

Vol 5: Issue IV Oct - Dec 2023

Artificial intelligence and Tertiary Education Management

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Abstract

This paper discussed the concept of AI and its roles in tertiary education management. Secondary data collected from print and online publications was used in this paper. The paper concluded that AI can aid effective tertiary institution administration, effective implementation of teaching programmes, enhance effective student learning in tertiary institutions, aid effective conduct of examination in tertiary institutions, support virtual learning in tertiary institutions, improve research programme development, improve the provision of community service programme, aid effective data management, improve security in tertiary institutions and can improve the attendance of staff in tertiary institutions. Based on these points, the paper recommended that the government should increase funding of tertiary institutions for the development of artificial intelligence in all public tertiary institutions across the country.

Keywords: Artificial intelligence, tertiary education management, modern higher education

Introduction

Modern higher education is defined as organized tertiary learning and training activities and institutions that include conventional universities such as arts, humanities, and science faculties and more specialized university institutions in agriculture, engineering, science, and technology (Alemu, 2018). The concept of higher education also includes post-secondary institutions like polytechnics, colleges of education, and "grandesécole." Under the umbrella of higher education come all forms of professional institutions. Even this wide spectrum does not exhaust the possibilities of forms of higher education (Assie-Lumumba, 2005). Ogunode et al., (2023a) conceptualized tertiary education as a planned and organized educational system designed for the total development of man/woman and the total transformation of the society through the utilization of teaching, research and provision of community service. Tertiary education is post-basic and secondary school education that embraces advanced teaching, research and community service. Tertiary education is an advanced educational system meant for

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human capital development through teaching, research and provision of community service. Tertiary education is the third tier of education that is designed for the production of skilled professionals for socio-economic and technological advancement. Tertiary education or higher education is a set that constitutes the university, which is a subset of higher education. However, in some contexts, higher education and university are used interchangeably (Assie-Lumumba, 2005).

The goals of tertiary education according to the FGN National Policy on Education (Federal Republic of Nigeria, 2013), shall be to: contribute to national development through high-level manpower training; provide accessible and affordable quality learning opportunities in formal and informal education in response to the needs and interests of all Nigerians; provide high-quality career counselling and lifelong learning program that prepare students with the knowledge and skills for self-reliance and the world of work; reduce skill shortages through the production of skilled manpower relevant to the needs of the labour market; promote and encourage scholarship, entrepreneurship and community service; forge and cement national unity; and promote national and international understanding and interaction.

The implementation and realization of tertiary education goals depends on the availability of human resources and material resources. Artificial intelligence is one of the materials resources that can be deployed for effective management of tertiary institutions.

Artificial Intelligence refers to the development of computer systems and machines capable of performing tasks that typically require human intelligence (AFSA, 2022; Ogunode & Gregory, 2023). These tasks include learning, reasoning, problem-solving, perception and natural language understanding. Artificial Intelligence technologies encompass various techniques and approaches, such as machine learning, deep learning, natural language processing, computer vision and robotics. These technologies enable computers to analyze vast amounts of data, recognize patterns, make predictions and automate complex processes. Artificial Intelligence has applications across numerous fields, including health care, finance, transportation, customer service and education. It has the potential to transform industries, improve efficiency and create new opportunities (AFSA 2022).

Alagbe (2023) viewed AI as the ability of a computer or machine to mimic the capabilities of the human mind – learning from examples and experience, recognizing objects, understanding and responding to language, making decisions, solving problems – and combining these and other capabilities to perform functions a human might perform, such as greeting a hotel guest or driving a car. Ogunode & Ukozor (2023) defined Al as programs designed with human-like intelligence and structured in the forms of computers, robots, or other machines to aid in the provision of any kind of service or tasks to improve the social economic and political development of the society. Artificial Intelligence is an application or program constructed to carry out tasks with human-like intelligence. They also viewed Artificial Intelligence as collections systems, packages and applications designed into digital computers or computer-controlled robots to carry out assignments and tasks with human-like intelligence.

Artificial Intelligence and Tertiary Education Management:

AI can play a critical role in tertiary institution management by aiding effective tertiary institution administration, effective implementation of teaching programmes, enhancing effective student learning in tertiary institutions, and aiding effective conduct of examinations in tertiary institutions. It can support virtual learning in tertiary institutions, improve research



programme development, improve the provision of community service programmes, aid effective data management, improve security in tertiary institutions and improve attendance of staff in tertiary institutions. All these possibilities are discussed below in detail:

- Aid Effective Tertiary Institutions Administration: Tertiary institutions i. administration refers to the use of tertiary institutions resources to execute tertiary institutions programmes for the attainment of tertiary institutions objectives. Tertiary institutions administration implies the arrangement of resources in a way that will aid the implementation of tertiary institution programmes for the realization of tertiary institution's goals. Tertiary institutions administration covers all activities and programmes of tertiary institutions. Tertiary institutions administration also focuses on teaching, research and community service programmes of tertiary institutions. According to Ogunode (2020), the objectives of university administration or tertiary institution administration include: implementing the programme of the universities as defined; allocating resources for the implementation of the university programme; ensuring implementation of the teaching programme, ensuring implementation of the research programme; to ensure delivery of quality community services programme, to ensure effective staff development, to ensure effective student administration, to ensure smooth implementation of academic calendar and to ensure quality education. Bordia (2023) contended that AI tools can automate repetitive tasks essential for the smooth functioning of an institute. AI can be used to aid effective tertiary institution administration. The use of AI in education in India can be to make school management tasks effortless for admins and teachers. By automating activities like fee collection, admission enquiries management, tracking the circulation of books in the library, helping admins plan the entire academic year and more, AI can improve the efficiency of school administration. AI can facilitate the automation of administrative tasks, allowing educators to allocate more time for student interaction and personalized instruction (Chan & Tsi, 2023).
- ii. Effective Implementation of Teaching Programme: Artificial intelligence can be deployed to solve various problems hindering the effective implementation of teaching programmes in tertiary institutions across the country. The teaching programme is a core programme of tertiary institutions and is very critical to the attainment of tertiary institutions. The teaching programme covers the preparation of lecture notes, presentation of lectures, assessment of student's academic programmes via tests and examinations, marking of students' scripts, preparation of students' results, integration of resources into lecture presentations and classroom management. These entire things that constitute teaching programmes can be easily done by deployment of Artificial intelligence. On the issue of learning development in tertiary institutions, Bordia (2023) concluded that educational institutions can use AI-powered chatbots to provide uninterrupted learning to students. As chatbots are available, students can use them to resolve doubts in real time. Moreover, chatbots can also be used by school authorities to provide information to parents and students. For example, details on fees, new admissions, classes etc. can be passed on to parents and students through AI-



powered chatbots. Tasks such as grading assignments, generating reports, and managing administrative paperwork can be automated, leading to increased efficiency and improved teacher-student interactions (Chen et al., 2020; Borbajo et al., 2023)). AI integration empowers teachers to use AI as a tool to enhance instruction (Singh & Jain 2022).

Enhance Effective Learning in Tertiary Institutions Students: On iii. personalize learning among students of tertiary institutions. Bordia (2023) pointed out that giving a personalized touch to education helps students learn better and grasp content more easily. With the help of AI, teachers can provide personalized learning to students. Also, this tool can offer course recommendations to learners based on their subjects of interest. Students can use AI to ask questions to teachers and connect with them outside physical classrooms. Also, teachers can use this tool to provide feedback to students by analyzing their strengths and weaknesses. Personalized learning has gained popularity in recent years. It helps teachers understand the pain points and strengths of students and provide the best learning experience based on pupils' needs. AI tools can help teachers understand individual students' learning needs, and expectations from courses, and offer custom learning journeys that improve their knowledge levels. Also in the area of examining tertiary institutions, Bordia (2023) maintained that the concept of virtual learning has gained popularity, especially after the pandemic. Like classrooms, exams also shifted to the online mode. Anisova (2023) noted that Virtual assistants and chatbots have become valuable assets in the educational sphere. They employ natural language processing and machine learning algorithms to comprehend user queries, provide assistance, and facilitate seamless learning experiences. AI-powered educational assistants and virtual teachers offer numerous benefits. First, they provide personalized support, tailoring their responses and resources to meet the specific needs of individual students. This personalized approach enhances the learning experience, catering to each student's unique requirements. Virtual assistants are available round-the-clock, ensuring 24/7 access to help and resources. Students can seek guidance at their convenience, fostering independence and self-directed AI-powered educational assistants offer scalability and consistency since they handle multiple queries simultaneously, ensuring seamless support for a large number of students. Additionally, they provide consistent responses and feedback, eliminating discrepancies in instructional delivery and promoting equitable access to information. The immediate feedback and support offered by virtual teachers and assistants are invaluable. Students receive instant feedback on their work, allowing them to identify errors and areas for improvement in real time. This feedback loop boosts learning efficiency and facilitates student progress. For example, adaptive learning algorithms can analyze students' performance data to identify areas of strength and weakness, enabling educators to deliver targeted interventions and personalized support (Muñoz, et al., 2022). The integration of AI in the classroom holds significant implications for educational reform. AI technologies have the potential to transform traditional education systems from a one-size-fits-all approach to personalized and adaptive learning environments. This shift can lead to improved learning outcomes,



increased student engagement, and greater equity in education (Namboodiri, 2022).

- iv. Aid Effective Conduct of Examination: AI can help conduct fair exams with the use of AI-powered remote proctoring. With its help, school authorities can easily conduct exams for remote learners. The authorities can prevent cheating during exams by analyzing the images/video streams produced by AI proctors. These proctors keep an eye on the candidate by detecting voices or the presence of another person apart from the examinee. Lecturers can also use Al to manage their course materials. Bordia (2023) asserted that one of how this technology can be used is to improve the quality of courses offered online and offline. Research has shown that the dropout rates in online courses are relatively high. Also, the dropout rate in schools is on the higher side. It can happen due to multiple reasons like lack of clarity in understanding different concepts or the inability of teachers to identify the gaps in learning materials/lectures. AI can fill these gaps by analyzing how students interact with different course materials. Using this data, the course quality can be improved. Ogunode et al. (2023b) maintained that AI can support educational institutions to conduct effective examinations that will meet quality standards.
- Support Virtual Learning in Tertiary Institutions: With the help of AI, v. students can learn from anywhere at their own pace without having to attend physical classes. They can connect with learners from all over the world and participate in similar courses. AI is modifying education models and teachinglearning techniques around the globe. As learners can quickly access information, they can resolve their doubts in a short time. This powerful technology is also promoting the culture of lifelong learning by empowering students with the required information in a span of a few seconds (Bordia, 2023). Tertiary institutions are using AI to attract top talents, boost enrollments, predict outcomes, and identify at-risk students. Even the New Education Policy 2020 emphasizes the use of technology to provide the best learning opportunities to students and reduce the time spent on administrative tasks. With AI, schools can manage their tasks and boost the productivity of their teachers. Moreover, AI in tertiary institutions can be used to train teachers and keep them updated on new trends in the education industry. With AI, the education industry can change traditional learning methods to provide an enriched learning experience for students. Now students can learn from any corner of the world thanks to the power of artificial intelligence. Universal access to education is one of the applications of AI in education. Quality education is accessible to students outside their classrooms. They can participate in global courses and learn from anywhere without worrying about their geographical location (Bordia, 2023; Borbajo et al., 2023).
- Improve Research Programme Development: Paul (2015) and Fawole et al. vi. (2006) also see research as a systematic investigation including development, testing and evaluation, designed to develop or contribute to knowledge. Research is a curiosity-driven activity that has the purpose of discovery and advancement of knowledge. Ogunode & Abubakar (2020) submitted that research is the second cardinal programme of higher institutions. Research is very important to the



development of the society. Research is conducted mostly in the higher institutions environment to solve problems affecting society. The academic staff is saddled with the responsibility of carrying out research in the universities. Conducting research is one criterion for measuring their performance (Yusuf 2012; Ogunode & Ade 2023). Paul (2015) submitted that the conduct of research is one of the basic functions of tertiary institutions, which comprise Universities, Polytechnics, Monotechnics and Colleges of Education. The academic staff of these institutions are compulsorily required to carry out research activities as their promotions are primarily based on their research outputs. Apart from the academic staff being promoted through research publications, research activities enhance their credibility, and status, and also add value both to their immediate community and the larger global community. Khedkar (2023) observed that researchers can use AI tools for writing a research grant, a book, or even academic journal articles. Some AI-powered tools can help researchers to edit their articles and use grammatically correct English. Analyzing data from the experiments conducted is an important aspect of research. AI-powered data analysis tools can help researchers analyze data more efficiently and make the process free of any bias. Researchers can save hundreds of hours by using AI tools that can read complex papers and summarize them. Researchers can also make use of AI tools for citing literature and keeping their sources organized. AIpowered research tools for reading, annotating, and note-taking can make the process of acquiring knowledge considerably more efficient. Such tools can provide the user excerpts from the literature source, with the most relevant information highlighted, and help one decide whether an article is worth reading. This can help the user quickly locate relevant information in research articles, determine which paragraphs to read in-depth and compile notes on the subject. To use such an AI-powered tool most effectively for research, the users should critically assess the output without accepting it as 'the truth' and read the original text instead of simply relying on AI-generated summaries. To use AI tools effectively for creating experimental design models, researchers must design models that take a wide range of variables and parameters into account. By inputting specific criteria into such models, researchers can generate optimal designs that maximize their study effectiveness.

viii. Improve Provision of Community Service Programme: Ogunode et al. (2023a) viewed community service programmes of higher institutions as community-inclined services initiated by the institutions to develop the communities. Community services of higher institutions are services provided by institutions to benefit the community people. Community service of tertiary institutions involves all organized services provided by the institutions to the host communities to improve their communities positively. Ogunode et al. (2022) maintained that the community service programme is the third cardinal programme of tertiary institutions. A community service programme is an organized and planned service programme of higher institutions for the benefit and betterment of their host community. Community service according to Peter (2017) involves making knowledge and skills in the "ivory tower" available to members of the immediate and distant public. Public lectures, conferences and consultancies are examples of



community service. There has been a mutual benefit to such tertiary institutions and the communities. An increase in consultancy services offered by tertiary institutions can also explain the increase in community service. Most tertiary institutions have established consultancy services as a way of generating funds internally. AI for Good (2023) acknowledged that AI technology has numerous beneficial applications for humanity, such as crime prevention, identification, and case-solving. However, he also noted that the potential for misuse of this technology is a cause for concern, leading to ethical grey areas. Werner stressed the importance of responsible use of AI technology, as it can impact the optimization of outcomes, be it for good, bad, or neutral purposes. Ultimately, it is how we choose to use this technology that will determine its impact on society. AI has the potential to be viewed from various perspectives, ranging from enhancing affordable healthcare, and education, and promoting gender equity, to developing high-tech solutions such as autonomous driving in smart cities. The possibilities are endless, and we can channel our efforts towards tackling global challenges. AI can significantly improve the efficiency and accuracy of processes and decision-making, leading to enhanced quality of life and sustainable development. The United Nations Sustainable Development Goals (SDGs) serve as a driving force towards achieving a more sustainable future for all by 2030. Consisting of 17 Goals and 167 targets, the SDGs provide a blueprint for a better world that was agreed upon by 193 countries. The SDGs are envisioned to act as a compass that guides us towards a future with a higher quality of life and sustainable development on Earth. The role of AI in achieving the SDGs was explored by the scientific journal Nature three years ago and it was found that AI has the potential to positively impact 135 targets across all the goals, while also inhibiting 59 targets. Despite this, the positive use cases of AI in advancing the SDGs outweigh the negative. With its ability to analyze vast amounts of data, identify patterns, and provide accurate predictions, AI can play a vital role in helping to achieve the SDGs. AI can help improve access to education, healthcare, and clean water, and can also aid in the fight against climate change, poverty, and hunger. However, it is crucial to ensure that AI is developed and used ethically and responsibly, to avoid any unintended negative consequences. By harnessing the power of AI, we can accelerate our progress towards a sustainable future for all (AI for Good, 2023).

viii. **Effective Management of Data:** AI can be employed in tertiary institutions to improve data management in the system. In education, the concept of Big Data refers to large volumes of structured and unstructured data generated within the educational ecosystem, including student information, academic records, assessments, social interactions, and more. Big Data in education encompasses the collection, analysis, and interpretation of vast amounts of data to derive meaningful insights and patterns that inform educational practices and policies. It involves leveraging technology and advanced analytic techniques to make sense of the diverse data points generated across various educational systems and platforms. Big Data in education is characterized by its immense volume, variety, velocity, and veracity. It encompasses diverse types of structured and unstructured data from various sources, including learning management systems and online



platforms. The velocity of data generation requires real-time processing for timely interventions and personalized support. Ensuring data veracity is crucial to maintaining accuracy and integrity when working with educational data. With the increasing digitization of educational processes, enormous amounts of data are generated, including student performance metrics, learning activities, assessments, and more (Anisova, 2023). AI algorithms can effectively process and analyze this data in the following ways according to Anisova (2023):

- ix. **Personalization:** AI algorithms can analyze individual student data to identify learning preferences, strengths, and areas for improvement. By considering various factors such as learning style, pace, and content preferences, AI can personalize instruction, recommend tailored resources, and provide adaptive learning experiences that optimize student engagement and success.
- x. **Predictive Analytics:** AI algorithms can analyze historical educational data to make predictions about student outcomes. By identifying patterns and correlations in the data, AI can forecast potential risks, such as students at risk of dropping out or struggling with specific subjects. This enables educators to intervene early and provide targeted support, improving student retention and academic performance. AI algorithms analyze educational data to generate actionable insights for educators. These insights inform instructional decision-making, allowing teachers to identify learning gaps, adapt teaching strategies, and provide targeted interventions that support each student's progress (Anisova, 2023).
- xi. Improve Security in Tertiary Institutions: AI can be used in tertiary institutions across Nigeria to improve the security of lives and properties. Tertiary institutions in Nigeria are faced with various insecurity problems. Source security (2023) noted that security is a 24-hour challenge. Protecting schools involves the deployment of a range of security and physical handling tools. Reducing risk requires that access to school buildings be controlled, while also preserving an 'open' campus atmosphere that promotes a learning environment. Schools should be an inviting place for students and families, so technological solutions aimed at restricting access should be low-profile and unobtrusive. School security must also be designed in layers, or concentric circles of protection, starting at the school's perimeter and working inward to secure individual classrooms and other internal areas. Source security (2023) listed the following AI devices to solve security problems in tertiary institutions to includes;
 - 1. **Enhancing Video Security at Schools:** Video surveillance is a technology that is unobtrusive and can promote security beginning at the outermost boundaries of the school environment at the perimeter and as automobiles drive onto school grounds. Surveillance can keep a silent and constant watch as people come and go. Furthermore, incorporating new artificial intelligence (AI) and deep learning technologies is increasing the real-time capabilities of video surveillance to provide early warning of a possible security threat as it enters a campus. AI and deep learning analyse the content of video feeds and provide usable information to security personnel, including analysis of trends and real-time alarms when an event takes place (ibid.).



- 2. Incorporating AI into Video Security: In addition to controlling perimeter access, video surveillance incorporating AI can also provide other benefits, such as keeping watch on a school campus after hours – before and after school, or even on weekends when extra-curricular activities may be taking place. The systems can monitor traffic flow and ensure that only authorised vehicles enter an area. The benefits of AIdriven video systems also enable greater effectiveness of systems that are not being actively monitored. Video feeds are analysed in real-time and alarms can be raised only if there is a problem. Whenever a vehicle passes into a restricted area on a school's campus, the video system captures a vehicle image and automatically provides significant data (ibid.).
- Automated Number Plate Recognition ANPR Systems: Automated 3. number plate recognition (ANPR) systems identify the license numbers of cars that enter a school's parking entrance or gate and can match the numbers to a watch list and provide an alarm. The technology could also be used to monitor compliance with restricted areas; for example, to only allow vehicles that are registered for a parking pass to park in a certain lot. A more advanced approach could involve dual identification technologies - vehicle plate and facial recognition of a driver - to add another layer of security. Video systems with illegal parking detection can define a zone for no parking at a school. If any vehicle enters the area, the camera will be triggered to collect evidence. Images are captured of illegally parked vehicles, and the system provides data about when and where it occurred, the vehicle plate number and the parking violation (ibid).
- Facial Recognition Systems: Facial recognition can be used at school 4. entrances and gates to promote the security of students and staff and to identify known suspects who attempt to enter the building. 'Blacklist alarm' technology generates a notification if a known suspect enters. Clarity is paramount when identifying faces, and cameras that provide wide dynamic range (WDR) can offset challenges such as backlighting on a bright day when the light behind a person coming in is brighter than the ambient light inside (ibid).
- People Counting Cameras: Facial recognition systems can also be used 5. inside school buildings. A facial recognition terminal installed at the entrance of a campus building or library can be configured to ensure that only registered students and staff have access to the buildings. People counting cameras can be used in cafeterias and libraries to provide daily or monthly traffic reports and to better understand peak times and arrange workflow accordingly (ibid).
- Unified Security Solution: Feeds from all the cameras can be managed, 6. monitored and stored in an authorised security centre, either located on a campus or in a central location that combines camera feeds from multiple campuses in a school district, for example. In general, security staff can access surveillance data in a variety of ways, via a desktop, laptop, or mobile device. Such flexibility makes the job of security personnel easier. A campus police or resource officer can view video on a mobile device



while patrolling the campus. Often video surveillance systems at schools are not monitored. School security personnel have more pressing duties than sitting in front of a video monitor, and it is difficult for operators to stay alert for detailed incidents that may be shown on the screen. Tedious and error-prone manual monitoring can now be replaced by more intelligent systems that provide alarms only when there is something to see (ibid.).

- 7. Maximizing School Surveillance Capabilities: Systems to maximize school surveillance and security include dedicated, high-performance cameras for event capture, an embedded network video recorder for event recording and storage, and a centralized video management platform to unify the system. AI and deep learning technologies automate security processes and provide useful real-time information that extends beyond video images. Deploying these technologies at the perimeter can promote better security campus-wide by preventing danger from entering the learning environment (ibid.).
- 8. Improvement Attendance of Staff in Tertiary Institutions: Tertiary institutions in Nigeria seem to be facing the problem of poor attendance of staff to offices. It has been observed that most tertiary institutions across the country are facing poor turn in of staff to work. Pocket (2022) submitted that the attitude of most staff in tertiary institutions to work is poor. He further stated that some of the staff do not go to work as scheduled for them. In addition, he emphasised that an AI-based attendance management system is a technological solution that streamlines facial attendance-related practices recognition. like identification, working hours' auto tracking, and more. The recent cut-age machine learning technique helps employers in employee data analysis to automate and enhance the process of tracking employee attendance. By utilizing AI algorithms, the system accurately identifies employees, records their attendance in real-time, analyses attendance patterns, and provides valuable insights for workforce management. With an AI attendance system, HR can perform administrative tasks without any errors, enhance the HR operation more efficiently, and improve the decision-making processes.

The benefits of an AI-based attendance management system in tertiary institutions include but are not limited to;

a. Maintaining accurate tracking in the attendance system is challenging for employers. A company loses enough time in maintaining the accuracy of the time and attendance tracking system. The cloud-based AI-powered attendance management system provides real-time employee data systematically. AI features like facial recognition and biometric identification ensure precise verification of employees' identities, minimizing the risk of buddy punching and reducing errors in attendance records (Pocket, 2022).



- With the assistance of AI, attendance management improves the b. employee's real-time attendance tracking facilities. It provides efficient output by eliminating the need for manual data entry and reducing administrative burdens. Additionally, an AI-based attendance system provides efficiency and accuracy in attendance tracking applications that curb employee overpayment and underpayment. All employees are paid as per their working hours or working days. AI attendance tracking system saves HR time. They can invest their time in other administrative work. AI provides accurate data on early leaving, overtime, leaves, shifts, and more. By automating processes and reducing the need for manual labour, organizations can save costs associated with traditional attendance methods and data entry. AI attendance management system prevents extra time consumption and expenses (ibid.).
- With the help of an automated attendance portal, employees can c. view their attendance records and history, fostering a sense of ownership over their punctuality and attendance behaviour. Moreover, they can use AI-generated geolocation tracking to attain their attendance and verify whether they are at a workplace or remote location. AI in the attendance system can significantly improve shift management by introducing advanced technologies like facial recognition and biometric identification, providing realtime updates on attendance status. Also, With AI-based technologies, a company can analyze attendance patterns, ensure better decision-making, arrange efficient shift allocation by preventing understaffing or overstaffing, provide flexible accommodation, optimize task allocation based on employee performance, etc. It reflects on the betterment of the employee payroll process and other HR practices. AI-based attendance systems can help organizations comply with labour regulations by accurately tracking attendance and ensuring fair compensation. Additionally, they provide enhanced data security through encryption and controlled access to sensitive employee information (ibid.).

Conclusion and Recommendations:

This paper discussed the concept of AI and its roles in tertiary education management. The paper specifically concluded that AI can aid effective tertiary institution administration, effective implementation of teaching programmes, enhance effective learning in tertiary institution students, aid effective conduct of examination, support virtual learning in tertiary institutions, improve research programme development, improve the provision of community service programme, effective management of data, improve security in tertiary institutions and improve the attendance of staff in tertiary institutions. Based on these points, the paper



recommended that the government should increase funding of tertiary institutions for the development of artificial intelligence in all public tertiary institutions across the country.

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