



ARTIFICIAL INTELLIGENCE AND TEACHING PROFESSION IN NIGERIA IN THE 21ST CENTURY

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Abstract

Artificial intelligence is advancing at incredible speed and becoming part of our everyday lives. This is thanks to the technological advances of the last decades and the spread of digitalization in countless areas. Education is another area where information and communication technologies are an integral part of everyday life. It is therefore inevitable that artificial intelligence is ignored in the field of education. This study examines what AI might imply for education, learning and teaching. Artificial intelligence-based technologies offer a number of benefits for students and teachers alike.

Keywords: Artificial Intelligence, Future, Teaching Profession and Nigeria.

Introduction

Nowadays, the use of artificial intelligence (AI) is becoming more common in many areas of life, and this is also true for education. AI-based education can take many forms and its main goal is to make education more effective. Digitalization and the appropriate use of information communication tools (ICT) are essential in today's modern world. Ralph and George (2010) described artificial intelligence as a cluster of technologies, and various computing science approaches to make flexible rational decisions that align with unpredictable environmental conditions. They also considered AI as a tool for sustainable development. The better we understand the present and the history that AI has created, the better we can understand the possibilities of the future/impact of AI in education in Nigeria. To appreciate the opportunities and challenges that Artificial intelligence creates, we need both good understanding of what AI is today and what the future of teaching profession in our nation may be when AI will be widely used in the society. Artificial intelligence can enable new ways of learning, teaching and education and it may also change the society in ways that pose new challenges for educational institutions. It may amplify skill differences and polarize jobs, or it may equalize opportunities for learning. According to Ralph and George (2010) Artificial Intelligence systems includes the people, procedure, hardware, software, data and knowledge needed to develop computer systems and machines to display features of intelligence.

Concept of teaching profession in Nigeria

Teaching is an occupation dating from the time of human existence. However, despite its age, it has consistently lacked the command of prestige and power accorded the classical professions such as law and medicine. Teaching is a noble profession (Usman Mohammed Aklahyel, 2016). In Nigeria, teaching has remained a trade union rather than a professional organization. There are very few things that are as rewarding as making a sound difference in shaping the lives of young people, inspiring and mentoring them to become the best versions that they can be. Teaching goes beyond subject knowledge and the satisfaction that it provides goes beyond words. According to Oxford, teaching is "a paid occupation, especially one that involves prolonged training and a formal qualification."



Who is a qualified teacher?

A qualified teacher: is a trained person who impacts relevant knowledge to a learner in a school environment. According to Are (2002) a teacher refers to the person who instructs to provide the teaching-learning process.

Reasons for taking up teaching as a profession

According to Divyansh Bordia-09 Nov 2020 “To teach is to touch a life forever.”

1. **Inspire and Influence:** as mentioned, teachers have the added responsibility of shaping future generations. Teachers have an opportunity to make a difference. You can teach them to be responsible and sensible citizens.
2. **Improvement and Learning:** teaching and learning go hand in hand. Since you will be around young, curious, minds all day, you will be able to push yourself and get better every day. When you are in an environment that asks a lot of questions and is inquisitive, you grow and develop each day. You get to polish your skills and techniques.
3. **Work Satisfaction:** the joy of making a difference and making a change in the right direction is like no other. Teaching provides job satisfaction that is like no other. Teachers have to use different teaching strategies and techniques to cater for each child.
4. **Respect:** teaching is a respectful job and people look up to teachers for the work that they do and the influence they have. Teaching is a noble profession.
5. **Potential for Growth:** the stability and job security of a teaching career are high. The potential that teachers have is commendable and the possibilities of teaching are vast. With online teaching apps and virtual classrooms on the rise, you can teach from the comfort of your home and without any geographical restrictions.

The Challenges Facing Teaching Profession in Nigeria

The following are the problems of teaching profession as recorded in <https://www.interestjournals.org>

1. Inadequate funding.
2. Poor societal perception of teacher education.
3. Lack of commitment among teachers.
4. Lack of motivation.
5. Unethical behavior of some teachers.

Concept of Artificial Intelligence

Artificial intelligence can be described as the simulation of the human mind to make computers think and act like humans by performing tasks like learning and problem-solving (Zhang & Lu, 2021). Artificial Intelligence according to Benhamou and Janin (2018) stated that artificial intelligence involves a collection of technologies that enable machines to act with a very high level of intelligence similar to humans. Merriam-Webster English Dictionary (2018) stated that artificial intelligence is “a part of computer science that deals with giving ability to the machines to look as if they have natural human intelligence”. This means machines perform tasks like intelligent beings and animals (McCorduck, 2004). Artificial intelligence is an area of computer science with the help of digital electronics that emphasizes the creation of intelligent machines that work and react like humans. Artificial intelligence applications are in wide use by educators and learners from nursery to tertiary education level.

Types of Artificial Intelligence

According to Ralph and George (2010) the history of AI can relatively be categorized into three types.

1. **Data-based neural artificial intelligence:** this type of AI is largely based on neural system (neurobiology/nervous system). Here the human brain started to look like a computer and the computer became known as the electronic brain.



2. Logic-based artificial intelligence: this form of AI was able to manipulate logical theorems and their creators were certain that they had produced solver that thinks. .
3. Knowledge-based artificial intelligence: this type focuses on the cognitive (intellectual) level of activity.

Benefits of Artificial Intelligence in Education

Education is one of the most important sectors in Nigeria that touches everybody regardless of age and location. Many other elements can be obtained through AI according to (Chen et al, 2020). We will briefly examine some potential benefits that AI offers to students and teachers. Artificial intelligence brings benefits and opportunities to education by:

1. Facilitating personalization of learning, providing instant feedback and improving efficiency in the assessment process. One of the key aspects of AI in education is the ability to adapt the learning process to the individual needs of pupils/students.
2. Artificial intelligence helps to reducing the workload of lecturers. In the recent years, the lecturers have often shown dissatisfaction with the high workload experienced in education.
3. Artificial intelligence can be used to create tutorial and interactive virtual assistants, system that can answer students' questions, provides additional explanation and guide students in real-time through the learning process.
4. Through tutorial and virtual assistance students can benefit from additional support and learn at an individualized pace receiving real-time guidance to support learning process (Mahendra 2023).

Challenges of Artificial Intelligence in Nigeria

According to a Ph.D Student, Alabi Ebifakumor Blessing in the Journal of Business Education, Management Science and Information, Ignatius Ajuru University of Education Rumuolumeni Prot Harcourt, Rivers State, Nigeria Volume 8, Number 2, 2022. The following are some hindrances of AI in education sector.

- 1) **Fear of AI jeopardizing the objectives of education if the emphasis is on technology alone:** If the development of AI is mainly focused on technology, there is a risk that AI applications will no longer be in line with educational objectives. This risk increases when simulations are used excessively for teaching. There is a chance that knowledge and skills in a simulation cannot be applied in the real world.
- 2) **Lack of human interaction:** Such gaps can hinder students' personal development, as without human connections, it can be difficult for students to develop emotional and social skills according to (Grace et al. 2018).
- 3) **Dependency on black-box models versus the responsibility of lecturers:** there is a risk that education will become dependent on AI systems that we do not fully understand. A lecturer cannot take responsibility for systems that are incomprehensible.
- 4) **Applying AI without preparation:** so many conditions need to be met before Artificial Intelligence can be successful applied in education. For example, technical infrastructure and data are required before AI can be applied.
- 5) **Insecurity issues:** safety and security regarding AI-based system revolve around concepts such as safe Artificial Intelligence for use by humans, verification, validation, self-awareness in adversary prone environment.

Several countries that are known for their advancements in artificial intelligence according to Lizka Vaintrob, August 15, 2023.

Several countries are known for their advancements in artificial intelligence and making them great destinations for learning about these fields.



1. **United States:** The U.S. is a global leader in AI research with top universities like Stanford, MIT and Silicon Valley as a hub for tech innovation.
2. **Japan:** Japan is known for its robotics industry and has a strong focus on AI research. Institutions like the University of Tokyo and the Advanced Telecommunications Research Institute International are renowned for their work in AI.
3. **Germany:** Germany is known for its engineering expertise and has a strong robotics industry in the Technical University of Munich.
4. **United Kingdom:** The UK has a strong presence in AI research, with universities like Oxford and Cambridge at the forefront of AI innovation.

Suggestion

1. Educational institutions should keep pace with rapidly evolving technology, to enable teachers and students to be future ready.
2. There would be less interactions between human beings in offices and other places of work as automated machines takeover most of the jobs.
3. Employers who have the intention of using AI in their place of work should retrain their staff to new tasks when the old ones would be taken over by artificial intelligence (automated machines).
4. Both software and hardware components should be made available in the school by the government to aid the use of AI by the Lecturers and learners.
5. There should be personal code for accessing ones data in order to maintain confidentiality.

Conclusion

The future of artificial intelligence in education is likely to grow in the coming years. With the help of AI technology, educational institutions can make teaching processes more efficient and effective and a range of benefits for students and teachers. With the help of artificial intelligence, teachers can better track students learning and create more personalized teaching plans. Educational institution and teachers must be prepared to use AI and adapt to technological changes.

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