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PRE-SERVICE TEACHERS' AWARENESS AND UTILIZATION OF ARTIFICIAL INTELLIGENCE FOR LEARNING IN UNIVERSITIES IN KWARA STATE, NIGERIA

Abstract. Pre-service teachers' familiarity and proficiency with AI tools are crucial for effectively integrating these innovations into future classrooms. Yet, limited research exists on AI awareness and utilization among pre-service teachers in Nigerian universities, particularly in Kwara State. This study, therefore, explored the state of AI awareness and utilisation among pre-service teachers in universities in Kwara State. A descriptive research approach of survey type was employed. The population for the study was all pre-service teachers in universities in Kwara State, Nigeria. Two hundred (200) pre-service teachers were sampled for the study using stratified sampling technique. A researchers' self-developed questionnaire was used for data collection while the data collected for this study were analysed using mean and percentage to answer the two research questions while independent t-test was used to test the hypotheses postulated for this study at 0.05 level of significance. The findings indicate that the level of awareness of Artificial Intelligence for learning was high among pre-service teachers in universities in Kwara State. It was also revealed that the level of utilisation of Artificial Intelligence for learning was low among pre-service teachers in universities in Kwara State. Statistical analysis using independent t-tests revealed no significant differences in AI awareness and utilization based on gender of the respondents. It was however recommended that training on usability of AI should be organised for pre-service teachers so as to ensure effective use of AI.

Keywords: Artificial intelligence, pre-service teachers, teacher education, awareness, utilisation, learning.

Introduction

Artificial Intelligence (AI) is a phenomenon that has transformed and improved the teaching and learning process in this digital age. It has developed at a very fast rate that it has transformed several sectors such as the education. Although AI is already being used in the educational environment of all continents, not much is known about the perception and the use of AI among Nigerian undergraduates, especially those enrolled in the teacher preparation programmes. Through this research, the scholars aimed to seal the gap in knowledge regarding the awareness and the use of AI tools by these students in real life. The value of the investigation is that it would reveal the core factors that influence the consciousness and usage of AI, which can then inform the future of enhancing educational outcomes.

The inequality in the use of technology in learning institutions has emerged to be witnessed as a consequence of the cultural shift to using digital learning aids. Issues of whether students in universities in Kwara State are adequately prepared and motivated to integrate AI in their learning are increasingly becoming common. The researcher is driven by the need to address this social problem that has been

triggered by the varying levels of digital literacy and lack of a uniform access to technology resources among students. In discussing these issues, the research aims to make a contribution to more balanced and productive application of AI in education, specifically, teaching education.

The need to conduct the study is analyzed by acknowledging the possibility that AI will bring to the educational setting. AI has the ability to customize education, offer smart tutoring, and enable access to a plethora of data and resources and as a result enhance research of teacher education (UNESCO, 2021). Nonetheless, such benefits are possible when students know and utilize such technologies (Ally, 2022). This research is needed to comprehend how much students in the Universities in Kwara State are ready to utilize AI in their studies and also to determine any impediment that can hinder the process. Therefore, the main purpose of the study was to assess the pre-service teachers' awareness and utilisation of Artificial intelligence for learning in Universities in Kwara State, Nigeria. Specifically, the study examined:

1. The level of awareness of Artificial Intelligence for learning among pre-service teachers in Universities in Kwara State
2. The level of utilisation of Artificial Intelligence for learning among pre-service teachers in Universities in Kwara State
3. The difference in the awareness of Artificial Intelligence for learning among pre-service teachers in Universities in Kwara State based on their gender and school type
4. The difference in the utilisation of Artificial Intelligence for learning among pre-service teachers in Universities in Kwara State based on their gender and school type

Artificial Intelligence (AI) could be traced to the works of John McCarthy in 1955, which was based on the assumption that all facets of learning and other types of intelligences could be provoked by the machine (Wang, 2018). The concept of Artificial Intelligence was defined by different scholars and Benhamou and Janin (2018) described Artificial Intelligence as a set of technologies that allow machines to behave at a very high level of intelligence as humans do. AI is able to scan the learning patterns and preferences of an individual student and modify the educational content and pace (Benhamou & Janin, 2018). This will enable the students to learn at their pace and fashion and will address their weaknesses and strengths. The adaptive learning platforms have many that rely on AI algorithms to keep the difficulty and content of the lessons adaptable as the student makes progress and have a more personalized learning experience (Bruce, 2019).

AI includes expert system, fuzzy logic, artificial neural network, evolutionary algorithms, case-based reasoning, image processing, natural language processing, speech recognition and robotic. According to Tredinnick (2017), AI can be described as a group of technologies, and different methods of computing science can be employed to create flexible decisions regarding what rational choices should be made in the unpredictable environment. Nevertheless, one can attribute this tread to the process automation, Internet of things, data processing, tangible robotic, conversational interactions and decision support.

Woods and Evans (2018) unveiled that the usage of Artificial Intelligence is cross-cutting in different fields of human activities that may include speech recognition, machine translation, and acting as robots instead of humans. It can be concluded that Artificial Intelligence use in the educational process will be more effective. Artificial Intelligence can transform learning operations in three major ways. They are smart automation, innovation, and increased productivity of learners (Woods & Evans, 2018).

Among the most favorable views of AI in learning, there is the power of AI to offer personalized educational opportunities (Woods & Evans, 2018). The AI is able to study the personal

learning styles and preferences and adjust the content and speed of learning to the needs of individual students. Such personalisation has the potential to bring about better learning (Bruce, 2019). AI-based solutions can also automatize administrative processes to liberate educators to teach. Furthermore, AI is capable of covering the disparities in the access to good education by delivering resources to poor or remote locations.

Bhagat et al. (2021) classify artificial intelligence into two, weak artificial intelligence and strong artificial intelligence. A computer is said to have weak artificial intelligence when it is simply a tool used to study the cognitive processes. This implies that the computer simulates intelligence. Strong artificial intelligence on the other hand is the manner in which computers are intelligent, self-learning systems. This brings to the surface the idea that a computer has the capability of performing tasks as a man does because it has all the innate human capabilities. The researchers proceed to group the numerous economic applications of AI into five, which are autonomous driving, dematerialization, robotization, and deep learning.

The understanding of AI requires knowing the way it works. AI relies on the development of computer programs that are developed by humans. This program consists of algorithms which are supposed to perform certain tasks. Once that is done, humans have to directly and indirectly teach the algorithm to understand how its purpose is required to be and what errors and remedies it may have. This requires the capacity to read huge amounts of information.

Artificial intelligence (AI) usage in libraries and other organizations has resulted in the steep increase of inequality and an overall feeling of panic about being deprived of a job due to the trend of technological change (International Labor Organization, 2018). Korinek and Stiglitz (2017) report that the use of AI technologies can cause jobs to disappear or to be polarized. Bowles (2017) puts in a submission that the adoption of AI can cause a substantial rise in inequality due to automation. As well, Frey and Osborne (2017) state that within the next 20 years, AI will take the place of approximately 35 percent of employees in the UK and 47 percent of employees in the US. The World Bank (2016) argues that the underdeveloped countries might be less willing to use AI because it can lead to a high unemployment rate. By the analysis, employment losses will be 69 percent in India, 72 percent in Thailand, 77 percent in China, and 85 percent in Ethiopia due to the AI adoption. All of these studies point to the possibility of gross loss of jobs due to AI.

Bernard (2018) points out that AI can resolve the problems related to gender. For instance, detecting and preventing online bullying, enhancing access to healthcare by both genders, advancing gender equality in the workplace and so on. Gender discrimination and bias patterns can be extracted and assessed with the help of AI-driven tools and shed light on the areas, where interventions are necessary. Another aspect that was highlighted by Bernard (2018) is that if AI is not developed and supervised closely, AI systems may support the existing gender stereotypes. As an illustration, voice assistants whose voice is mostly of a female type and with subservient feedback may reinforce gender conventions. There is an attempt to make sure that the AI systems are constructed in such a way that they do not reinforce destructive stereotypes.

According to Treharne (2017), AI is a system that varies depending on the collected data, the analysis of the data used, and other observations gathered without being coded. It means that AI is a set of technologies making machines perform functions to a greater extent of intelligence and imitate human abilities in terms of perception, understanding, and taking some actions. The available literature has pointed out that artificial intelligence has two forms; weak artificial intelligence and strong artificial intelligence.

This study has taken into account several variables such as the degree of awareness and the use of Artificial Intelligence to study among school students. The study by Roberts (2021) suggested that the adoption of artificial intelligence (AI) as an aid in learning by students in higher institutions of learning is turning out to be a game-changer since it provides learners with personalized and adaptive

learning experiences. Intelligent tutoring systems and machine learning algorithms are examples of AI technology that help to personalize learning material to the unique needs of the students, give them specific feedback, and allow a student to learn at his/her own pace. Such tools do not only complement the conventional teaching techniques but present new ways of encouraging critical thinking, problem solving, and conceptual learning. Educational tools based on AI can be used to analyze educational data in large quantities to individualize the learning process, predict student achievements and refine teaching methods and make learning more interesting and effective in higher education (Roberts, 2021).

Concerning the awareness of Artificial Intelligence, Rothan (2019) highlighted how the awareness of artificial intelligence (AI) by students to learn in universities is growing and is helpful. Learners are using AI applications and websites to improve their learning process by utilizing numerous resources and applications. Such tools are AI-powered virtual assistants, intelligent study platforms, and language processing applications that are useful in research, organization and information retrieval. The adaptive learning systems based on AI can provide students with the opportunity to customize their learning experience and enjoy the possibility to learn at their own pace and with the style of learning that suits them best. Also, AI applications facilitate group learning, where students can learn together remotely, exchange materials, and have peer-to-peer learning experiences. In general, the use of AI among undergraduates in higher education institutions is enhancing students to have more control over their education experience, which facilitates autonomy, efficiency, and a better comprehension of their studies (Rothan, 2019).

The main goal in training the new generation to face the changing world of technology is to raise awareness of artificial intelligence (AI) in students. With AI slowly taking over different aspects of the society, it is important to prepare students with an initial familiarity with the principles and how AI can be applied (John, 2019). Students can be made aware of the ethical implications, possible implications on the society, and employment opportunities that AI offers through awareness programmes. With the interactive approach toward AI, students are likely to gain critical thinking, digital literacy, and curiosity-driven mentality that will make them better placed to negotiate and participate productively in the AI future (Andersen & Brown, 2022). Besides, a literate student population will be in a better position to embrace the revolutionary potential of AI in a responsible manner and see to it that new technologies can meet the demands and values of the society.

Besides the above variables, the study will also take into consideration the effect of the other moderating variables, including gender and the type of school on the awareness and use of artificial intelligence in learning at schools. The role of gender in the process of adopting and using artificial intelligence in learning is varying, yet they are involved. A study conducted by Bernard (2018) revealed that there are gender differences in the adoption of technology as males are more likely to express interest and confidence in the use of AI tools than females. There is however an attempt to close this divide with the help of inclusive AI educational programs such that both sexes are motivated and brought forward to use AI as a learning tool. Besides, specific AI apps that cater to various ways of learning and liking are vital in achieving gender equity in the use of technology in educational places.

Research Questions

The following research questions have been raised to guide the study

1. What is the level of awareness of Artificial Intelligence for learning among pre-service teachers in Universities in Kwara State?
2. What is the level of utilisation of Artificial Intelligence for learning among pre-service teachers in Universities in Kwara State?

Research Hypotheses

The following hypotheses were postulated for this study:

H1: There is no significant difference in the awareness of Artificial Intelligence for learning among pre-service teachers in Universities in Kwara State based on their gender
H2: There is no significant difference in the awareness of Artificial Intelligence for learning among pre-service teachers in Universities in Kwara State based on school type
H3: There is no significant difference in the utilisation of Artificial Intelligence for learning among pre-service teachers in Universities in Kwara State based on their gender
H4: There is no significant difference in the utilisation of Artificial Intelligence for learning among pre-service teachers in Universities in Kwara State based on school type

Methods and materials

This study adopted the descriptive research of the survey type. The population of this study included all pre-service teachers in Universities in Kwara State, Nigeria. The target population included the pre-service teachers in University of Ilorin (public) and Al-Hikma University, Ilorin (private). Stratified random sampling was used to select 120 and 80 pre-service teachers across all levels in Faculties of Education of University of Ilorin and Al-Hikma University, Ilorin respectively. Stratified random sampling was adopted in order to ensure that students across all levels are captured. The total number of respondents for this study is 200.

A researchers' designed questionnaire tagged "Questionnaire on Pre-service Teachers' Awareness and Utilization of Artificial Intelligence for Learning in Universities in Kwara State (QPTAUAILU)" was used to obtain data from the respondents. The items in the questionnaire contain both demographic data and items focusing on pre-service teachers' awareness and utilisation of Artificial intelligence for learning. In order to ascertain the reliability of the instrument, the test-retest method was carried out on the groups who were not part of the sample. Then the data collected was subjected to Cronbach Alpha and the reliability coefficient of 0.71 was obtained for the instrument. Data collected was analysed using descriptive and inferential statistics. The mean and percentage was used to analyse the research questions while t-test was used to test the formulated hypotheses with the aid of statistical package for social science at 0.05 level of significance.

Results

The analyses and results of the data collected for this study were hereby presented.

Question One: *What is the level of awareness of Artificial Intelligence for learning among pre-service teachers in Universities in Kwara State?*

Given that there are 10 items on the awareness structured in a four-response-type, the minimum, maximum and range score were 10, 40 and 30 respectively. The range score was therefore divided by 3-level (30/3=10). Students whose score fell within score range of 10 – 20; 21 – 30 and 31 – 40 were categorized as low, moderate and high level of awareness respectively. The analysis of response to research question 1 were summarized and presented in Table 1.

Table 1. Level of Students' Awareness of Artificial Intelligence for Learning among Pre-service Teachers in Universities in Kwara State

Level of Awareness	Score Range	Frequency	Percentage
High	31 – 40	117	57.5

Moderate	21 – 30	41	20.5
Low	11 – 20	32	16.0
Total		**200**	**100.0**

Table 2 revealed that 117 (57.5%) of the students were highly aware of Artificial Intelligence for learning; 41 (20.5) were of moderate level of awareness while 32 (16.0%) had low level of awareness of Artificial Intelligence for learning. Thus, the level of awareness of Artificial Intelligence for learning was high among pre-service teachers in universities in Kwara State.

Question Two: *What is the level of utilisation of Artificial Intelligence for learning among pre-service teachers in universities in Kwara State?*

Given that there are 15 items on the utilisation structured in a four-response-type, the minimum, maximum and range score were 10, 40 and 30 respectively. The range score was therefore divided by 3-level (30/3=10). students whose score fell within score range of 10 – 20; 21 – 30 and 21 – 40 were categorised as low, moderate and high level of utilisation respectively. The analysis of response to research question 2 were summarized and presented in Table 2.

Table 2. Level of Students' Utilisation of Artificial Intelligence for learning Among Pre-service Teachers in Universities in Kwara State

Level of Utilisation	Score Range	Frequency	Percentage
High	31 – 40	38	19.0
Moderate	21 – 30	68	34.0
Low	11 – 20	94	47.0
Total		**200**	**100.0**

Table 4 revealed that 38 (19.0%) of the students were of high utilisation of Artificial Intelligence for learning; 68 (34.0%) were of moderate level of utilization while 94 (31.0) had low level of acceptance of Artificial Intelligence for learning. Thus, the level of utilisation of Artificial Intelligence for learning was low among pre-service teachers in universities in Kwara State.

Hypotheses Testing

Inferential statistics of independent t-test was used to test the hypotheses postulated for this study at 0.05 alpha level.

H1: *There is no significant difference in the awareness of Artificial Intelligence for learning among pre-service teachers in Universities in Kwara State based on their gender*

Table 3. t-test Statistics showing the difference in the awareness of Artificial Intelligence for learning among pre-service teachers' universities in Kwara State based on their gender

Gender	No	Mean	S. D.	Df	t-value	Sig	Remark
Male	88	33.426	3.125				
				198	1.417	0.091	**Not Rejected**
Female	112	32.183	3.422				

**Insignificance at p>0.05*

Table 3 shows that the t-value 1.417 is obtained with a p-value of 0.091 when computed at 0.05 alpha level. Since the p-value of 0.091 is greater than 0.05 level of significance, the null hypothesis one is not rejected. Therefore, there was no statistically significant difference in the awareness of Artificial Intelligence for learning among pre-service teachers in universities in Kwara State based on their gender ($t_{\{198\}} = 1.417$, $p>0.05$).

H2: *There is no significant difference in the awareness of Artificial Intelligence for learning among pre-service teachers in universities in Kwara State based on school type*

Table 4. t-test Statistics showing the difference in the awareness of Artificial Intelligence for learning among pre-service teachers in universities in Kwara State based on school type

School Type	No	Mean	S. D.	df	t-value	Sig	Remark
Private	80	32.192	3.361				
				198	1.103	0.138	**Not Rejected**
Public	120	32.227	3.272				

**Insignificance at p>0.05*

Table 4 shows that the t-value 1.103 is obtained with a p-value of 0.138 when computed at 0.05 alpha level. Since the p-value of 0.138 is greater than 0.05 level of significance, the null hypothesis two is not rejected. Therefore, there was no statistically significant difference in the awareness of Artificial Intelligence for learning among pre-service teachers in universities in Kwara State based on school type ($t_{\{198\}} = 1.103$, $p>0.05$).

H3: *There is no significant difference in the utilisation of Artificial Intelligence for learning among pre-service teachers in universities in Kwara State based on their gender*

Table 5. t-test Statistics showing the difference in the utilisation of Artificial Intelligence for learning among pre-service teachers in universities in Kwara State based on their gender

Gender	No	Mean	S. D.	df	t-value	Sig	Remark
Male	88	33.048	3.593				
				198	1.382	0.174	**Not Rejected**
Female	112	33.161	3.722				

**Insignificance at p>0.05*

Table 5 shows that the t-value 1.382 is obtained with a p-value of 0.174 when computed at 0.05 alpha level. Since the p-value of 0.174 is greater than 0.05 level of significance, the null hypothesis five is not rejected. Therefore, there was no statistically significant difference in the utilisation of Artificial Intelligence for learning among pre-service teachers in universities in Kwara State based on gender ($t_{\{198\}} = 1.174$, $p>0.05$).

H4: *There is no significant difference in the utilisation of Artificial Intelligence for learning among pre-service teachers in Universities in Kwara State based on school type*

Table 4. t-test Statistics showing the difference in the utilisation of Artificial Intelligence for learning among pre-service teachers in universities in Kwara State based on school type

School Type	No	Mean	S. D.	df	t-value	Sig	Remark
Private	80	32.188	3.357				
				198	1.105	0.141	**Not Rejected**
Public	120	32.229	3.276				

**Insignificance at p>0.05*

Table 4 shows that the t-value 1.105 is obtained with a p-value of 0.141 when computed at 0.05 alpha level. Since the p-value of 0.141 is greater than 0.05 level of significance, the null hypothesis two is not rejected. Therefore, there was no statistically significant difference in the utilisation of Artificial Intelligence for learning among pre-service teachers in universities in Kwara State based on school type ($t_{\{198\}} = 1.105$, $p>0.05$).

Discussion

Findings from this study revealed that the level of awareness of Artificial Intelligence for learning was high among pre-service teachers in universities in Kwara State. This implies that pre-service teachers in universities in Kwara State were aware of Artificial Intelligent for learning. This finding corroborates with Kucukkeles, et al. (2019) whose study revealed that the awareness and use of AI have improved user engagement in many developing countries in the world. Access to timely information can only occur in a situation where AI is being used to guide and support, and at the same time user-friendly, particularly in information search. For instance, a friendly AI technology will help users search for information with ease, help retrieve information across various collections, and help with users' queries.

In addition, findings of this study revealed that the level of utilisation of Artificial Intelligence for learning was low among pre-service teachers in universities in Kwara State. This shows that pre-service teachers in universities in Kwara State rarely use AI for academic activities. This finding is in line with Fernandez (2016) whose study showed that using AI in academic libraries by students was low. However, using AI will help in the analysing big data, create metadata, and improve search translation. This means that using AI in academic libraries will make library materials more accessible and available.

Furthermore, findings of this study revealed that there was no statistically significant difference in the awareness of Artificial Intelligence for learning among pre-service teachers in universities in Kwara State based on gender. These findings substantiate Agrawal, et al. (2018) whose study showed no discrepancy in the awareness of Artificial Intelligence for learning History between male and female students regardless of their academic levels. More so, findings of this study revealed that there was no statistically significant difference in the awareness of Artificial Intelligence for learning among pre-service teachers in universities in Kwara State based on school type. This implies that no significant difference exit among pre-service teachers in public and private universities in Kwara State.

It was found that there was no statistically significant difference in the utilisation of Artificial Intelligence for learning among pre-service teachers in universities in Kwara State based on gender. Findings also revealed that there was no statistically significant difference in the utilisation of Artificial Intelligence for learning among pre-service teachers in universities in Kwara State based on school type. These results are in line with Huang, et al. (2019) whose study showed no discrepancy existing in the utilization of AI for learning.

Conclusion

This study explored the level of awareness and utilization of AI among the pre-service teachers' awareness and utilization of AI for learning in universities in Kwara State. The findings reveal a mixed picture, with majority of pre-service teachers demonstrating awareness of AI while few displayed

utilization of AI tools for learning. By implication, the future teachers know the "what" but haven't mastered the "how." This disconnect has profound pedagogical implications for the future of education in Kwara State, Nigeria. Without active utilization, pre-service teachers may enter the workforce capable of talking about AI but unable to use it to differentiate instruction, automate grading, or create personalized learning pathways for their future students. If teachers-in-training aren't using AI during their formative university years, they will likely fall into pedagogical lag, teaching using 20th century methods in a 21st century classroom. In the light of this development, conferences, workshops and training programmes including hand-on session for pre-service teachers on AI tools and integration of AI literacy into teacher education curricula was recommended by the researchers. It is further suggested for the future researchers that longitudinal studies to track changes in AI utilization over time or comparative studies across different states or countries be conducted.

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НИГЕРИЯНЫҢ КВАРА ШТАТЫНДАҒЫ УНИВЕРСИТЕТТЕРДЕ БІЛІМ АЛЫП ЖАТҚАН БОЛАШАҚ МҰҒАЛІМДЕРДІҢ ЖАСАНДЫ ИНТЕЛЛЕКТ ТУРАЛЫ ХАБАРДАРЛЫҒЫ МЕН ОНЫ ОҚУ ҮДЕРІСІНДЕ ҚОЛДАНУЫ

Аңдатпа. Болашақ мұғалімдердің жасанды интеллект (ЖИ) құралдарымен таныстығы мен оларды қолдану дағдылары осы инновацияларды болашақтағы оқу үдерісіне тиімді енгізу үшін маңызды. Дегенмен, Нигерия университеттеріндегі, әсіресе Квара штатындағы болашақ мұғалімдердің жасанды интеллект туралы хабардарлығы мен оны пайдалану деңгейі жөнінде зерттеулер жеткіліксіз. Осыған байланысты бұл зерттеу Квара штатындағы университеттерде білім алып жатқан болашақ мұғалімдердің ЖИ туралы хабардарлығы мен оны қолдану жағдайын зерттеуге бағытталды. Зерттеуде сауалнама түріндегі сипаттамалық зерттеу әдісі қолданылды. Зерттеудің жалпы жиынтығын Квара штатындағы университеттерде білім алып жатқан барлық болашақ мұғалімдер құрады. Стратификацияланған іріктеу әдісі арқылы зерттеуге 200 болашақ мұғалім таңдалды. Деректерді жинау үшін зерттеушілер әзірлеген сауалнама пайдаланылды. Жиналған деректер екі зерттеу сұрағына жауап беру үшін орташа мән мен пайыздық көрсеткіштер арқылы талданды, ал зерттеу барысында ұсынылған гипотезаларды тексеру үшін 0,05 маңыздылық деңгейінде тәуелсіз t-тест қолданылды. Зерттеу нәтижелері Квара штатындағы университеттерде білім алып жатқан болашақ мұғалімдердің оқу мақсатында жасанды интеллект туралы хабардарлық деңгейі жоғары екенін көрсетті. Сонымен қатар, олардың оқу үдерісінде жасанды интеллектті қолдану деңгейі төмен екені анықталды. Тәуелсіз t-тест нәтижелері респонденттердің жынысына байланысты жасанды интеллект туралы хабардарлық пен оны пайдалану деңгейінде айтарлықтай айырмашылық жоқ екенін көрсетті. Осыған байланысты болашақ мұғалімдердің жасанды интеллектті тиімді пайдалануын қамтамасыз ету үшін арнайы оқыту және тренингтер ұйымдастыру ұсынылады.

Түйін сөздер: Жасанды интеллект, болашақ мұғалімдер, мұғалімдерді даярлау, хабардарлық, қолдану, оқу үдерісі.

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ОСВЕДОМЛЁННОСТЬ БУДУЩИХ УЧИТЕЛЕЙ ОБ ИСКУССТВЕННОМ ИНТЕЛЛЕКТЕ И ЕГО ИСПОЛЬЗОВАНИЕ В ОБУЧЕНИИ В УНИВЕРСИТЕТАХ ШТАТА КВАРА, НИГЕРИЯ

Аннотация. Осведомлённость будущих учителей об инструментах искусственного интеллекта (ИИ) и их умение использовать их являются важными для эффективной интеграции этих инноваций в будущий образовательный процесс. Однако существует ограниченное количество исследований, посвящённых осведомлённости и использованию ИИ среди будущих учителей в университетах Нигерии, особенно в штате Квара. Поэтому данное исследование направлено на изучение уровня осведомлённости и использования искусственного интеллекта среди будущих учителей университетов штата Квара. В исследовании использовался описательный метод исследования типа опроса. Генеральную совокупность исследования составили все будущие учителя университетов штата Квара, Нигерия. Для исследования с использованием стратифицированной выборки было отобрано 200 будущих учителей. Для сбора данных применялась анкета, разработанная исследователями. Полученные данные анализировались с использованием среднего значения и процентных показателей для ответа на два исследовательских вопроса, а также независимого t-теста для проверки выдвинутых гипотез на уровне значимости 0,05. Результаты исследования показали, что уровень осведомлённости об использовании искусственного интеллекта для обучения среди будущих учителей университетов штата Квара является высоким. Однако было выявлено, что уровень использования искусственного интеллекта для обучения среди них остаётся низким. Статистический анализ с использованием независимого t-теста показал отсутствие значимых различий в уровне осведомлённости и использования ИИ в зависимости от пола респондентов. В связи с этим рекомендуется организовывать специальные тренинги по использованию ИИ для будущих учителей с целью обеспечения его эффективного применения в обучении.

Ключевые слова: Искусственный интеллект, будущие учителя, педагогическое образование, осведомлённость, использование, обучение.

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