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PERCEIVED INFLUENCE OF ARTIFICIAL INTELLIGENCE ON ADMINISTRATIVE TASKS IN THE TERTIARY INSTITUTION IN AKWA IBOM STATE

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Abstract
The paper under analysis herein is the perceived influence of artificial intelligence on administrative tasks of University of Uyo, Uyo. There were three hypotheses and three research questions leading to the study. The research design based on this study was cross-sectional survey. The study sample was a population of 2780 non-academics staff in the University of Uyo, Uyo. Data collection will be based on a self-develop structured questionnaire called: Perceived Impact of Artificial Intelligence on Administration of University Makurdi Questionnaire (PIAIYMQ). The research questions were answered in terms of data analysis with the use of descriptive statistics through mean values of scores and the standard deviation. The hypotheses were tested at 0.05 level of significance by using the Chi-Square Statistics. The results indicated that the perceived impact of AI on admission process in University of Uyo, Uyo is huge. The second discovery indicated that the perceived impact of AI on decision making process in University of Uyo, Uyo is significant. The third finding indicated that there is a considerable perceived effect of AI on resource administration in University of Uyo, Uyo it was advised among others that the university needs to develop a complex implementation plan of embodying AI in university procedures, making sure stakeholder buy-in, foreseeable difficulties including the safety of information and ethical concerns should be solved. The university must make investments on training programs with the aim of ensuring the establishment of AI literacy among the staff and faculty to empower them to make appropriate use of AI tools in decision-making, resource administration, and even admissions.

Keywords: *Perceived impact, Artificial Intelligence, Admission process, Decision making process, Resource administration and University*

Introduction

Administration in the Nigerian universities has always been an issue especially because of various issues including inefficiencies in the administration, lack of transparency between governing boards and universities, misallocation of resources, and the use of the outdated administration techniques. Such problems remain detrimental to proper operation of learning institutions thus affecting the quality of teaching offered. As a case example, poor administration of data, slow flow of administrative reports, and ineffective monitoring and evaluation mechanisms are a burden to universities. Such issues require a strategic revamp to foster a more efficient administration and performance of these establishments (Olayinka, 2021).

Good administration plays an important role in reaching the aims of universities as it educates. It involves planning, organising, directing and controlling resources to attain educational objectives in a resourceful manner. Healthy administration practices make sure that the universities are in a position to deliver top-notch education, operate financial prosperity, develop favorable learning climate, and address modifications and problems in the academic context (Bush, 2018). Good administrative practices play significant roles in shaping the performance and image of the universities hence leading them to success in churning out qualified graduates as well as research. Artificial Intelligence (AI) is a transcendental development that has the potentiality to ameliorate the manner in which universities are administered. Machine learning, natural language processing, and data analytics are type of AI technologies which provide powerful solutions to the situation of enhancing the decision-making process, resource distribution strategy, and automating the administrative tasks. With the help of AI used in university administration, universities are able to eliminate most of the issues that appeared in previous times, optimize their processes, and develop a more effective educational ecosystem (Baker & Smith, 2019). Nevertheless, the introduction of AI in educational administration provokes a number of ethical, juridical, and social concerns. Take as an example, AI education may yield probable prejudice and discrimination, pose a threat to privacy, and influence the workforce. That is why it is important to consider appropriate use of AI in educational administration.

Administration entails arranging and managing the workings of a company to succeed. It entails many functions, which are planning, organizing, staffing, leading, and controlling. Upon an effective administration, an organization will be managed well and systematically, using the least amounts of the organization resources, and delivering the intended results (Robbins & Coulter, 2020). Within the context of a university, the administration can be explained as processes and activities related to the administration of the institution. These are academic administration, financial administration, human resource administration and student services administration. The administration of the university works towards ensuring that the standards of education are kept high, that the resources at their disposal are to the best use and that the university can in way adjust to the need changes as well as external demands (Shattock, 2013).

Conversely Artificial Intelligence (AI) is a branch of computer science that denotes a system that is created in the field with the aim of undertaking tasks that would ordinarily be done by the human mind. Such duties encompass learning, conjecturing, problem-solving,

comprehension of natural language and perception. The AI technologies are able to work with large amounts of data, recognise patterns, and make decisions with only a gasp of human action required (Russell & Norvig, 2020).

Artificial intelligence has the ability to utilize enormous data to present information that can be used to make a choice. Decision-making involves the selection of the most appropriate course of action by exploring possible alternatives, and this is an important part of administration that defines whether a certain organization is effective and successful. In the case of university administration, decision-making is an important aspect in strategic planning, allocation of resources, academic programming as well as tackling the needs of students. Decision-making can be hugely affected through predictive analytics and data-driven insights AI is able to deliver. By following patterns and forecasting the emerging trends, based on vast amounts of information that one can access, AI systems help the university administrators make the necessary decisions within the shortest timeframe possible and quite effectively as well. As an example, it is now possible to predict student enrollment trends, staffing levels, resources, and pinpoint those students at risk of dropping out, thus taking timely measures (Baker & Smith, 2019). Implementing AI will allow universities to make more evidence-based decisions that are accurate and ultimately enhance the functioning of educational institutions and their results (Russell & Norvig, 2020).

University resources are wide-ranging in terms of the varieties of resources possessed; they include financial resources, human resources (faculty and staff) physical infrastructure (buildings and equipment) and technological resources. Resource administration plays a critical role in university administration, so that the best resources need to be allocated and used in helping to fulfill academic and administrative activities. AI has proven to be highly beneficial in improving resource administration due to highly enhanced data analytics and forecasting. AI solutions have the ability to optimize the use of resources and analyze the usage trends, predict the future resource requirements and optimize resource allocation on the fly. As an example, artificial intelligence could be used to predict the most popular time in facilities, schedule classes most efficiently within the opportunities of classrooms, and even predict the spending needs with the historical data about the budgetary use (Holmes et al., 2019). Using AI, institutions will be able to escape the wasteful use of resources, make the entire process more efficient, creating a high-quality education and technical support of the administration (Luckin, 2018).

Various individual problems can be solved by the integration of AI into the administration of the University of Uyo, Uyo. The university will find increased administrative efficiency as it will be able to provide AI-driven automation of routine tasks. This would liberate employees to concentrate on more strategic undertakings culminating in a better total productivity. Moreover, AI-assisted data-driven decision-making has the potential to assist the university to properly distribute resources, plan their academic progress, and increase the retention and success rates (Adamu, 2020). Furthermore, within the University of Uyo setting, AI can be utilized to aid the implementation of personalized learning programs that will help to deliver the custom educational experience that the university could offer to its learners with different needs. AI tools also have an ability to give constant student assistance, which enhance the student life and pleasure overall. The

perceived effect that AI will have on the running of University of Uyo, Uyo, is quite significant. Incorporating the existing options of administration and employing the possibilities of AI, the university may improve efficiency of its functioning, decision-making, and guidance of students and employees. In this research, the author intends to consider these effects in more detail, and to understand how it will be beneficial to incorporate AI into the administration practice in the university.

Statement of the Problem

Ideally, the administration of the university must be highly efficient, transparent, and responsive, with efficient administration processes, optimally allocated resources and data-driven decision making. Such a high performance in administration can help the universities to deliver quality to their education, improve satisfaction levels among students and personnel, and introduce rapid adaptation to the varying educational needs and external factors.

At present, the University of Uyo, Uyo is experiencing a number of challenges in the administration practices. Such issues have been inefficiency in the operations of administration, poor resource administration, and decision making that is frequently not backed with powerful use of facts. These problems result in a delay, a rise in operational expenses and inefficient use of the resources, which in turn influence the quality of education which concern the functioning of the institution as a whole.

The difference in the ideal administration situation and the actual scenario in the University of Uyo, Uyo will mean that a huge problem exists. Lack of efficient administration practices prevents effective delivery of quality education at the university and thus unable to support its stakeholders. This inefficiency is further aggravated by the fact that there are no modern technological instruments that can be used to improve the administration processes and thus it has remained a persistent issue that has impacted the academic and administrative operations. The promising opportunities of Artificial Intelligence (AI) to change the administration of universities through automation of traditional duties, better allocation of the resources, and the potential to make choices data-driven, are identified in prior studies (Holmes et al., 2019; Luckin, 2018). Multiple universities all over the world have begun to adopt AI into their administration system, and when they report to have shown significant improvement in administration efficiency, resource administration, and services to students (Baker & Smith, 2019).

Although the advantage of AI in university administration has been demonstrated, there is limited literature and practice of AI regarding the Nigerian university set-up, or in the case of university of Uyo, Uyo. The literature that exists mostly concentrates on the developed nations and the theory is largely neglected and there is little reference to the challenges and opportunities, which are unique to the developing nations. This insufficiency of localized studies leaves a gap of studying how AI could be effectively applied and employed at Nigerian universities. This paper will address this gap by discussing the perceived effects of AI on the administration of University of Uyo, Uyo. It will be looked into how the particular administration problems of the university can be solved through the use of AI and improve on the efficiency of its operations. This study will add to the overall discussion of artificial intelligence in education administration by sharing

empirical data and practice and provide a guide to other Nigerian universities that may want to implement AI.

Research Questions

The following questions are raised to guide the study:

1. What is the perceived influence of AI on decision making process in University of Uyo, Uyo?

2. What is the perceived influence of AI on resource administration University of Uyo, Uyo?

Hypotheses

The following hypotheses are formulated and tested at 0.05 level of significance:

1. There is no significant perceived influence of AI on decision making process in University of Uyo, Uyo

2. There is no significant perceived influence of AI on resource administration University of Uyo, Uyo.

Methodology

The setting for this study is Akwa Ibom State. Which is located in the South-South geo-political region of the country. The state was created on 23rd September, 1973. This study adopted a cross-sectional survey research design. According Shields (2013), cross-sectional survey deals with data collection for the purpose of describing, interpreting, evaluating and analyzing the existing conditions of variables and prevailing situations.

The population for this study comprised 2780 nonacademic staff in University of Uyo, Uyo (University of Uyo, Uyo Records and Statistics, 2023). The study sampled 351 non-academic staff of University of Uyo, Uyo. Purposive sampling technique will be employed to select only administration staff of the university.

Thei instrument used for data collection is a self-develop structured questionnaire titled: Perceived Impact of Artificial Intelligence on Administration of University Questionnaire (PIAIYMQ). The instrument is design in line with the study variables on a four point Likert scale with the response mode of Strongly Agree (SA) = 4, Agree (A) = 3, Disagree (D) = 2 and Strongly Disagree (SD) = 1 respectively. Data were analyzed using descriptive statistics of mean scores and standard deviation to answer the research questions. The arithmetic mean was used to determine the mean score on each item so as to accept or reject its influence based on the cutoff point of 2.50. The Chi-Square Statistics was used to test the hypotheses at 0.05 level of significance.

RESULTS

Research Question 1: What is the perceived impact of AI on decision making process in University of Uyo, Uyo?

Table 1: Mean and Standard Deviation on the Perceived Impact of AI on Decision Making Process in University of Uyo, Uyo

S/N	Item Description	N	SA	A	D	SD	Mean ($\bar{x}$)	SD	Decision
1	AI provides valuable insights for making strategic decisions	351	151	120	41	39	3.09	0.99	Agree
2	AI helps in predicting future trends affecting university administration	351	141	119	57	34	3.05	0.98	Agree
3	AI supports data-driven decision-making processes	351	120	125	53	53	2.89	1.04	Agree
4	AI reduces uncertainties in decision-making	351	119	129	58	45	2.92	1.01	Agree
5	AI enhances the accuracy of administrative decisions	351	114	120	66	51	2.85	1.04	Agree
	Cluster Mean and Standard Deviation						**2.96**	**1.01**	**Agree**

Table 1 shows the mean and standard deviation of items 1-5 as follows: 3.09, 3.05, 2.89, 2.92 and 2.85 with a corresponding standard deviation of .99, .98, 1.04, 1.01 and 1.04 respectively. The table also has a cluster mean of 2.96 and a standard deviation of 1.01 above the cut-off mean point of 2.50. This result implies that respondents agreed that AI provides valuable insights for making strategic decisions, it helps in predicting future trends affecting university administration, it supports data-driven decision-making processes, it reduces uncertainties in decision-making and that AI enhances the accuracy of administrative decisions. This result implies that AI have positive perceived impact on decision making process in University of Uyo, Uyo.

Research Question 2: What is the perceived impact of AI on resource administration University of Uyo, Uyo?

Table 2: Mean and Standard Deviation on the Perceived Impact of AI on Resource Administration in University of Uyo, Uyo

S/N	Item Description	N	SA	A	D	SD	Mean ($\bar{x}$)	SD	Decision
6	AI optimizes the allocation of financial resources	351	131	120	56	44	2.96	1.02	Agree
7	AI improves the utilization of physical infrastructure (e.g., classrooms)	351	130	103	66	52	2.89	1.07	Agree
8	AI enhances the administration of human resources (staff and faculty)	351	121	110	67	53	2.85	1.06	Agree
9	AI helps in forecasting and planning resource needs accurately	351	117	124	61	49	2.88	1.03	Agree
10	AI reduces waste and ensures efficient use of university resources	351	101	123	72	49	2.77	1.03	Agree
	Cluster Mean and Standard Deviation						**2.87**	**1.04**	**Agree**

Table 2 shows the mean and standard deviation of items 11-15 as follows: 2.96, 2.89, 2.85, 2.88 and 2.77 with a corresponding standard deviation of 1.02, 1.07, 1.06, 1.03 and 1.03 respectively. The table also has a cluster mean of 2.87 and a standard deviation of 1.04 above the cut-off mean point of 2.50. This result implies that respondents agreed that AI optimizes the allocation of financial resources, it improves the utilization of physical infrastructure (e.g., classrooms), AI enhances the administration of human resources (staff and faculty). AI helps in forecasting and planning resource needs accurately. And that it reduces waste and ensures efficient use of university resources. This result implies that AI have positive perceived impact on resource administration University of Uyo, Uyo.

Testing of Hypotheses

Hypotheses 1: AI has no significant perceived impact on decision making process in University of Uyo, Uyo

Table 3: Chi-Square test on the Perceived Impact of AI on Decision Making Process in University of Uyo, Uyo

Responses	Observed Frequency	Expected Frequency	df	χ^2	p	Remark

Strongly Disagree	45	87.8				
Disagree	58	87.8				
Agree	129	87.8	3	61.433	0.000	Significant
Strongly Agree	119	87.8				
Total	351					

Table 3 shows the x^2 (df, 3) = 61.433, p = 0.000 < 0.05. Since the p value is less than an alpha level of 0.05 the null hypothesis which states that AI has no significant perceived impact on decision making process in University of Uyo, Uyo was rejected. This implies that AI has a significant perceived impact on decision making process in University of Uyo, Uyo.

Hypotheses 2: AI has no significant perceived impact on resource administration University of Uyo, Uyo.

Table 4: Chi-Square test on the Perceived Impact of AI on Resource Administration in University of Uyo, Uyo

Response Category	Observed Frequency	Expected Frequency	df	χ^2	p-value	Significance
Strongly Disagree	53	87.8				
Disagree	67	87.8				
Agree	110	87.8	3	36.909	<0.001	Significant
Strongly Agree	121	87.8				
Total	351	-				

Table 4 shows the x^2 (df, 3) = 36.909, p = 0.000 < 0.05. Since the p value is less than an alpha level of 0.05 the null hypothesis which states that AI has no significant perceived impact on resource administration University of Uyo, Uyo was rejected. This implies that AI has a significant perceived impact on resource administration University of Uyo, Uyo.

Discussion of Findings

The initial observation was that there is a strong perceived effect of AI regarding the decision making process in the University of Uyo, Uyo. This implies that AI can be used to deliver significant insights, aids in forecasting future trends, facilitates data-driven, minimises uncertainties and improves judiciousness in administrative decisions. This observation corresponded with Chan and Lee (2019) who have noted in their study that the AI technologies can help universities to search large sets of data effectively, establish the future direction, and assist in making data-informed decisions related to many administrative processes.

The second discovery built on the fact that AI is perceived to greatly influence the resource management in University of Uyo, Uyo. This conclusion models how AI is able to optimize the resources allocation, testify the increase of resources utilization, streamlining the management of

human resources, streamlining the forecasting and planning, and minimize wastage and effective utilization of the university resources. Such a finding is in line with Tran and Dharmalingam (2020) whose study revealed that AI technologies can be considered to be critical in resource allocation optimization as well as using Big Data based on student enrolment tendencies, course usage, and faculty capacity. Through AI-based analytics university can optimize resource deployment, optimize all their forecasting and planning systems and eventually minimize their operation expenditure.

Conclusion

According to its findings, the emergence of AI technology has considerable possibilities of transforming multiple aspects of the operations of the University of Uyo, Uyo. To begin with, AI can smooth the applications in the admission process, make the documentation as accurate as possible, speed up the process, and increase efficiency with the possibility of pinpointing the potential issues. Secondly, AI can be used in decision making where it provides insights and gives predictions on trends, assists in data driven decisions, lowers uncertainties in making decisions, and also enhances correct decision making. Finally, AI in resource management optimizes resource distribution, maximizes resource utilisation and human resource management, assists in the prediction and planning, and prevents wastage, hence efficient resource deployment in the university.

Recommendations

The recommendations following the results of this study may be the following:

1. The college should devise a full-scale implementation plan of incorporating AI in the university operations to seek the approval of the stakeholders and to overcome the possible obstacles like privacy of data and concern of ethics.
2. The university is suggested to invest in the development of training programs to develop AI literacy among staffs and faculty members to make them efficient to utilize AI-based tools to assist in decision-making, resource management, etc. and admissions.
3. Within the university, constant assessing and feedback ought to be created to track the effects of AI implementations on university work, and changes can be made iteratively, not to mention shifting requirements and technologies.

References

Adamu, U. (2020). The role of artificial intelligence in improving higher education administration. *Journal of Educational Technology*, 17(2), 113-128.

Baker, R. S., & Inventado, P. S. (2014). Educational data mining and learning analytics. In J. A. Larusson & B. White (Eds.), *Learning analytics* (pp. 61-75). Springer.

Baker, T., & Smith, L. (2019). *The impact of AI on education: Current insights and future directions*. Policy Futures in Education.

Baker, T., & Smith, L. (2019). *The impact of AI on education: Current insights and future directions*.
Policy Futures in Education.
Bush, T. (2018). *Theories of educational leadership and administration* (5th ed.). Sage.

Chan, H. C., & Lee, L. K. (2019). Artificial Intelligence in Higher Education: Applications, Promises and Ethical Challenges. *International Journal of Advanced Computer Science and Applications*, 10(12), 42-48.

Holmes, W., Bialik, M., & Fadel, C. (2019). *Artificial intelligence in education: Promises and implications for teaching and learning*. Center for Curriculum Redesign.

Holmes, W., Bialik, M., & Fadel, C. (2019). *Artificial intelligence in education: Promises and implications for teaching and learning*. Center for Curriculum Redesign.

Luckin, R. (2018). *Machine learning and human intelligence: The future of education for the 21st century*. UCL Institute of Education Press.

Luckin, R. (2018). *Machine learning and human intelligence: The future of education for the 21st century*. UCL Institute of Education Press.

Olayinka, A. (2021). Challenges facing higher education in Nigeria and the way forward. *International Journal of Education and Research*, 9(3), 45-56.

Robbins, S. P., & Coulter, M. (2020). *Administration* (14th ed.). Pearson.
Russell, S., & Norvig, P. (2020). *Artificial intelligence: A modern approach* (4th ed.). Pearson.
Russell, S., & Norvig, P. (2020). *Artificial intelligence: A modern approach* (4th ed.). Pearson.
Shattock, M. (2013). *Managing successful universities* (2nd ed.). Open University Press.

Tran, L. T., & Dharmalingam, S. (2020). Artificial Intelligence in Education: Applications and Possibilities. *International Journal of Emerging Technologies in Learning (iJET)*, 15(1), 141-154.

Tran, L. T., & Dharmalingam, S. (2020). Artificial Intelligence in Education: Applications and Possibilities. *International Journal of Emerging Technologies in Learning (iJET)*, 15(1), 141-154.