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Core Curriculum and Minimum Academic Standards (CCMAS) Implementation in Nigerian Universities: Roles of Artificial Intelligence

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Annotation

Core Curriculum and Minimum Academic Standards (CCMAS) was introduced into the universities by the National Universities Commission. The Core Curriculum and Minimum Academic Standards (CCMAS) is designed for implementation from the 2023/2024 academic session. CCMAS is designed for the universities. This paper discussed the roles of artificial intelligence in the implementation of the Core Curriculum and Minimum Academic Standards (CCMAS) in universities in Nigeria. The paper used secondary data. The secondary sources of data were collected from both print and online publications. Content analysis was used to analyze the selection of literature for the study. The paper concluded that artificial intelligence can support effective teaching and implementation of CCMAS, research in CCMAS, aid effective provision of community service to the host communities and support blended learning implementation. Based on these points identified, the paper hereby recommends an increment in the funding of the universities to enable university administrators to acquire more artificial intelligence facilities and infrastructures. All academic staff should be trained on the usage and maintenance of Artificial Intelligence. The government should provide quality internet service in all universities to aid in easy connection. Artificial Intelligence facilities should be subsidized for students and lecturers.

Keywords: Artificial intelligence, Core Curriculum and Minimum Academic Standards (CCMAS), Universities.

INTRODUCTION

According to the NPE (FRN, 2004 as cited in Ololube, 2016), university education is expected to make an optimum contribution to national development through the intensification and diversification of its programmes for the development of high-level human resources base within the context of the needs of the nation; make professional course contents to reflect Nigeria's national requirements; make all students, part of the general program of all-round improvement and to offer general study courses such as history of ideas, philosophy of knowledge and nationalism. Universities are expected to encourage and disseminate their research results to both government and industries. Universities are expected to inculcate community spirit in their students through projects and action research. They are expected to ensure that faculty in their professional fields have relevant industrial and specialized experience.

The goals of tertiary education which include the universities according to the FGN National Policy on Education (2014), 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 realization of the goals of university education depends on the effective implementation of the curriculum. Recently, the National Universities Commission of Nigeria developed a new curriculum titled Core Curriculum and Minimum Academic Standards (CCMAS). The new curriculum is meant to reposition the universities for national and international development. NUC (2022) maintained that The CCMAS documents are uniquely structured to provide for 70% of core courses for each programme while allowing universities to utilise the remaining 30% for other innovative courses in their peculiar areas of focus. In addition to the overall Learning Outcomes for each discipline, there are also Learning Outcomes for each programme and course. In general, programmes are typically structured such that a student does not carry less than 30 credit units or more than 48 credit units per session. Consequently, the Commission is optimistic that the 2022 CCMAS documents will serve as a guide to Nigerian Universities in the design of curriculum for their programmes with regards to the minimum acceptable standards of input and process, as well as, a measurable benchmark of knowledge, 21st-century skills and competences expected to be acquired by an average graduate of each of the academic programmes, for self, national and global relevance.

The new CCMAS has 17 faculties namely; i. Administration and Management, ii. Agriculture, iii. Allied Health Sciences, iv. Architecture, v. Arts, vi. Basic Medical Sciences, vii. Communications and Media Studies, viii. Computing, ix. Education, x. Engineering and Technology, xi. Environmental Sciences, xii. Law, xiii. Medicine and Dentistry, xiv. Pharmaceutical Science, xv. Sciences, xvi. Social Sciences and xvii. Veterinary Medicine (NUC, 2022). The new CCMAS is designed to be implemented by both human and material resources like the ICT and artificial intelligence facilities. It should be noted that Artificial Intelligence is an infrastructure that can empower people (Ayeni, 2017). Artificial Intelligence is an infrastructure designed to ease the way of teaching and learning in tertiary institutions. Following the above, it has been noted that infrastructural development enhances human security (Ayeni, Andeshi, & Uzoigwe, 2022),

Artificial intelligence as an infrastructure is expected to make learning and teaching easy and conducive. Scholars like Ayeni, Sani, Andeshi, Ibrahim and Adamu (2020) have also argued that infrastructural development has intended and unintended benefits for the youth. One of the rationales behind the use of artificial intelligence as an infrastructure in tertiary institutions is that, it is one of the things that can reduce poverty, rather than vote buying (Ayeni, Doosuur, & Kefas, 2021). The absence of infrastructure can create human security challenges. This is why scholars have described security as the "state of not being financially, emotionally, psychologically and materially threatened" (Ayeni, & Beji, 2018, p. 17). There is doubt if the absence of Artificial intelligence is capable of creating emotional and psychological threats when it is not available. The above doubt informs this study.

The objective of this study is therefore to examine the role of Artificial Intelligence in the implementation of Core Curriculum and Minimum Academic Standards (CCMAS).

Concept of Implementation

Ogunode and Ahaotu (2020) viewed implementation as the systematic way of executing programmes, policies and projects. Implementation is the act of carrying out planned actions and programmes. Implementation is the stage by stage of carrying out defined and planned programmes. Implementation means carrying out an assigned task. Implementation comes after the process of planning, organization, coordination and promotion which is necessary to achieve policy objectives. Implementation implies the process of activating an approved policy. Franklin (1982), defined implementation as activities that include amassing resources needed to mobilize and carry out responsibilities, planning specific programme designs, using legislation and translating them into specific regulations, organizing staff, creating or amending appropriate routines and providing the benefits and services to intended recipients. Hyder (1984) considers implementation as the act of putting policies into practice. It is often. Manafa (2011) observed that policy implementation depends on some factors which include knowing what you want to do and the availability of the required resources. Implementation becomes possible when the resources have been mapped out for the project. Implementation is the act of carrying out a planned programme as designed.

From the above, implementation can be seen as the act of carrying out planned programmes and projects to achieve a specific purpose. Implementation is the process that involves the execution of a designed programme and projects. Implementation is key to the completion of projects. Implementation is one of the critical components of project management that involves the practical execution of projects to realize their objectives.

Concept of Core Curriculum and Minimum Academic Standards (CCMAS)

Core Curriculum and Minimum Academic Standards (CCMAS) is an organized curriculum for the production of graduates that are fit and self-rely, for national and global relevance. Core Curriculum and Minimum Academic Standards (CCMAS) is an improved curriculum with regards to the minimum acceptable standards of input and process, as well as, a measurable benchmark of knowledge, 21st-century skills and competencies expected to be acquired by an average graduate of each of the academic programmes, for self, national and global relevance.

From the above, Core Curriculum and Minimum Academic Standards (CCMAS) is an improved curriculum designed to be implemented through blended learning and developed for the training and development of graduates who are fit to solve the problems confronting the nation and to contribute to national and international development. Core Curriculum and Minimum Academic Standards (CCMAS) can also be defined as a curriculum development for implementation in Nigerian universities that is anchored on virtual and blended learning and involvement of teaching, research and provision of community services.

Concept of Artificial Intelligence

There are many definitions of artificial intelligence by different authors. For instance, 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. Artificial intelligence (AI), according to Copeland (2023) is the ability of a digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings. The term is frequently applied to the project of developing systems endowed with the intellectual processes characteristic of humans, such as the ability to reason, discover meaning, generalize, or learn from experience.

Ogunode and Ukozor (2023) defined AI as programmes 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. Frankenfield (2023) defined Artificial intelligence (AI) as the simulation of human intelligence by software-coded heuristics. Artificial Intelligence is a branch of science producing and studying machines aimed at the stimulation of human intelligence processes.

From the above, Artificial Intelligence can be defined in this paper can be viewed as a machine programmed with simulation of human intelligence that can solve complex problems. Artificial intelligence is a machine programmed with human intelligence that makes it mimic human capacities and solve complex. Artificial intelligence is a machine or computer system that has the abilities and capacities to carry out complex tasks that are similar to human intelligence.

Roles of Artificial Intelligence in the Implementation of Core Curriculum and Minimum Academic Standards (CCMAS)

Artificial Intelligence has a critical role in the implementation of the Core Curriculum and Minimum Academic Standards (CCMAS) in Nigerian universities. Some of the roles include; supporting effective teaching of CCMAS, research of CCMAS aiding effective provision of community service to the host communities and supporting blended or hydra learning implementation

Support Effective Implementation of Teaching of Core Curriculum and Minimum Academic Standards (CCMAS)

Teaching is the first cardinal programme of the university system. Teaching is defined as the practical implementation of a school curriculum to improve the abilities and capacities of learners. Teaching is very important in the university system because it leads to the realization of the university's objectives. Teaching in universities can be done in two major ways namely; traditional means of teaching and virtuous means of teaching. The traditional or physical means of teaching is characterized by teachers' centered and offline while the virtual is carried out via online and distance learning. Teaching involves the delivery of the lesson, preparation of lesson notes, supervision of students' projects, grading of students' exams and management of students' data (Ogunode, & Olowonefa, 2023). Artificial intelligence can help lecturers in Nigerian universities implement the new Core Curriculum and Minimum Academic Standards (CCMAS). Artificial Intelligence tools like:

1. AudioPen

Poth, (2023) noted that for years, I have been using voice-to-text to write blogs, books, emails, and lesson plans. This is an AI-powered web app that you can use on your computer or phone. The app takes your words and enhances them as it generates the text, which you can edit as needed.

2. Canva Magic Write

Poth, (2023) submitted that Canva now offers an AI text-to-image generator called Magic Write, which can inspire creativity in writing. It provides ideas, helps with brainstorming, and supports lesson planning, making it a useful tool for educators to create a presentation or other graphics for classroom use. Magic Write can assist with many writing tasks that

educators may have by analyzing the word prompts and then helping with brainstorming, creating an outline, writing lesson plans, or generating a visually engaging presentation in far less time. Brock (2023) opined that Canva is an AI writing tool designed to help you overcome writer's block, brainstorm ideas, or create engaging written content. If writing isn't your strong point as a teacher, then this tool might be just what you need. Canva Magic Write can inspire your creativity by providing ideas, structure, and content to make your lessons more engaging and impactful for your students. The potential and limitations of this tool come down to how often you can find a use for it and how satisfied you are with the content it creates.

Curipod:

Curipod is one of the best AI tools for designing class materials and lesson plans. The software uses AI to create content for the classroom. You can use it to generate lesson plans, project outlines, writing prompts, student reports, and more. This tool is great if you want to save time on lesson planning for every single class. It's also perfect for creating personalized learning experiences for your students. Poth, (2023) opined that this website enables teachers to create interactive lessons in minutes using AI. Students can explore various topics, and the AI functionality helps generate customized lessons tailored to their learning needs. Teachers simply type in a topic, and a ready-to-run lesson is generated with text, images, and activities such as polls, open-ended responses, word clouds, and more. There are even activities to build in that focus on SEL check-ins.

4. Eduaide.Ai:

This is an AI-assisted lesson-development tool that provides educators with more than 100 resource types to choose from to create high-quality instructional materials. It offers the ability to translate the generated content into more than 15 languages instantly. Educators can generate a syllabus, create discussion prompts, use the "teaching assistant" for help with creating individualized education program plans, write emails, or even compile a list of accommodations for students. Eduaide.AI has a content generator, teaching assistant, feedback bot, free-form chat, and assessment builder (Poth, 2023).

5. OpenAI:

Poth (2023) observed that the recently released teaching with AI guide for teachers was created to help educators use ChatGPT in their classrooms. The guide comes with several suggested prompts and includes explanations that clarify exactly how ChatGPT works and what its limitations are, and it provides reminders of the importance of verifying information and checking for bias. Brock (2023) noted that with ChatGPT 4, which is a paid version, there is greater accuracy and reliability of information than with the original version. ChatGPT is a generative AI chatbot that can hold a conversation with you based on information collected from the Internet. ChatGPT is a 'freemium' service, meaning it has a free version and a paid version. While it can be a useful tool for both teachers and students if used to support research or writing by answering suggested prompts, it is unlikely to be effective as a replacement debate partner.

6. Quizizz:

Poth (2023) maintained that with Quizizz, teachers can design quizzes that will create a personalized learning path based on each student's responses. Teachers can also create lessons with Quizizz, which now has an AI enhancement that can adjust question difficulty, check grammar, and redesign questions to reflect real-world scenarios, with more features on the way. Also, Brock (2023) observed that iSpring Page is an intuitive AI-powered course creation tool for developing entire courses, tutorials, and quizzes, all in your browser. With this cloud-based tool, teachers can create visually appealing eLearning content with ease. The intuitive user interface makes the iSpring Page accessible and fun to use. This education tool is equipped with iSpring AI, which is a virtual assistant capable of taking over several tasks to save you time and enhance your teaching process. You can use the AI assistant to generate and edit text, brainstorm ideas for courses, and create quiz questions. iSpring Page is an all-in-one platform for creating or enhancing existing materials to increase student engagement in your classroom. iSpring AI helps you take your creativity to the next level.

7. Slidesgo:

Poth, (2023) observed that this tool provides access to free templates via Google Slides and now has the AI Presentation Maker. With this new functionality, presentations can be created within minutes. Simply choose a topic; select a tone such as casual, creative, or professional; make changes; and download your presentation. Slidesgo is a time-saver for sure lecture presentation to students.

Powerpoint Speaker Coach

Poewer-point speaker coach according to Brock (2023) is an AI-powered tool that can help you rehearse your presentations and practice public speaking skills. This tool can analyze your speech through its tone, pace, and emphasis to deliver constructive feedback in real-time. This feedback bot is perfect if you're new to teaching and need to build your confidence in speaking, or if you find yourself giving a talk in front of a larger audience. For teachers who are keen to keep their class engaged with succinct and polished presentations, this is the tool to have.

Generally, Ogunode, Edinoh, and Chinedu (2023) concluded that Artificial intelligence can be deployed to solve various problems hindering the effective implementation of teaching programmes in tertiary institutions across the country. The

essence of teaching is to improve and make learners better off. For instance, it has been noted that Training improves the performance of individuals on their jobs by correcting any deficiency in human effort (Ogunode & Ayeni, 2023). 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 students' 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. The inability of the relevant agency of government not to deploy AI to aid teaching and learning can result in what scholars refer to as a failure of structure (like the government) not to perform its expected role, which leads to negative consequences (Ayeni, & Nwaorgu, 2018; Joseph, Cinjel & Ayeni, 2017). 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. Westagilelabs (2022) observed that tutoring programs or intelligent tutoring systems (ITS) based on artificial intelligence are equipped to handle personalized feedback and instructions for one-on-one teaching. However, they cannot replace teachers since they are not advanced enough to teach how a human can. They can help in scenarios where human tutors are not available for small lessons that can be taught and evaluated online. It can be an effective tool in e-learning platforms to teach languages, geography, circuits, medical diagnosis, computer programming, mathematics, physics, genetics, chemistry, etc. They are designed to factor in engagement, metrics for grading and comprehension.

Support Effective Research in CCMAS

Research is an important programme of the universities. Research is regarded as the second cardinal programme of the universities. Research is carried out by both lecturers and students. Research writing is part of students' work in the universities and lecturers need to carry out research and ensure timely publication to earn maximum points for promotion. Research is an integral part of the new Core Curriculum and Minimum Academic Standards (CCMAS) designed for Nigerian universities. AI is one of the technological tools available for research development in the universities. AI has a lot of opportunities to offer both the students, researchers and academic staff that are involved constantly in the conduct of research. This is because tertiary education is believed to focus more on research among other things (Ogunode, Ayeni, & Ogwuche, 2024). AI tools have been developed to assist students carry out research without much stress. AI has offered academic staff many tools to help them come up with research topics and design methods for the conduct (Ogunode, and Gregory, 2023). Kundariya (2023) noted that AI has simplified research processes and learning, making the education process easier for students and scholars. Kundariya (2023) listed the following AI tools that can aid research in higher institutions;

1. Google Scholar

To get better information on academic research, students and scholars can consider Google Scholar in their topmost favourite list. Through this tool, you can easily stay up-to-date on the latest research papers, scholarly literature, articles, conference papers, and theses. It also allows scholars to find relevant publications and citations easily. Most importantly, its simple user-friendly interface makes it a valuable resource and a great tool to use.

2. Scite

Scite is one of the most popular AI-powered academic research tools that improve any academic research in one go. Its own natural language processing and machine learning help users do better research on scholarly articles and analyze citations. Moreover, Scite allows researchers like you to assess the dependability in any particular context of references. It helps in evaluating the quality and impact of the research. It also provides better visualizations and metrics to understand the citation landscape of a particular paper or a topic. If you have missed out on using this tool, try it out today.

4. Trinka

It is one of the most commonly used AI tools for scholars and students, as it helps with grammar and language correction for academic and technical writing. It has 3000+ grammar checks, and tone, and style enhancements, which help scholars write better theses and projects without any errors. Trinka helps you document scientific findings and allows you to have a more technical tone and style without any difficulty. Therefore, for academic research purposes, Trinka is the most promising tool, as it helps document research papers and white papers in a better way.

4. Elicit

Lecturers can consider Elicit as one of the easiest go-to AI tools in the market to process your knowledge. With the help of this tool, you can design and conduct qualitative research. From analyzing the textual data to specifying the key themes, sentiments, and patterns, a researcher can use this tool to automate. Also, Elicit can be used to deduce summaries and visualizations for effective data interpretation. For any researcher, Elicit is a gold mine as it helps them gain deeper insights and make informed decisions.

5. Scholarcy

Scholarly is an AI tool that improves academic research by automating the process of reading, summarizing, and extracting information. It can help you recognize figures, tables, and references from the articles and help grasp the main concepts. Additionally, this tool has citation extraction features that allow the users to organize and cite the sources used in the research. It also provides the literature review process which enables you to save valuable time and effort.

6. Knewton

Using artificial intelligence and machine learning algorithms, Knewton allows users to deliver personalized educational content. You can tailor the tool for the educational content as per individual needs and learning styles. This is a one-stop and easy pickup tool in the academic learning phase. Knewton also allows users to analyze student performance data, strengths, weaknesses, and progress. By leveraging the benefits of AI, Knewton seeks to improve engagement making it one of the best online learning platforms.

7. IBM Watson

IBM Watson has various AI-powered tools for academic research. This tool has its own Watson Discovery and Watson Natural Language Understanding features. Features like data extraction, sentiment analysis, and language processing are built into this tool that smoothens the research process. In this way, this tool can help you discover insights from unstructured data.

8. Tableau

Tableau is a powerful tool that helps users to analyze data. With its drag-and-drop interface, Tableau helps users easily explore, understand, and identify data, trends, patterns, and outliers. It supports everything from basic charts and graphs to advanced maps, treemaps, and heat maps. It is a popular choice for data analysts, businesses, and researchers across industries for its user-friendly interface and robust data visualization capabilities.

9. Semantic Scholar

Semantic Scholar is an AI academic search engine that focuses only on relevant research papers. It is used in computer science, neuroscience, and the biomedical sciences. Also, its natural language processing and machine learning techniques help to analyze the content. This tool can help researchers find and navigate relevant literature, visualize citations, and track scholarly articles. Its advanced search capabilities and citation analysis are some of the most recommended features to use. With its AI-driven approach, you can efficiently create and deliver high-quality scientific literature.

10 Consensus

Consensus is one of the best AI tools if you are looking for genuine scientific findings. Using this AI tool, lecturers and students can't go wrong with any research information, as they source the information for you only from published sources. That makes the process very reliable and uncomplicated to understand the subject and document it effectively. Also, this AI tool scans each topic thoroughly (through peer-reviewed research) so that it can provide you with a genuine and well-researched article that will reduce your stress.

11. Mendeley

Mendeley is a user-friendly AI tool to organize, share, and cite your research papers properly in one place. It helps you organize your PDFs, create better bibliographies, and annotate documents easily. Moreover, this tool enables researchers to collaborate on projects and discover relevant articles based on their interests. Mendeley's powerful features and integration into academic workflows make it a practical tool. It helps you to streamline your management and enhance collaboration within the scholarly community.

12. Zotero

Zotero is an AI-powered management tool and your research assistant. It is specially designed to help researchers and scholars collect, organize, annotate, cite, and share research documents. This tool can help you customize all your collections and automatically extract metadata from sources. Zotero has 10,000 citation styles for you to format your work and match your style to a publication. Moreover, it takes help from references and bibliographies to edit text and give you genuine information in your Google Doc or Word document.

AI generally has many researchers solve their research problems. For instance, Khedkar (2023) noted 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. AI-powered 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.

Aid Effective Provision of Community Service to the Host Communities

Artificial intelligence also has roles to play in helping academic staff to improve their contributions to community development. Ogunode, Iyabode, and Olatunde-Aiyedun (2022) 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. The university's third cardinal programme is community services and the academic staff has great roles to play in the provision of community service.

Hanif (2023) outlined some AI tools that can support academic staff to improve their community service provision to their respective communities;

Glue-Up AI Copilot:

The first AI-enabled SaaS platform for communities. Integrated into Glue Up's membership management software, it enables you to manage your members and foster strong relationships with them using a single solution. The AI Copilot acts as an intelligent writing assistant, allowing users to effortlessly generate compelling event titles, subtitles, SEO descriptions, summaries, survey descriptions, and campaign text blocks. By simply providing your project details, you can use the AI Copilot to create content tailored to your needs, which can be further refined or dismissed based on your satisfaction. Lecturers can Glue Up AI Copilot can enhance your community engagement efforts. Glue Up AI Copilot excels in creating engaging event pages that capture your audience's attention. It transforms the information you provide about the event into engaging pages. These are not only optimized for search engines but also compelling, encouraging your audience to register. Glue Up serves as a comprehensive community engagement platform, offering streamlined event and membership management. The platform facilitates seamless application processes, event planning and execution, email marketing, and data-driven insights, enabling associations to foster strong connections with their communities. Moreover, Glue Up provides a custom-built community exclusively designed for your members, ensuring a secure environment where they can freely express themselves without concerns about data or security breaches. Its advanced features like speed networking, 1-on-1 chat and business card sharing foster long-lasting relationships among members.

ChatGPT

They are using it for content creation, streamlining code implementation, analyzing reports, and serving as an effective chatbot. Let's see how you can specifically utilize ChatGPT to boost engagement within your community. Lecturers can use ChatGPT to create a variety of engaging content such as blog posts, social media posts, and community updates. Simply provide the context or topic you want to write about, and let the AI generate text for you.

Voicepan

By utilizing Voicepan to convert your videos into written content, you can optimize the value and reach of your video assets. This approach enhances accessibility, improves SEO, and provides valuable insights for content optimization.

Brand4

A brand is a social listening tool that greatly amplifies community engagement by closely monitoring conversations and trends across multiple social media platforms. The tool allows you to effortlessly track and analyze all mentions of your association across the internet, gaining valuable insights into discussions, sentiments, and perceptions surrounding your organization.

Dialogfeed

DialogFeed is one such tool that employs machine learning algorithms to automatically identify and eliminate spam, inappropriate content, and abusive behaviour within your community. It analyzes user-generated content, such as comments and posts, to swiftly detect and remove any material that violates community guidelines. In addition to keyword blacklisting and media filtering, it automatically detects unsafe images and removed them from your feed. With this proactive approach, your community moderators can focus on curating high-quality content and engaging with community members. AI has helped both lecturers and students to carry out research (Ogunode, & Ukozor (2023).

Support blended or hydra learning implementation

Another role of artificial intelligence in the implementation of CCMAS is that it provides opportunities for CCMAS to be implemented in the blended form. Gupta (2023) defined blended learning as combining the benefits of traditional classroom teaching with emerging technology and online educational resources to make learning more real-time, contextual, and engaging. The concept of blended learning continues to evolve as we have left the traditional classroom and corporate offices in replace of online learning, remote work, and digital workplaces. Now, learners still have traditional, trainer-led lessons and coaching sessions, but this is blended with self-guided, interactive experiences, provides hands-on training, and enables employees in the flow of work. AI makes it possible for lecturers in Nigerian universities to both carry out teaching offline and online model. AI provides both lecturers and students to lecture and learn at their convenience. Blended learning takes endless forms and can be customized for any learning method. What you choose to pursue in your classroom will depend in part on the technology available at your school and the devices your students have access to at home. R& T (n.d) noted that blended learning benefits both students and teachers. Because all students live in a technology-driven world, blended learning can be helpful to every student. Mobile access means teachers can easily schedule assignments, score student submissions, and track student progress through an online teacher management hub, day or night. Blended learning helps teachers stay organized and

connected in more meaningful ways with their students. Blended learning is also flexible: blended learning methods can be integrated into almost any classroom.

Findings

The study revealed that AI as an infrastructure has a critical role to play in the implementation of the CCMAS in Nigerian universities. Artificial Intelligence being an infrastructure can aid effective teaching and implementation of CCMAS, research in CCMAS, support effective provision of community service to the host communities and support blended learning implementation. There is an agreement among scholars of development studies that AI is an infrastructure. The findings of this study therefore correlate with a finding of an existing study that posited that infrastructural development provides a suitable environment and support for the development of entrepreneurship skills and industrialization (Ayeni, Abdullahi & Andeshi, 2021). The above is on the understanding that tertiary institution is supposed to be the knowledge economy to provide support for entrepreneurship skills and industrialisation.

Conclusion and Recommendations

Core Curriculum and Minimum Academic Standards (CCMAS) was introduced into the universities by the National Universities Commission. The Core Curriculum and Minimum Academic Standards (CCMAS) is designed for implementation from the 2023/2024 academic session. CCMAS is designed for the universities.

The paper concluded that artificial intelligence can support effective teaching and implementation of CCMAS, research in CCMAS, aid effective provision of community service to the host communities and support blended learning implementation.

Based on these points identified, the paper hereby recommends an increment in the funding of the universities to enable university administrators to acquire more artificial intelligence facilities and infrastructures. All academic staff should be trained on the usage and maintenance. The government should provide quality internet service in all universities to aid in easy connection. Artificial Intelligence facilities should be subsidized for students and lecturers.

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