitriadou& Lanitis, 2023; Guo et.al, 2021; Nguyen et.al, 2023).

Many previous researches and studies have shown the positive impact of employing artificial intelligence applications and the importance of their use in the educational process, which the researcher benefited from in his current study And of these Studies and research as study (Qirqaji, 2023) and the study of (Al-Ghamdi and Alfarani, 2020), And study (Al-Qahtani, 2022), And study (Al-Qarala and Taha, 2022) And study (Shaaban, 2021) And study (Al-Muqeeti & Abu Al-Ola,2022) And study (Al-Huwaiti,2022) And study (Al-Habib,2022) And study (Al-Faifi & Al-Dalalah,2022) And study (Kuleto et al, 2021) And study (Al-Atl et al,2021) And study (Al-Subhi,2020) And study (Al-Khaybari,2020) And study (Wang et al, 2020) And study (Shin & Shin, 2020).

And given what had been mentioned previously. Lost Originated the idea. The researcher has to talk about this study and what it seeks to recognize. The level of knowledge of vocational education teachers about employing artificial intelligence applications in the educational process.

Problem the Study and its Questions:

The employment of artificial intelligence and its applications in our daily lives is increasing more rapidly, and artificial intelligence scientists are now relying on new approaches in machine learning, computer modeling, expert systems, and intelligent systems that contribute to decision-making. New patterns of artificial intelligence applications have emerged, such as smart teaching systems, adaptive learning environments, and expert systems. These patterns have formed an integrated system through which the educational process can be developed and used in education through content, communication, assessment and evaluation, automation of administrative tasks, and so on.

The application of artificial intelligence in the education process is of great importance. This was confirmed by the Scientific Educational Forum, which is concerned with the applications of artificial intelligence in teaching and learning. It was held in Saudi Arabia in 2021. A lot of research and studies as study (Al-Atl et al, 2021), And study (Guan et.al, 2021) And study (Wang et.al, 2024) So I went through this Study to learn about the level of knowledge of vocational education teachers about employing artificial intelligence applications in the educational process.

Building, as mentioned above, a Problem centric study in an attempt to answer the following questions:

1- What is the level of knowledge of vocational education teachers about employing artificial intelligence applications in the educational process from their own point of view?

2- Are there any statistically significant differences at the significance level (α=0.05) at the level of vocational education teachers' knowledge of employing artificial intelligence applications in the educational process from their own point of view, which is attributed to the gender variable (males, females)?

3- Are there any statistically significant differences at the significance level (α=0.05) at the level of vocational education teachers' knowledge of employing artificial intelligence applications in the educational process from their own point of view, which is attributed to the variable of teaching experience (less than 10 years, more than 10 years)?

4- Are there any statistically significant differences at the significance level (α=0.05) at the level of vocational education teachers' knowledge of employing artificial intelligence applications in the educational process from their own point of view, which is attributed to the academic qualification variable (diploma, bachelor's degree, postgraduate studies)?

Goals of the Study:

The main goal is focused on the study of the Present, trying to identify:

1. Recognize the level of vocational education teachers' knowledge of employing artificial intelligence applications in the educational process from one point of view. Look at them.

2. Find out if there are statistically significant differences at the significance level (α=0.05) In the level of knowledge of vocational education teachers about employing artificial intelligence applications in the educational process from their own point of view, which is attributed to the gender variable (males, females).

3. Find out if there are statistically significant differences at the significance level (α=0.05)

In the level of knowledge of vocational education teachers about employing artificial intelligence applications in the educational process from their own point of view, which is attributed to the variable of teaching experience (Less than 10 years, more than 10 years)?

4. Find out if there are statistically significant differences at the significance level (α=0.05) In the level of knowledge of vocational education teachers about employing artificial intelligence applications in the educational process from their own point of view, which is attributed to the academic qualification variable (diploma, bachelor's degree, postgraduate studies)?

Importance of the Study:

It determines the Importance of the study as follows:

- **Theoretical Importance:** The theoretical importance of this emerges in dealing with a topic characterized by modernity in Arab countries and the world in general, providing a conceptual framework on the applications of artificial intelligence, highlighting the reality of its use in the educational process, contributing to enriching the theoretical aspect of research and studies dealing with artificial intelligence and its applications, and increasing the literary and educational heritage in this field.

- **Practical importance:** The practical importance of this is highlighted in the study in his attempt to direct the attention of officials and those in charge of educational institutions to the level of knowledge of teachers' vocational education by employing artificial intelligence applications and working to improve this reality, and contributing to directing decision-makers and educational planners to the degree of importance of employing artificial intelligence applications in various fields in the education process. This is according to my teacher's point of view on vocational education. Thus, decisions should be made to employ them optimally.

Border the Study:

Limited the study Present on me:

- Objective limit: The level of knowledge of vocational education teachers about employing artificial intelligence applications in the educational process.

- Human limit: The study was applied to vocational education teachers in Jordan.

- Spatial limit: Public schools in the governorates of Ajloun, Irbid, and the capital, Amman.

- Time limit: Apply this to the study in the second semester of the academic year (2023/2024).

Terms of the Study:

Adopt the study of the following terms:

Artificial Intelligence: One of the branches of computer science, which is the behavior and characteristics that various computer programs depend on and are compatible with human mental capabilities in various works, and among the most important of these capabilities is the machine's ability to teach and make correct decisions (Stumbrienė et.al, 2023).

It is also known as a new technical science that studies and develops theories, methods,

techniques, and application systems to simulate and extend human intelligence. Considering it as a comprehensive and multidisciplinary subject, artificial intelligence includes many scientific fields, such as computer science, physiology, philosophy, psychology, and mathematics. The primary task of artificial intelligence is to build a behavioral system that can imitate the functions of the human brain and control it with a human computer system. (Lufeng, 2018)

the researcher defined artificial intelligence procedurally. The score obtained by the respondent on the scale prepared for this purpose.

Artificial Intelligence Applications: the use of devices, programs, machines, or systems capable of simulating human intelligence to carry out specific operations and tasks, such as instant chat programs and bots (Al-Ghamdi & Al-Farani, 2020).

It can also be defined as applications of software algorithms and techniques that allow computers and machines to mimic human cognition and decision-making processes to successfully complete tasks (Shaaban, 2021).

As he knows it, It is an applications that rely on artificial intelligence, which is the ability of a computer to simulate the human mind, which seeks to develop computer systems to work with high efficiency, speed, and great accuracy by imitating and simulating the mental and mental processes of humans in learning, thinking, deducing, reasoning, making decisions, solving problems, managing, and completing tasks. Successfully in all aspects of the educational process without fatigue or exhaustion.

The researcher knew Intelligence applications are procedurally artificial. The score obtained by the respondent on the scale prepared for this purpose.

Vocational Education Teacher: He is a qualified teacher with a university degree in vocational education. He was appointed to the Jordanian Ministry of Education for the purpose of teaching the vocational education curriculum, which starts from the fourth grade and continues until the tenth grade.

Method and Field Procedures:

The Curriculum of the Study:

For the answer to the questions, the descriptive method was used due to its suitability and the nature of the current study, and he knew it. (Al-Assaf,2012) The descriptive method is: “that type of research through which all members of the research community or a representative sample of them are interrogated, with the aim of describing the phenomenon studied in terms of its nature and degree of existence only, without going beyond that to studying the relationship or deducing the causes.”.

Community Study:

A community study of all vocational education teachers in Jordan was conducted. The study sample initially consisted of (277) male and female teachers, to whom the study tool was distributed electronically through the use of modern means of communication such as Facebook and WhatsApp. (27) questionnaires were excluded due to not being responded to properly. Correct, and thus (250) questionnaires remained that were retrieved correctly, which is the number that represents the study sample, as the study sample was chosen randomly, and the following table No. (1) shows the distribution of study individuals according to its variables:

variable	Category	Repetition	The ratio (%)
Sex	male	112	45%
	female	138	55%
the total		250	100%
Qualification	Intermediate diploma and bachelor's degree	197	79%
	Postgraduate	53	21%
the total		250	100%
Years of Experience	Less than 10 years	168	67%
	More than 10 years	82	33%
the total		250	100%

Table 1. Distribution of Study Sample Members According To Study Variables

Tool of the Study

To answer Questions on the study and to achieve its goals, it has been referred to previous research and studies Related To a topic Study as study (Qirqaji, 2023),and study (Al-Habib, 2022) and study (Al-Ghamdi and Al-Farani, 2020) and study (Al-Subhi, 2020), And study (Mallik & Gangopadhyay, 2023), and study (Akgun & Greenhow, 2022), and study (Forero& Negre, 2024), where it was done Tool design The study in its initial form, which was in the form of a questionnaire, was formed of two parts:

Part One: Contains data Demographics about the sample study based on sex, number of years of experience, and educational qualification.

The second part: Included sections of the study tool that were designed to measure my teacher's level of knowledge of Vocational education in Jordan by employing artificial intelligence applications in the educational process, which in its initial form included (20) paragraphs.

Validity and Reliability of the Study Tool:

To verify the validity and reliability of the study tool, the following procedures were followed:

First: Validity of the Study Tool:

The validity of the study tool was verified by following the following steps:

The Validity of the Apparent Consistency (The Arbitrators Believed):

Where verified, the validity of the apparent consistency of an instrument study through its presentation of its initial image was presented to a group of experienced judges from the faculty specializing in vocational education and a number of educational supervisors. For the vocational education curriculum in the Ministry of Education, they number (9) arbitrators. This is in order to express their opinion on the suitability of the study tool to the nature of the purpose to be achieved from it, in addition to reviewing it and proposing the addition, deletion, or merging of some paragraphs. The arbitrators presented a set of suggestions represented in the process of merging and deleting some paragraphs, and the researcher committed to making the amendments required by the arbitrators so that the study tool in its final form consisted of (14) items.

Internal Consistency Validity

To ensure that the statements are related to the overall degree, Internal consistency was measured, and its validity was confirmed by calculating the Pearson correlation coefficient between each statement, the scale, And the total degree for scale The result was as in the following table number 2):

indication	Correlation coefficient	Paragraph	indication	Correlation coefficient	Paragraph
.000	**.649	8	.000	**.647	1
.000	**.793	9	.000	**.782	2
.000	**.735	10	.000	**.539	3
.000	**.576	11	.000	**.667	4
.000	**.702	12	.000	**.602	5
.000	**.649	13	.000	**.712	6
.000	**.573	14	.000	**.634	7

Table no (2) The correlation coefficient of the questionnaire items with the total score for the scale

**** A function at a level α =0.01**

It is evident from Table No(2) that all correlation coefficients are statistically significant at some level(α=0.01), which indicates the validity of the internal consistency of the tool of the study.

Second: Instrument stability of the study:

To verify the stability of the study tool Instrument, the reliability of the study was calculated Using a parameter (Cronbach alpha). Its value reached (0.88), which is considered high and indicates a high degree of stability of the study tool and its readiness for actual application on the ground.

The Statistical Treatment Used:

A set of appropriate statistical methods were used in the study to process the data, as follows:

- The arithmetic means to calculate the value given by individuals in a sample study for each phrase of the scale and also to arrange the weights of each statement of the scale based on the responses of sample members of the study.

- Standard deviation to see how scattered the data is (Sample responses from the study) From its arithmetic mean, the deviation is also useful in knowing the order of the means if some of them are equal so that the rank of the statement is best for the one whose standard deviation is less.

- Correlation coefficient (Pearson Correlation Coefficient) To calculate the internal consistency of an instrument from the study.

- (Cronbach alpha: To calculate the stability coefficient of a tool used in the study.)

To interpret the results and determine the level of responses to the tool's statements was used Correction method appropriate, which is represented by a five-point Likert scale, where weights were given scores for each of the alternatives as follows: Very high = 5 grades, high = 4 grades, average = 3 grades, low = 2 degrees, very low = 1 degree.

These answers were classified into five equal levels using the following equation:

Class length=(Greater value - less value)÷ number of tool alternatives) =(1-5)÷5 = 80.0, so we get the following classification shown in Table No. (3):

Average Range	Response Level
5 - 4.21	**Too high**
4.20 -3.41	**High**
3.40 -2.61	**Medium**
2.60 -1.81	**Low**
1.80 -1.0	**very low**

Table No. (3): Distribution of The Length of the Categories According to the Hierarchy Used in the Tool the Study

Study the Results and Discuss Them

Related results answer the first question of the study, which states: "**What is the level of knowledge of vocational education teachers about employing artificial intelligence applications in the educational process from their point of view themselves?"**

To answer this question, arithmetic means, and standard deviations were extracted from paragraphs on the scale of the level of knowledge of vocational education teachers about employing artificial intelligence applications in the educational process. They are arranged in descending order according to their arithmetic averages, as shown in table No. (4):

degree Knowledge	standard deviation	SMA	ferries	Rank
Medium	0.68	3.38	I have knowledge of the concepts and terminology associated with AI applications.	**1**
Medium	0.58	3.31	I plan ahead to develop my knowledge and skills in using AI applications.	**2**
Medium	0.71	3.24	I aim to develop my skills in employing modern applications in the field of education, especially artificial intelligence.	**3**

Medium	0.64	3.20	I am able to identify artificial intelligence applications that can be used in the educational process.	**4**
Medium	0.52	3.14	Read research on artificial intelligence applications.	**5**
Medium	0.55	3.08	I have the ability to find resources that develop my skills in using artificial intelligence applications in the educational process.	**6**
Medium	0.59	3.01	I can solve some of the technical problems they face when using artificial intelligence applications	**7**
Medium	0.63	2.90	I trust my skill to employ some applications of artificial intelligence in education	**8**
Medium	0.72	2.84	Set clear educational goals that focus on employing artificial intelligence applications.	**9**
Medium	0.67	2.81	Use learning resources based on artificial intelligence applications.	**10**
Medium	0.58	2.73	I have received proper training in using some AI applications.	**11**
Low	0.52	2.58	I participate in seminars and workshops related to artificial intelligence applications.	**12**
Low	0.55	2.53	Create digital educational media based on artificial intelligence.	**13**
Low	0.61	2.47	Design Digital calendar tools using artificial intelligence applications.	**14**
Medium	**0.61**	**2.94**	**The total score for the knowledge scale Employing artificial intelligence applications**	

Schedule (4): Arithmetic means and standard deviations For paragraphs of scale. The level of knowledge of vocational education teachers about employing artificial intelligence applications in the educational process is Arranged in descending order according to their arithmetic averages

It is clear from the results of the previous table No. (4).The general arithmetic mean of sample responses the study on scale items My teacher's level of knowledge vocational education By employing artificial intelligence applications in the educational process has reached (2.94)It is an indicator that indicates the level(middle)And the value of the standard deviation of the general arithmetic mean For scale It reached (0.61).as And Note in Table No(4) (11) items received a medium score and (3) items received a low score, as is also noted The arithmetic averages of expressions The scale may It ranged between(2.47-3.38)Where she came from in the first place the paragraph that states "I have knowledge of the concepts and terminology associated with AI applications" By arithmetic average was(3.38) and a standard deviation of (0.68) to a moderate degree, followed in second place by the paragraph that states: “I plan ahead to develop my knowledge and skill in using AI applications "With an arithmetic average of (3.31) and a standard deviation of (0.58) with a moderate degree, and the paragraph that states, “Create digital

educational media based on artificial intelligence "With an arithmetic average of (2.53) and a standard deviation of (0.55), with a low degree. The last place was for the paragraph that states: “Design digital calendar tools using artificial intelligence applications, “With an arithmetic average of (2.47) and a standard deviation of (0.61), with a low degree.

It is clear from the result of the answer to this question that my teacher vocational education. They have knowledge and information Medium about these applications, which can be used in education, where the term artificial intelligence is a modern term that its fame has spread over the past years, which has required those working in the field of education to research it and learn about its developments. This result may not be completely satisfactory, but the nature of the vocational education specialty, which is predominantly applied to skills, may have an impact on this. Also, the field of artificial intelligence may require high technical expertise to practice it correctly, and this may not be available to vocational education teachers due to the lack of focus on it and their lack of enrollment in specialized courses in this field, especially since the Ministry of Education does not provide specialized courses for teachers, but rather provides general courses, and this may also be a reason for this result.

This result is consistent with the results of the study (Al-Ghamdi and Alfarani,2020) and study (Al-Subhi, 2020) and study (Al-Khaybari, 2020). I also disagreed with the outcome of the study (Al-Faifi & Al-Dalalah, 2022) and study (Zhai et.al, 2024) and study (Kamalov et.al, 2023).

Results related to answering the second question to study which states, are there any statistically significant differences at the significance level? $\alpha = 0.05$) in the level of knowledge of vocational education teachers about employing artificial intelligence applications in the educational process from their own point of view, which is attributed to the gender variable (males, females)"

To answer this question, the t-test was used, and the arithmetic means, and standard deviations were extracted, as shown in the following table No. (5):

Schedule (5): Test results(T)To indicate the differences in the level of knowledge of vocational education teachers about employing artificial intelligence applications in the educational process

Sex	the number	SMA	standard deviation	value (v)	Degrees of freedom	Significance level
male	112	3.28	0.63	0.483	448	0.629
female	138	3.32	0.58			

from their own point of view, which is attributed to the gender variable (males, females)

The previous table shows(5)There are no statistically significant differences between Male and Female Teachers in the level of knowledge of vocational education teachers about employing artificial intelligence applications in the educational process from their own point of view, which is attributed to the gender variable (males, females), where the value of t was (0.483) respectively, which means that it is not statistically significant at the significance level ($\alpha \leq 0.05$), and these results are due to that The knowledge of male and female teachers in the specialty of vocational education about the applications of artificial intelligence in the educational process is similar, as they live in the same teaching environments. There is no difference between the skills and courses that male or female teachers take from the Ministry of Education.

Results related to answering the third question of the study, which states, Are there any statistically significant differences at the significance level? α = 0.05) in the level of knowledge of vocational education teachers about employing artificial intelligence applications in the educational process from their own point of view, which is attributed to the teaching experience variable (less than 10 years, more than 10 years)"

To answer this question, the t-test was used, and the arithmetic means, and standard deviations were extracted, as shown in the following table No. (5):

Teaching experience	the number	SMA	standard deviation	value (v)	Degrees of freedom	Significance level
Less than 10 years	168	3.68	0.66	2.86	558	0.005
More than 10 years	82	3.25	0.60			

Schedule (6): Test results (T) To indicate the differences in the level of knowledge of vocational education teachers about employing artificial intelligence applications in the educational process from their own point of view, which is attributed to the variable of teaching experience (less than 10 years, more than 10 years)

The previous table shows(6)There are statistically significant differences Among vocational education teachers in Jordan In the level of knowledge of vocational education teachers about employing artificial intelligence applications in the educational process from their own point of view, which is attributed to the variable of teaching experience (less than 10 years, more than 10 years), where the value of t was (2.86) respectively, which means that it is statistically significant at the significance level (α≤0.05)For the benefit of teachers whose teaching experience is less than 10 years, This is attributed The result until Teachers with less than 10 years of teaching experience have practiced various technical skills well, in addition to the fact that most of them may have graduated from university in a short period of time, and therefore have good knowledge about the importance of artificial intelligence applications, and modern and widespread technology means have gained these teachers who... They are actively using these technologies and applications. They have truly recognized the importance of artificial intelligence in the educational process, unlike teachers with more than 10 years of experience and whose work routine may have prevented them from properly developing themselves.

Results related to answering the fourth question to study, which states, are there any statistically significant differences at the significance level? α = 0.05) in the level of knowledge of vocational education teachers about employing artificial intelligence applications in the educational process from their own point of view, which is attributed to the variable Qualification "(Intermediate diploma and bachelor's degree, Postgraduate)"

To answer this question, the t-test was used, and the arithmetic means, and standard deviations were extracted, as shown in the following table No. (5):

Schedule (7): Test results (T)To indicate the differences in the level of knowledge of vocational education teachers about employing artificial intelligence applications in the educational process from their own point of view, which is attributed to a variable educational qualification (intermediate diploma, bachelor's degree, postgraduate studies)

The previous table shows (7). There are statistically significant differences among vocational education teachers in Jordan In the level of knowledge of vocational education teachers about

Qualification	the number	SMA	standard deviation	value (v)	Degrees of freedom	Significance level
Intermediate diploma and bachelor's degree	197	3.39	0.59	3.72	623	0.005
Postgraduate (master's and PhD)	53	3.77	0.62			

employing artificial intelligence applications in the educational process from their own point of view, which is attributed to the academic qualification variable (intermediate diploma, bachelor's degree, postgraduate studies), where the value of T was (3.72) respectively, which means that it is statistically significant at the significance level (α≤0.05) For the benefit of teachers who hold higher degrees such as master's and doctorate degrees, This is attributed to the result until teachers with higher academic qualifications may have used some artificial intelligence techniques during their master's and doctoral studies by using these applications or techniques in writing their research or university dissertations. Therefore, they gained good knowledge that exceeded those of students with lower academic qualifications.

Conclusions:

In light of what the results indicated, the researcher concludes the following:

1- The level of knowledge of vocational education teachers about employing artificial intelligence applications in the educational process from their own point of view may come in at a moderate level on the scale as a whole, with a mean score of (2.94) and standard deviation (0.61).

2- There are no statistically significant differences at the significance level (α≤0.05) between teachers, males, and females the level of knowledge of vocational education teachers about employing artificial intelligence applications in the educational process from their own point of view.

3- There are statistically significant differences at the significance level (α≤0.05). The level of knowledge of vocational education teachers about employing artificial intelligence applications in the educational process from their own point of view is attributed to the variable qualification-scientific for teachers and for the benefit of teachers who hold higher degrees such as master's and doctorate degrees.

4- There are statistically significant differences at the significance level (α≤0.05). The level of knowledge of vocational education teachers about employing artificial intelligence applications in the educational process from their own point of view is attributed to the variable teaching experience of teachers and for teachers with less than 10 years of experience.

Recommendations and Suggestions:

In light of the results, the study Researcher guardian and suggest the following:

1. Directing the attention of my teachers' vocational education. The importance of acquiring knowledge and skills about artificial intelligence and its applications.

2. Directing decision-makers and educational planners to the importance of employing

artificial intelligence applications in various areas of the educational process and employing them optimally.

3. Providing the educational environment with the necessary applications and devices for employment techniques Artificial intelligence in education.

4. Holding training courses for teachers in vocational education to familiarize them with the applications of artificial intelligence and to provide them with skills to employ them in the educational process.

5. Procedures for studies are similar to those of present and general education teachers from different specializations.

6. Procedure of surveys: It discusses the most prominent applications of artificial intelligence that can be used in all aspects of the educational process.

7. Procedure of studies: An experimental study that highlights the impact and effectiveness of artificial intelligence applications in developing multiple skills among learners.

8. Procedure of studies: A survey that identifies the most important challenges facing the education process in employing artificial intelligence.

References

Qirqaji, A.D. (2023). Employing artificial intelligence applications and their importance in the educational process from the point of view of computer teachers. Journal of Educational and Psychological Sciences, 7(42), 65 – 86.https://doi.org/10.26389/AJSRP.Q100923

Robert. J. (2022). human intelligence, Britannica. https://www.britannica.com/science/human-intelligence-psychology

Al-Mutairi, M. (2019). Artificial intelligence is an input for developing educational decision-making in the Ministry of Education in the State of Kuwait. Journal of Scientific Research in Education, 20 (Part Eleven), 573-588.https://doi.org/10.21608/jsre.2019.69880

Fahmirad, M. & Kotamjani, S (2018). A Review on Application of Artificial Intelligence in Teaching and Learning in Educational Contexts. International Journal of Learning and Development, 8(4), 106-118.

Alghamdi, S.F. & Alfarani, L. A. (2020). The reality of using female teachers at the special education schools to the educational applications of artificial intelligence (AI) and their attitude towards it. International Journal of Educational and Psychological Studies, 8 (1), 57-76,https://doi.org/DOI:10.31559/EPS2020.8.1.4

Al-Qahtani, G. (2022). The Reality of Using Artificial Intelligence (AI) in Human Resources Management: An Applied Study on Teaching Members at King Saud University. (2022). Journal of Educational and Psychological Sciences, 6(55), 1-23.https://doi.org/10.26389/AJSRP.Q150622

Al-Qarala, F., Taha, M. (2022). The extent of the possibility of applying artificial intelligence in physical education colleges in Jordanian universities from the point of view of faculty members. Unpublished master's thesis, Mutah University, Jordan.

Shaaban, A. (2021). Artificial intelligence and its applications in higher education. Educational Journal of the Faculty of Education in Sohag, 84(84), 1-23.https://doi.org/10.21608/edusohag.2021.148034

Al-Muqeeti, S., Abu Al-Ola, L. (2022) "The Reality of Employing Artificial Intelligence and Its Relationship to the Quality of Performance of Jordanian Universities from the Faculty's Perspectives," Journal of the Association of Arab Universities for Research in Higher Education, Vol. 42: Iss. 2, Article 19.Available at:https://digitalcommons.aaru.edu.jo/jaaru_rhe/vol42/iss2/19

Al-Huwaiti, A. (2022). The degree of acceptance of faculty members in Jordanian universities for using

artificial intelligence applications in light of the Unified Theory for Acceptance and Use of Technology (UTAUT). A magister message that is not published. Middle East University, Jordan.

Al-Habib, M. (2022). Employing artificial intelligence applications in training faculty members in Saudi universities from the point of view of education experts: A proposed scenario. Journal of the Islamic University for Educational and Social Sciences, 9(1), 277-317.https://journals.iu.edu.sa/ESS/Main/Article/4559

Al-Faifi, H., Al-Dalalah, O. (2022). The reality of employing applications of artificial intelligence technology in education in Saudi universities from the point of view of faculty members (Taybah University as an example). College of Education Journal. Tanta University, 85(1), 717-795.https://doi.org/10.21608/mkmgt.2022.119290.1157

Kuleto, V., Ilić, M., Dumangiu, M., Ranković, M., Martins, O., Păun, D., & Mihoreanu, L (2021). Exploring Opportunities and Challenges of Artificial Intelligence and Machine Learning in Higher Education Institutions. Sustainability, 13(18). 10424.

Al-Atl, M., Al-Anazi, I., and Al-Ajmi, A. (2021). The role of artificial intelligence (AI) in education from the point of view of the College of Basic Education in the State of Kuwait. Journal of Educational Studies and Research, 1(1), 30-64.

Al-Subhi, S. (2020). The reality of Najran University faculty members' use of artificial intelligence applications in education. College of Education Journal of Educational Sciences, 44(4), 319-368.https://doi.org/10.21608/jfees.2020.147725

Al-Khaybari, S. (2020). The degree to which secondary school teachers in Al-Kharj Governorate possess the skills of employing artificial intelligence in education. Arab Studies in Education and Psychology, 119(119), 121-153.https://saep.journals.ekb.eg/article_78556.html

Wang, S., Yu, H., Hu, X., & Li, J (2020). Participant or spectator? Comprehending the willingness of faculty to use intelligent tutoring systems in the artificial intelligence era. British Journal of Educational Technology, 51(5), 1657-1673.

Shin, S., & Shin, H (2020). A study on the application of artificial intelligence in elementary science education. Journal of Korean Elementary Science Education, 39(1), 117-132.

Scientific Educational Forum. (2021). Applications of artificial intelligence in education and learning. Which was held at the College of Education at Imam Muhammad bin Saud Islamic University in Saudi Arabia from March 23, 2021, to March 25, 2021.

Lufeng, H. (2018). Analysis of New Advances in the Application of Artificial Intelligence to Education. Conference Proceedings of the 2018 3rd International Conference on Education, E-learning and Management Technology (EEMT). https://www.researchgate.net/publication/329952581_Analysis_of_New_Advances_in_the_Application_of_Artificial_Intelligence_to_Education

Al-Assaf, S. (2022). Introduction to research in behavioral sciences. 2nd edition, Dar Al-Zahraa for Publishing and Distribution, Amman, Jordan.

Ng, D. T. K., Leung, J. K. L., Su, J., Ng, R. C. W., & Chu, S. K. W. (2023). Teachers' AI digital competencies and twenty-first century skills in the post-pandemic world. Educational technology research and development : ETR & D, 71(1), 137–161. https://doi.org/10.1007/s11423-023-10203-6

Alissa, R.A.S., & Hamadneh, M.A. (2023). The level of science and mathematics teachers' employment of artificial intelligence applications in the educational process. International Journal of Education in Mathematics, Science, and Technology (IJEMST), 11(6), 1597-

1608. https://doi.org/10.46328/ijemst.3806

Akcan, A. T., Yıldırım, B., Karataş, A. R., & Yılmaz, M. (2023). Teachers' views on the effect of STEM education on the labor market. Frontiers in psychology, 14, 1184730. https://doi.org/10.3389/fpsyg.2023.1184730

Liu, J., Liu, Z., Wang, C., & Xu, Y. (2024). Identification and evaluation of educational technology trends from 2004 to 2022: Evidence based on computers in human behavior and horizon report. Heliyon, 10(2), e24277. https://doi.org/10.1016/j.heliyon.2024.e24277

Manca, S., Raffaghelli, J. E., & Sangrà, A. (2023). A learning ecology-based approach for enhancing Digital Holocaust Memory in European cultural heritage education. Heliyon, 9(9), e19286. https://doi.org/10.1016/j.heliyon.2023.e19286

Peng, R., Abdul Razak, R., & Hajar Halili, S. (2023). Factors influencing in-service teachers' technology integration model: Innovative strategies for educational technology. PloS one, 18(8), e0286112. https://doi.org/10.1371/journal.pone.0286112

Triberti, S., Di Fuccio, R., Scuotto, C., Marsico, E., & Limone, P. (2024). "Better than my professor?" How to develop artificial intelligence tools for higher education. Frontiers in artificial intelligence, 7, 1329605. https://doi.org/10.3389/frai.2024.1329605

Dimitriadou, E., & Lanitis, A. (2023). A critical evaluation, challenges, and future perspectives of using artificial intelligence and emerging technologies in smart classrooms. Smart Learning Environments, 10(1), 12. https://doi.org/10.1186/s40561-023-00231-3

Dec, G., Stadnicka, D., Paśko, Ł., Mądziel, M., Figliè, R., Mazzei, D., Tyrovolas, M., Stylios, C., Navarro, J., & Solé-Beteta, X. (2022). Role of Academics in Transferring Knowledge and Skills on Artificial Intelligence, Internet of Things and Edge Computing. Sensors (Basel, Switzerland), 22(7), 2496. https://doi.org/10.3390/s22072496

Guo, J., Bai, L., Yu, Z., Zhao, Z., & Wan, B. (2021). An AI-Application-Oriented In-Class Teaching Evaluation Model by Using Statistical Modeling and Ensemble Learning. Sensors (Basel, Switzerland), 21(1), 241. https://doi.org/10.3390/s21010241

Nguyen, A., Ngo, H. N., Hong, Y., Dang, B., & Nguyen, B. T. (2023). Ethical principles for artificial intelligence in education. Education and information technologies, 28(4), 4221–4241. https://doi.org/10.1007/s10639-022-11316-w

Guan, H., Chen, Q., Han, S., & Zhang, B. (2021). The Influence of "Artificial Intelligence + Human-Computer Interaction" on Teachers' Psychological Changes in Academic Management in Colleges. Frontiers in psychology, 12, 730345. https://doi.org/10.3389/fpsyg.2021.730345

Wang, K., Ruan, Q., Zhang, X., Fu, C., & Duan, B. (2024). Pre-Service Teachers' GenAI Anxiety, Technology Self-Efficacy, and TPACK: Their Structural Relations with Behavioral Intention to Design GenAI-Assisted Teaching. Behavioral sciences (Basel, Switzerland), 14(5), 373. https://doi.org/10.3390/bs14050373

Stumbrienė, D., Jevsikova, T., & Kontvainė, V. (2023). Key factors influencing teachers' motivation to transfer technology-enabled educational innovation. Education and information technologies, 1–35. Advance online publication. https://doi.org/10.1007/s10639-023-11891-6

Mallik, S., & Gangopadhyay, A. (2023). Proactive and reactive engagement of artificial intelligence methods for education: a review. Frontiers in artificial intelligence, 6, 1151391. https://doi.org/10.3389/frai.2023.1151391

Zhai, Y., Chu, L., Liu, Y., Wang, D., & Wu, Y. (2024). Using deep learning-based artificial intelligence electronic images in improving middle school teachers' literacy. PeerJ. Computer science, 10, e1844. https://doi.org/10.7717/peerj-cs.1844

Kamalov, Firuz, David Santandreu Calonge, and Ikhlaas Gurrib. 2023. "New Era of Artificial Intelligence

in Education: Towards a Sustainable Multifaceted Revolution" Sustainability 15, no. 16: 12451. https://doi.org/10.3390/su151612451

Forero-Corba, W., & Negre Bennasar, F. (2024). Techniques and applications of Machine Learning and Artificial Intelligence in education: a systematic review. [Técnicas y aplicaciones del Machine Learning e Inteligencia Artificial en educación: una revisión sistemática]. RIED-Revista Iberoamericana de Educación a Distancia, 27(1). https://doi.org/10.5944/ried.27.1.37491

Akgun, S., & Greenhow, C. (2022). Artificial intelligence in education: Addressing ethical challenges in K-12 settings. AI and ethics, 2(3), 431–440. https://doi.org/10.1007/s43681-021-00096-7

Zawacki-Richter, O., Marín, V.I., Bond, M., & Gouverneur, F. (2019). Systematic review of research on artificial intelligence applications in higher education – where are the educators? International Journal of Educational Technology in Higher Education, 16. https://doi.org/10.1186/s41239-019-0171-0

Cortez, P. M., Ong, A. K. S., Diaz, J. F. T., German, J. D., & Singh Jagdeep, S. J. S. (2024). Analyzing Preceding factors affecting behavioral intention on communicational artificial intelligence as an educational tool. Heliyon, 10(3), e25896. https://doi.org/10.1016/j.heliyon.2024.e25896

Alammari A. (2024). Evaluating generative AI integration in Saudi Arabian education: a mixed-methods study. PeerJ. Computer science, 10, e1879. https://doi.org/10.7717/peerj-cs.1879