



Research Article

© 2023 Al-Tkhayneh et al.

This is an open access article licensed under the Creative Commons Attribution-NonCommercial 4.0 International License (<https://creativecommons.org/licenses/by-nc/4.0/>)

Received: 10 May 2023 / Accepted: 22 June 2023 / Published: 5 July 2023

The Advantages and Disadvantages of Using Artificial Intelligence in Education

Khawlah M. Al-Tkhayneh¹

Emad M. Alghazo²

Dina Tahat¹

¹College of Education,
Humanities and Social Sciences,
Al Ain University,
Al Ain, UAE

²Special Education Program,
Al Ain University,
Al Ain, UAE

DOI: <https://doi.org/10.36941/jesr-2023-0094>

Abstract

This study aimed to identify the advantages and disadvantages of using artificial intelligence in education from the perspective of the students of Al Ain University. The researcher used the descriptive approach due to its compatibility to the study objectives. The study sample consisted of (184) students from Al Ain University in Al Ain City, who were selected using the random stratified sampling method. The questionnaire was developed and distributed by using Google Drive software. The results showed that most students think that artificial intelligence can improve learning personal experiences, process a considerable amount of data and improve task management. However, there have been different opinions about the ability of artificial intelligence to control students' behavior and direct learning, improve the efficiency of educational system, provide notes and reviews, reduce dependency on teachers, and enhance social interaction. Furthermore, several students expressed their concerns about the possible missing of traditional educational jobs, the costs of implementing artificial intelligence systems, the errors of programming and error-processing, and missing the human relationships in the classroom.

Keywords: artificial intelligence, education, students of Al Ain University, model, Microsoft teams

1. Introduction

Currently, the world is witnessing several rapid changes that are driven by knowledge as well as scientific and technological advancement. These developments enhanced the human abilities to generate knowledge, innovate new technological applications, restructure institutions, and apply knowledge in the various domains of life.

Artificial intelligence (AI) was introduced as a pioneer technique that can create a revolution in several domains of the human life, including the domain of education. The United Arab Emirates is

one of the first countries that implemented artificial intelligence, particularly in the domain of education (Al-Bakri, 2021).

Indeed, education is considered as one of the domains that witnessed an increasing usage of artificial intelligence. Using artificial intelligence in education focuses on two main objectives: the first one aims at preparing individuals to be responsible workers and citizens in a world dominated by the systems of artificial intelligence, while the second objective aims at using the potentials of artificial intelligence to create a revolution and regular improvement in teaching and training (Al-Mashaqba, 2020).

In the sector of education, artificial intelligence provides the potential of changing the way of teaching and learning, where artificial intelligence customizes learning by adapting the content to satisfy the individual needs of students. Also, it can automate the administrative tasks, such as grades and tabulation, and allows teachers more space to focus on regulations. Furthermore, artificial intelligence can contribute to determining students' behavioral patterns which, in turn, allows teachers to intervene as early as possible when students have problems. Therefore, it contributes to improving the total quality of education and enhancing the students' learning experience (Al-Omari, 2021).

Furthermore, using artificial intelligence could raise concerns relating to decision-making and the role of humans in the educational process. Additionally, there are concerns about the privacy and security of the students' data that are used in training the models of artificial intelligence.

In this vein, it is necessary to study the implications of artificial intelligence on education inside the United Arab Emirates, while taking into account the possible ethical effects and risks. By doing so, we can make advantage of the power of artificial intelligence in improving the educational process, and ensuring that all students benefit equally.

2. The Study Problem

Using artificial intelligence in education has become increasingly prevalent in the United Arab Emirates. According to a new survey conducted by the Arab Bureau of Education for the United Arab Emirates, more than (50%) of teachers in the region reported using the instruments and applications that are based on artificial intelligence during their educational practices. In the near future, the patterns of traditional education in classrooms and lecturing halls will be replaced by robots and artificial intelligence components in order to satisfy the individual needs. Also, an increasing percentage of students will benefit from using adaptable robots, and teachers will enjoy the advantages offered by the techniques of artificial intelligence (Al-Turki, 2019).

Artificial intelligence has the potential of helping teachers and lecturers by alleviating the restrictions imposed by office work, which takes too much time; it performs the usual tasks, such as doing administrative work, coordinating documents, analyzing the patterns of learning at schools, as well as responding to the different questions and tasks by using artificial intelligence. According to some studies, teachers spend (31%) of their time in preparing lessons, scoring tests and doing the administrative tasks. Therefore, the instruments of automation and artificial intelligence can reduce the burdens of manual processes, such as scoring tests, evaluating tasks and allowing teachers more time to focus on students (Al-Johani, 2020).

Furthermore, using artificial intelligence in teaching has the potential of reducing face to face teaching, where learners can acquire knowledge anytime and anywhere. Independent learning can help students acquire knowledge while being at home which, in turn, results in missing school and academic communication. This could lead to a lack of social interaction and isolation, which ultimately leads to a lack in social cohesion in the community on the long run (Al-Mashaqba, 2020). Even though artificial intelligence can lead to a revolution in education by improving the results of learning and enhancing the students' experience, there are more concerns about its adverse effects on students.

3. The Study Importance (Theoretical and Practical)

The study importance lies in two sides:

The theoretical importance: the study topic has only been addressed by too few studies in the United Arab Emirates. Therefore, this study supports the results of the previous studies and enriches the literature relevant to the implications of artificial intelligence on education.

The practical importance: this study can help teachers and policy makers understand the possible advantages and disadvantages of using artificial intelligence in teaching and contribute to setting the strategies of using it effectively. Furthermore, the results of this study can contribute to improving learning outcomes, dealing with inclusiveness issues and ensuring the responsible usage of artificial intelligence in teaching.

4. The Study Objectives

The current study aims to:

- Determine the advantages of using artificial intelligence in teaching inside the United Arab Emirates from the perspective of the students of Al Ain University.
- Determine the possible disadvantages of using artificial intelligence in teaching inside the United Arab Emirates from the perspective of the students of Al Ain University.
- Evaluate the students' perceptions about using artificial intelligence in teaching.

5. The Study Questions

- what are the advantages of using artificial intelligence in teaching inside the United Arab Emirates from the perspective of the students of Al Ain University?
- what are the disadvantages of using artificial intelligence in teaching inside the United Arab Emirates from the perspective of the students of Al Ain University?
- what are the students' perceptions about using artificial intelligence in teaching in the United Arab Emirates?

6. The Study Limits

- The temporal limits: the second semester of the academic year (2022-2023).
- The spatial limits: the United Arab Emirates (Abu Dhabi, Dubai, Al Ain).
- The human limits: the students using artificial intelligence in Al Ain University, the faculty of education and social and human sciences.
- The objective limits: Identifying the advantages and disadvantages of artificial intelligence platforms used in teaching in Al-Ain University, such as Moodle, and Microsoft Teams.

7. The Second Part: The Theoretical Literature and Previous Studies

7.1 The procedural definition of the study terms

- Teaching: it is the process of acquiring knowledge, skills, values and attitudes that allow individuals to work effectively in their community. It includes sets of official and non-official learning experiences, including teaching in classrooms, practical training, empirical learning and socialization, in addition to a wide group of methods that can be adapted to satisfy the needs of individual learners (Al-Ghamidi, 2021).
- Artificial intelligence: artificial intelligence (AI) refers to the ability of computer systems to perform the tasks that usually require human intelligence, such as learning, inferring, solving problems, making decisions, and perception. Artificial intelligence includes

developing algorithms and computer software that can process and analyze too much data, identify patterns and make decisions based on those data (Al-Ghamidi, 2021).

Artificial intelligence was procedurally defined as the extent of using technology as an educational method in the educational process.

7.2 *The models of artificial intelligence platforms for education*

- 1- Moodle: it is a system for managing education via the free Internet, that is used in schools, universities and educational institutions around the world. This platform allows teachers to establish virtual classrooms, upload educational content and give homework to evaluate students. It also allows students to access their classrooms, receive the content, send homework and pursue their progress.

Moodle system includes several advantages that can contribute to improving the experience of teaching via the internet, including the technology of artificial intelligence. Moodle can use the techniques of artificial intelligence to analyze the educational data and provide specialized recommendations to students and teachers. For example, the platform can use the techniques of automated learning to analyze the student's performance and provide notes concerning the common errors and advices to improve performance.

This platform allows teachers to use the techniques of artificial intelligence to analyze and evaluate students' performance and interact with them. Also, the techniques of automated learning can be used to analyze the students' previous learning and provide recommendations to improve the future performance.

Moodle is the platform used by the students of Al Ain University, and most questionnaire's items are focused around it.

- 2- Microsoft teams: it is a platform for communication and cooperation via the Internet. It is a part of (Office 365) for commercial work, provided by Microsoft company. This platform allows users to communicate and cooperate remotely, either via text chatting, phone calls or video calls. Also, this platform allows teams of common projects to cooperate effectively, where they can share files and documents, and cooperate simultaneously. They can also establish communication channels inside the platform to organize ideas and improve communication among the team members.
- 3- Alef education: it is a digital educational platform that provides educational experiences to the students in the Arab world. Artificial intelligence is used to analyze the students' data and provide specialized learning courses based on their individual needs and interests. This platform offers a number of interactive learning activities, such as games, tests and video clips to engage students and promote their understanding to the subjects. Alef education also provides notices and reports that are presented in the actual time to teachers and parents which, in turn, allows them to monitor the students' progress and provide regulations based on that (Ali, 2022).

7.3 *The previous studies*

Al-Bakri (2021) conducted a study which aimed at identifying the impact of artificial intelligence on higher education in the Arab countries. The study sample consisted of (100) individuals from the faculty members and students from universities in the Arab countries. The study used the quantitative approach, where the questionnaire was used as the study instrument. The results revealed that artificial intelligence has several advantages in higher education, such as improving the students' participation, facilitating personal learning and increasing efficiency. However, it has some disadvantages, such as the possibility of missing the job, and the ethical concerns about using artificial intelligence.

The study recommended the necessity of urging universities in the Arab countries to, gradually,

integrate artificial intelligence in their educational systems and train the faculty members and employees to use it effectively, in addition to the necessity of dealing with the ethical concerns about artificial intelligence and its effect on labor market.

Al-Mashaqba (2020) aimed at identifying the impact of artificial intelligence on the outcomes of students' learning in the Jordanian Universities. The study sample consisted of (150) University students from the Jordanian Universities. The researcher used the qusai approach, and the pre and post tests were used as the study instrument. The results showed that artificial intelligence has a positive effect of the outcomes of students' learning, where the students who experienced the educational instruments that are based on artificial intelligence achieved more improvement in their academic performance. The study recommended the necessity of urging the Jordanian Universities to integrate artificial intelligence instruments in their educational systems to promote the students' outcomes, in addition to providing more training and support to the faculty members and employees for using these instruments effectively.

Huang (2019) aimed at identifying the impact of artificial intelligence on the relationships between teachers and students in the primary and secondary schools in China. The study sample consisted of (364) teachers and (1077) students from the primary and secondary schools in China. The study used the quantitative approach, where the questionnaire was used as the study instrument. The results revealed that artificial intelligence has a positive impact on the relationship between teachers and students, where it can facilitate communication between teachers and students, enhance personal learning, and provide information about the student's progress. However, artificial intelligence may increase the distance between teachers and students, and evoke more fears concerning the privacy and security of data.

The study recommended the necessity of integrating artificial intelligence in the educational systems in the Chinese schools in order to enhance the relationship between teachers and students, in addition to dealing with legal and ethical issues of using artificial intelligence in education, including privacy and data security.

Barak and Dori (2019) aimed to identify the potential benefits and challenges of using artificial intelligence in teaching science, technology, engineering and mathematics. The study sample consisted of (40) teachers in the domain of science, technology, engineering and mathematics as well as artificial intelligence and education. The study used the qualitative approach, where group discussions were used as the study instrument. The results revealed that artificial intelligence has several benefits in teaching science, technology, engineering and mathematics, such as providing specialized learning experiences, enhancing students' participation, and automating routine tasks. However, doing so implies some challenges, including the need to provide an intensive training to teachers and the possibility of biases in the logarithms of artificial intelligence.

The study recommended the necessity urging the teachers of science, technology, engineering and mathematics to consider the advantages and challenges of using artificial intelligence in education before implementing it, in addition to providing training and support to teachers about using the educational instruments of artificial intelligence and dealing with the ethical and legal issues of using artificial intelligence in education.

Al-Ghamidi (2021) aimed to identify the attitudes of Saudi University students towards artificial intelligence in education. The study sample consisted of (400) University students from the various Saudi universities. The study used the qualitative approach, where group discussions were used as the study instrument. The results revealed that the Saudi University students had positive attitudes towards artificial intelligence in education, where they thought that it could enhance the outcomes of students' learning, facilitate personal learning and improve the efficiency of educational systems. However, they expressed their fears concerning the possibility of missing jobs and the issues related to artificial intelligence at the legal and ethical level.

The study recommended the necessity of urging the University students to integrate artificial intelligence in their educational systems to enhance the outcomes of students' learning, in addition to dealing with the legal and ethical issues of using artificial intelligence in education, and providing

more support and training to faculty members and employees about using the educational instruments that are based on artificial intelligence effectively.

Kovanović and Gasevic (2019) aimed to investigate the possible benefits and challenges of using artificial intelligence in higher education. The study sample consisted of (18) experts in the domain of artificial intelligence and education. The study used the qualitative approach by using semi-structured interviews as the study instrument. The results revealed that artificial intelligence has several advantages in higher education, such as enhancing personal learning, improving students' participation, and providing smart-lesson systems. However, there were some challenges, including the need to provide an intensive training to faculty members and employees about using the educational instruments of artificial intelligence effectively and the possibility of biases in the logarithms of artificial intelligence.

The study recommended the necessity of urging higher education institutions to consider the advantages and challenges of using artificial intelligence in their educational systems before implementing them, in addition to providing more support and training to faculty members and employees about using the educational instruments that are based on artificial intelligence effectively and dealing with the legal and ethical issues of using artificial intelligence in education.

8. Methodology

This study used the descriptive approach, where a random sample was selected from the students of Al Ain University during the academic year (2022-2023) in Al Ain city . The questionnaire was used to collect data from the sample individuals about the advantages and disadvantages of using artificial intelligence in education in the United Arab Emirates.

8.1 The study sample and population

The study sample consisted of (184) students from Al Ain University in the city of Al Ain, who were selected by using the stratified random way during the second semester of the academic year 2022-2023. The study investigated the students' opinions concerning the advantages and disadvantages of using artificial intelligence in education. The questionnaire was used as an instrument for data collection, and then the collected data were inserted in the form of tables and diagrams.

8.2 Data collection instrument

A questionnaire was developed to collect data from the students of Al Ain University in order to identify the advantages and disadvantages of using artificial intelligence in teaching. The questionnaire consisted of two parts; the first part included the respondent's demographic variables (age, academic year, specialty, work, cultural background), while the second part included (13) items that address the advantages and disadvantages of using artificial intelligence in education in the United Arab Emirates. The items were rated as (agree, neutral, disagree), so the respondent reads the related items carefully and selects the appropriate choice.

9. Data Analysis and Results

9.1 Demographic Variables

Table 1: The distribution of the sample individuals according to age

Age groups	Frequency	Percentage
25-20	44	23.9%
30-26	50	27.2%

Age groups	Frequency	Percentage
35-31	52	28.3%
36 or above	38	20.7%
Total	184	100%

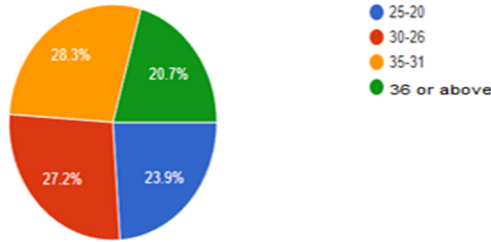


Table (1) reveals that the highest percentage of respondents ranges between (31-35) years old, with a percentage of (28.3%), while the least percentage of respondents is (36) years old, with a percentage of (20.7%).

Table 2: The distribution of the sample individuals according to academic year

Academic year	Frequency	Percentage
First	24	13%
Second	22	12%
Third	32	17.4%
Fourth	106	57.6%
Total	184	100%

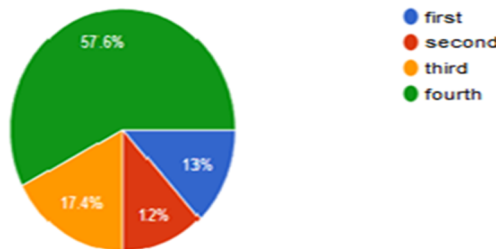


Table (2) reveals that the majority of respondents are in the fourth academic year, with a percentage of (57.6%), while the least percentage of respondents is in the second year, with a percentage of (12%).

Table 3: The distribution of the sample individuals according to specialty

Specialty	Frequency	Percentage
Applied Sociology	98	53.3%
Applied Psychology	26	14.1%
Special Education	36	19.6%
English Language teacher	10	5.4%
Arabic Language/ Islamic Education teacher	14	7.6%
Total	184	100%

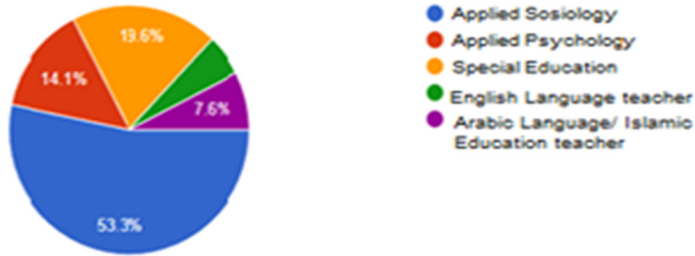


Table (3) reveals that the majority of respondents are in the specialty of Applied Sociology, with a percentage of (53.3%), followed by in the specialty of Special Education, with a percentage of (19.6%)

Table 4: The distribution of the sample individuals according to work

Work status	Frequency	Percentage
Works	122	66.3%
Doesn't work	62	33.7%
Total	184	100%

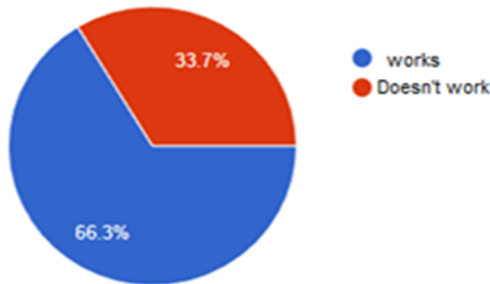


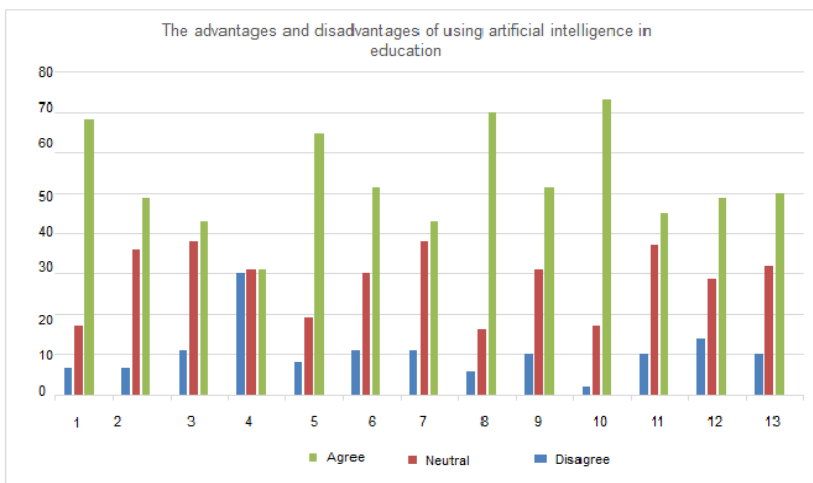
Table (4) reveals that workers are more than non-workers, where the workers gain a percentage of (66.3%), and non-workers (33.7%).

9.2 The results

Table 5: The respondents' answers to the questionnaire's items about the advantages and disadvantages of using artificial in education from the perspective of the students of Al Ain University

Items	Agree		Neutral		Disagree	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Artificial intelligence can enhance the students' personal learning experience.	136	73.91%	34	18.47%	14	7.60%
Artificial intelligence can control students' behavior and guide them towards the most relevant topics	98	53.26%	72	39.13%	14	7.60%
Artificial intelligence can improve the efficiency of the educational system	86	46.73%	76	41.30%	22	11.95%
Artificial intelligence can provide periodical reviews and notices for parents and students	62	33.69%	62	33.69%	60	32.60.6%
Artificial intelligence can process too much data and convert them into useful information	130	70.65%	38	20.65%	16	8.69%
Artificial intelligence can reduce dependency on teachers in providing the educational content	102	55.43%	60	32.60%	22	11.95%

Items	Agree		Neutral		Disagree	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Artificial intelligence can enhance social interaction and encourage students to communicate and cooperate effectively	86	46.73%	76	41.30%	22	11.95%
Artificial intelligence can facilitate the management of tasks, duties and reports related to students and teachers	140	76.08%	32	17.39%	12	6.52%
Artificial intelligence can improve the accuracy of guiding students towards the suitable academic paths	102	55.43%	62	33.69%	20	10.86%
Using artificial intelligence in education leads to missing traditional educational jobs.	146	79.34%	34	18.47%	4	2.17%
Using artificial intelligence in education leads to imposing more cost on school and universities.	90	48.91%	74	40.21%	20	10.86%
Artificial intelligence has some shortcomings in programming and difficulties dealing with errors	98	53.26%	48	26.08%	38	20.65%
Using artificial intelligence in education can lead to missing the human relationships in classrooms.	100	54.34%	64	34.78%	20	10.86%



In order to investigate the advantages and disadvantages of using artificial in education from the perspective of the students of Al Ain university, a survey was conducted and rated by using Likert scale according to a 13-item questionnaire. The respondents were asked to select the choice that expresses either their agreement or disagreement with each item, as follows:

- 1- The first item in the questionnaire investigated whether artificial intelligence can improve the experience of students' personal learning. (37.91%) agreed with this item, while only (7.06%) disagreed with it. This indicates that most the students in Al Ain University think that artificial intelligence can enhance their personal learning experience. Indeed, this is compatible with the increased attitude towards the specified learning experiences, where technologies, such as artificial intelligence can be used to customize learning according to the students' individual needs.
- 2- The second item in the questionnaire investigated whether artificial intelligence can control the students' performance and guide them towards the most relevant topics. (53.26%) agreed with this item with less agreement level, while only (7.60%) disagreed with it. This indicates that while some students think that artificial intelligence can be beneficial in guiding their learning, others have uncertainty concerning the control level of artificial intelligence. It important to notice that artificial intelligence can only offer recommendations based on data. Ultimately, the student has the choice to decide which topics he desires to address.

- 3- The third item addressed whether artificial intelligence can improve the efficiency of the educational system. About (46.73%) agreed with the item, while only (11.95%) disagreed with it. This indicates that while some students think that artificial intelligence can facilitate the educational system, others are more concerned about the impact of artificial intelligence on the traditional educational jobs. Artificial intelligence can contribute to the automation of administrative tasks, scores and evaluation which, in turn, can provide teachers with time to focus on the most relevant tasks, such as lesson planning and students' participation.
- 4- The fourth item addressed whether artificial intelligence can provide periodical reviews and notices to parents and students. This item gained a relatively low agreement level. About (33.69%) agreed with the item, while (32.60%) disagreed with it. This indicates that while some students think that artificial intelligence can provide reviews and notices, others prefer more human interaction. Artificial intelligence can provide automated notices concerning homework and assessment. However, teachers should also provide personal notes and support to students.
- 5- The fifth item addressed whether artificial intelligence can process too much data and change them into beneficial information. This item gained a high agreement level. About (70.65%) agreed with the item, while (8.69%) disagreed with it. This indicates that most students in Al Ain University think that artificial intelligence can analyze data and provide vision for improvement. Indeed, artificial intelligence can analyze too much data, such as the data related to students' performance and comments. It can also provide valuable visions that help teachers make informed decisions and improve their teaching methods.
- 6- The sixth item investigated whether artificial intelligence can alleviate the dependence on teachers in providing the educational content. This item gained a medium level of agreement, where (55.43%) agreed with the item, and (11.94%) disagreed with it. This indicates that while some students think that artificial intelligence can have more role in providing the content, others are more concerned about missing the human interaction. Indeed, artificial intelligence can provide an integral educational content, such as stereotypical units or video clips via the internet; however, teachers should be a part of the educational process to provide guidance and support to their students.
- 7- The seventh item investigated whether artificial intelligence can enhance social interaction and encourage students to communicate and cooperate. This item gained a medium level of agreement, where (46.73%) agreed with the item, and (11.95%) disagreed with it. This indicates that while some students think that artificial intelligence can facilitate communication and cooperation, others could be more skeptical concerning the level of human interaction that may be missed. Artificial intelligence can be used to facilitate communication and cooperation via discussion forums across the internet or cooperative projects. However, there should be balance between the opportunities of interaction and cooperation among students.
- 8- The eighth item investigated whether artificial intelligence can facilitate the management of tasks, duties and reports for teachers and students. This item gained a high level of agreement, where (76.08%) agreed with the item, and only (6.52%) disagreed with it. This indicates that most students in Al Ain University think that artificial intelligence can provide reviews and notices, others prefer more human interaction. Artificial intelligence can facilitate doing the administrative tasks and facilitate the management of tasks and reports for teachers and students. Artificial intelligence can be used to automate tasks, such as students' scores and assessment which, in turn, can provide more time to teachers and help them ensure that the students' marks are consistent and objective.
- 9- The ninth item investigated whether artificial intelligence can improve the accuracy of guiding students to the suitable academic paths. This item gained a medium level of agreement, where (55.43%) agreed with the item, and (10.86%) disagreed with it. This indicates that while some students think that artificial intelligence can provide the required

guidance and support, others are more skeptical about the accuracy of the recommendations provided by artificial intelligence. Indeed, artificial intelligence can analyze the data of students' performance and provide recommendations concerning the topics that should receive more focus. However, it is important to urge students to have a more active role in their learning and encourage them to make decisions based on their individual needs.

- 10- The tenth item investigated whether using artificial intelligence in education can result in missing the traditional educational jobs. This item gained a high level of agreement, where (79.34%) agreed with the item, and only (2.17%) disagreed with it. This indicates that most students in Al Ain University are worried concerning the possible effect of artificial intelligence on the traditional educational jobs, such as the role of teachers and the importance of face-to-face interaction. It is important to consider artificial intelligence as an instrument that enhances traditional educational jobs instead of replacing them.
- 11- The eleventh item investigated whether using artificial intelligence may impose more cost on schools and universities. This item gained a medium level of agreement, where (48.91%) agreed with the item, and (10.86%) disagreed with it. This indicates that some students recognize the possible advantages of artificial intelligence while others are concerned about the cost of implementing and maintaining the systems of artificial intelligence. It is important to urge educational institutions to, effectively, investigate the costs and benefits of using artificial intelligence, and to invest artificial intelligence in accordance with their comprehensive strategic objectives.
- 12- The twelfth item investigated whether artificial intelligence has programming and processing errors. This item gained a medium level of agreement, where (53.26%) agreed with the item, and (20.65%) disagreed with it. This indicates that some students recognize that artificial intelligence may include programming errors and errors in the systems of artificial intelligence, and thus, they could be concerned about the validity of artificial in education. It is necessary to encourage educational institutions to perform an accurate assessment for the validity of artificial intelligence systems before implementing them and set treatment plans for any faced difficulties.
- 13- The thirteenth item investigated whether using artificial intelligence in education can result in missing the human relationships in classrooms. This item gained a medium level of agreement, where (54.34%) agreed with the item, and (10.86%) disagreed with it. This indicates that while some students think that artificial intelligence can improve the experience of learning, others feel concerned about the possible loss of human interaction in the classroom. It is important to urge the different educational institutions to achieve balance between using artificial intelligence and face-to-face interaction, including the human relationships in the educational process.

Generally, the questionnaire's results revealed that the students of Al Ain University have a positive perspective about the possible benefits of artificial intelligence in education, such as the improved personal learning experiences, facilitated administrative tasks, and the ability to analyze too much data. However, there are concerns about the possible negative effects of artificial intelligence on the traditional educational jobs, missing human relationships in classrooms, and the level of control of artificial intelligence on students' learning.

Therefore, it is important to encourage teachers and policy makers to take these opinions into consideration while thinking about implementing artificial intelligence in education. However, we should deal with the worries and concerns about using artificial intelligence, and verify the implementation of artificial intelligence in a way that enhances students' learning experience. Indeed, this could entail establishing balance between using artificial intelligence and the traditional teaching methods, in addition to providing suitable training and support to teachers and students as well.

10. Discussing the Results

This study aimed at investigating the attitudes of Al Ain University students towards using artificial intelligence in education. The study used the quantitative research design, where the questionnaire was used as the study instrument. The results revealed that most students in Al Ain University think that artificial intelligence can enhance the students' learning experience, facilitate the administrative tasks and offer visions for improvement. However, some students expressed their fear concerning the effect of artificial intelligence on the traditional educational jobs, the accuracy of artificial intelligence recommendations, and the loss of human interaction in the classroom.

The results of this study agree with some of previous studies, such as (Al-Bakri, 2021), and (Al-Ghamidi, 2021), which revealed that artificial intelligence can enhance the outcomes of students' learning, facilitate personal learning, and improve the efficiency of teaching systems. However, the study results disagreed with (Hong, Lee, 2019) which revealed that artificial intelligence had a positive impact on the relationships between teachers and students, where the study didn't address this domain in particular.

The results showed that while some students thought that artificial intelligence could have a more prominent role in offering the educational content, others were more concerned about missing human interaction. This finding agrees with (Barak Dori, 2019) which revealed that artificial intelligence can provide specific educational experiences and enhance students' participation. However, it may require more intensive training for teachers and could be exposed to biases within the algorithms of artificial intelligence.

The results showed that while some students thought that artificial intelligence can facilitate communication and cooperation, others were more skeptical about missing human interaction. This finding agrees with (Kovanović and Gasevic, 2019), which suggested that artificial intelligence can enhance personal learning, and provide smart-lesson systems. However, it may require intensive training for the faculty members and employees about using the educational instruments that are based on artificial intelligence effectively.

11. Conclusion

Generally, the results revealed that while the students of Al Ain University have a positive perspective about the possible benefits of using artificial intelligence in education, there are concerns about the possible effect of artificial intelligence in education. Also, there are more concerns about the possible impact of social intelligence on traditional educational jobs, accuracy of artificial intelligence recommendations, and the possible loss of human interaction in the classroom. Educational institutions should evaluate the costs and benefits of using artificial intelligence and provide the necessary training and support to teachers and students about using the educational instruments that are based on artificial intelligence. It is also necessary to address the legal and ethical issues related to using artificial intelligence in education, such as privacy and data security.

12. Recommendations

- 1- Providing the necessary training and support for the faculty members and employees about the effective usage of the educational instruments that are based on artificial intelligence, where doing so can help ensure using artificial intelligence in a way that enhances its possible benefits and reduces any possible shortcomings.
- 2- Dealing with the legal and ethical issues related to using artificial intelligence in education, such as privacy and security of data, biases in the algorithms of artificial intelligence, and the possibility of missing jobs.
- 3- Encouraging students to have an active role in their learning. In this vein, artificial intelligence can provide valuable vision and recommendations about the topics and

domains that should be highlighted. However, it is the students' decision, where they have the choice to perform an active role in their own learning and make decisions based on their individual needs and preferences. Educational institutions should encourage students to have more active role in their own learning and provide them with the necessary instruments for better learning.

References

- Al-Ansari, L. (2021), the role of artificial intelligence in enhancing education in the kingdom of Saudi Arabia, *the international journal for the technology of education in Higher education*, 18 (1), (1-11).
- Al-Bakri, M. (2021), investigating the impact of artificial intelligence on higher education in the Arab countries, *the international journal for education technology in Higher education*, 18 (1), 1-17. <https://library.ajman.ac.ae/eds?search=y&query>.
- Al-Ghamidi, A. (2021), the attitudes of the students of the Saudi government universities towards artificial intelligence in education, *the international journal of modern techniques in education*, 16 (5), 26-41. <https://library.ajman.ac.ae/eds?search=y&query>.
- Ali, F. (2022). The advantages and disadvantages of using routine in education (Advantages and disadvantages of using artificial intelligence in education): (An exploratory study). *The Arab Journal of Electronic Education*, 7 (2), 25-38. <https://library.ajman.ac.ae/eds?search=y&query>.
- Al-Johani, N. (2020), the impact of artificial intelligence on education in the Arab world, *the international journal of modern techniques in education*, 15 (5), 143-156. <https://library.ajman.ac.ae/eds?search=y&query>.
- Al-Mashaqba, S. (2020), the impact of artificial intelligence on the outcomes of students' learning in the Jordanian Universities, *the journal of education and practice*, 11 (1), 20-29.
- Al-Omari, Mohammad. (2021). The impact of intelligence on education in the United Arab Emirates. *The International Journal of Education in Higher Education*, 18(1), 1-14.
- Al-Qudah, E. (2021). The role of artificial intelligence in promoting education in Jordan. *The International Journal of Modern Technologies in Learning*, 16(6), 47-63.
- Al-Turki, S. (2019). The impact of artificial intelligence on education in the Kingdom of Saudi Arabia. *The International Journal of Modern Technologies in Learning*, 14(13), 129-141.
- Barak, M., &Dori, Y. J. (2019). Potential benefits and challenges of using artificial intelligence in STEM education. *Education and Information Technologies*, 24(6), 3257-3275. <https://www.jstor.org/action/doBasicSearch?Query=Investigating+the+impact+of+artificial+intelligence+on+higher+education+in+Arab+countries>
- Huang, R., Liu, D., & Lin, W. (2019). The impact of artificial intelligence on teacher-student relationships in primary and secondary schools in China. *International Journal of Emerging Technologies in Learning*, 14(8), 109-124.
- Kovanović, V., &Gasevic, D. (2019). Artificial intelligence in higher education: Benefits, challenges, and ethical considerations. *Journal of Higher Education Policy and Management*, 41(5), 495-508. <https://www.jstor.org/action/doBasicSearch?Query=Investigating+the+impact+of+artificial+intelligence+on+higher+education+in+Arab+countries>
- Soltanifar, M., &Alipour, M. (2019). Exploring the potential benefits and challenges of artificial intelligence in education. *International Journal of Emerging Technologies in Learning*, 14(17), 59-71. <https://www.jstor.org/action/doBasicSearch?Query=Investigating+the+impact+of+artificial+intelligence+on+higher+education+in+Arab+countries>