AJLLSE GLOBAL RESEARCH NETWORK

AMERICAN Journal of Language, Literacy and Learning in STEM Education
Volume 3, Issue 6, 2025 ISSN (E): 2993-2769

Innovation, Teaching and Learning in Tertiary Institutions in Nigeria

Niyi Jacob Ogunode
Department of educational management, University of Abuja, Nigeria

Abayomi Isaac Araiyegbemi
University of Nigeria, Nsukka, Nigeria

Victor Olugbenga Ayoko
Department of Educational Foundations, Faculty of Education,
National Open University of Nigeria

Abstract. *This paper explore the various innovative teaching methods available that tertiary institutions in Nigeria can adopt to enhance students engagement. The paper used secondary data. The secondary data were collected from both print and online publications. Content analysis was used to analyze the selection of literature for the study. The paper concludes that interactive lessons, virtual reality technology, AI in Education, blended learning, 3D Printing, design-thinking process, project-based learning (PBL), inquiry-based learning, jigsaw, cloud computing teaching, flipped classroom, peer teaching, peer feedback, crossover teaching, personalized learning, active learning, gamification, problem-based learning, mistake-led teaching and collaborative learning as some of the innovative teaching methods available that tertiary institutions in Nigeria adopt to enhance students engagement. Based on this findings, the paper recommend that tertiary institutions management should encourage the academic staff to adopt any of the innovative teaching strategies that suit their teaching and learning environment. Also, the management of tertiary institutions in Nigeria should constantly organize capacity building for academic staff on innovative teaching methods and how the methods can be used in the various institutions.*

Key words: *Innovative teaching, Innovative teaching method, Learning, Tertiary institutions.*

1.0 Introduction

Tertiary institutions are institutions owned by the government. Public tertiary institutions are institutions established by the law of the parliament to provide a public higher education for the people within the country. Tertiary Education is the education given after Post Basic Education in institutions such as Universities and Inter-University Centres such as the Nigeria French Language Village, Nigeria Arabic Language Village, National Institute of Nigerian Languages, institutions such as Innovation Enterprise Institutions (IEIs), and Colleges of Education, Monotechnics, Polytechnics, and other specialized institutions such as Colleges of Agriculture, Schools of Health and Technology and the National Teachers' Institutes (NTI) (FRN, 2013).

Tertiary institutions is an organized social institutions made up with stakeholders like the students, lecturers (academic staff), non-academic staff and researcher whose responsibilities are lecturing, organization of instructional resources, assessment of students, marking of students' scripts and projects supervision(Ogunode, & Adamu, 2021). Tertiary education, also called post-secondary education, is any level of education pursued beyond high school, including undergraduate and

graduate credentials. These credentials encompass certificates, diplomas or academic degrees. Tertiary education refers to specialized education in a specific field, taken on after finishing high school. Tertiary education is non-compulsory and provided in a specialist institution, usually a college, polytechnic or university. This form of education may be delivered virtually or at a distance (Top-hat, 2023).

Tertiary education offers a broad range of academic disciplines and professional programs, including bachelor's degrees, master's degrees, doctoral degrees, and professional certifications. It focuses on in-depth exploration of subject areas, critical thinking, research skills, and the development of specialized expertise (Proctoredu 2023). Tertiary education is an organized educational system that is consciously designed for manpower production, in-service training and national development. Tertiary education is an education that advances teaching, research and community services for national development. Tertiary education is an education industry that is meant for the production of manpower and national development via implementation of teaching, research and provision of community services (Ogunode, 2025). The objectives of tertiary education includes; to provide higher education opportunities via effective teaching, researching and provision community services; to develop produce students with specialized knowledge and skills for solving personal problem and national problem; to prepare student for national workforce and to contribute to societal and community development; to provide academic program of various disciplines; to provide quality instruction in field of studies and to conduct researches to generate new knowledge for national development and to solve complex problems(Ogunode, 2025).

The realization of the tertiary education objectives depends on many factors such as the adoption of innovative teaching methods. London School of Science and Technology (2023) noted that to adequately equip students for the challenges of the twenty-first century, a paradigm shift in teaching and learning is imperative. Emphasis should be placed on nurturing skills such as critical thinking, problem-solving, and collaboration, rather than mere acquisition of knowledge. It is essential to create dynamic and interactive learning experiences that empower students to apply their knowledge in practical, real-world contexts, thereby better preparing them for achieving success in their future careers. Innovative teaching practices are characterised by a student-centred classroom approach, industry-based learning, project-based learning, facilitated peer-tutoring, integrated studies, implementation of mind maps, role-playing, audience response systems, and the application of technology to foster 21st-century skills, among other strategies (London School of Science and Technology 2023). Innovative teaching uses technological means to enhance teaching (Maki, 2008; Levy,2009 ; Ibrahim, Gana. Hassan, & Uno, 2017). It is import to explore the various innovative teaching methods that can be integrated into the teaching and learning in Nigeria tertiary institutions.

2.0 Review of Literatures

Innovation

Innovation can be seen as something new that brings benefit for an organization and human society. It has to do with the introduction of something new to the market; the usage of new ideas or methods to improve the quality of a product or process. Innovation uses platforms already invented to create a successful product or process in a commercial quantity which will at the end satisfy a market need. For innovation to work, users should get a real value out of it. Innovation turn ideas into viable and useful products. According to Achune in Oluwuo, (2021) innovation may not always mean a clean break from existing practice, it could merely involve integrating some aspects of the old ways to new discoveries to improve the system. In other words, innovation is not invention.

Invention is something that has never been made before. It is something new entirely. Invention carries inventions creatively to come up with new changes. They use the new things for a commercial success. Innovators exploit new ideas and bring to the public eye. Thus innovation is different from creativity, change, invention, and reforms.

There is product or service innovation, innovations in technology, tools or instrument and innovation in knowledge or methods. Technology per se is not innovation but technology enhances innovation. Innovation is therefore, a conscious effort directed towards a positive change. It ought to reduce cost,

time and boost productivity leading to efficiency and effectiveness in an organization. With innovation value is added to the activities of an organization. Every organization needs continuous improvement to bring about faster and better ways of problem solving which will eventually increase productivity. Innovation can be categorized as evolutionary or revolutionary, sustaining or disruptive. Evolutionary leads to incremental changes while revolutionary requires a complete change. Innovation can equally be categorized as tangible (technology tools) and intangible (methods, strategies and techniques). However, intangible innovation is less emphasized than tangible innovation (Serdyukor, 2019; Oluwuo, 2021). Innovation in this paper is the act of introducing new ideas, methods and strategies that can be transformation in an institutions and in an individual. Innovation is the process that brings new ways, styles and methods into a business, products or services for improvement of the business, products or services. Innovation is the ability and capacity to brings new ideas, develop new concept, conceive new system and use them to enhance existing products, services and process to the users.

Teaching

Teaching is the process of imparting knowledge, skills, and values to others. It involves the sharing of information and ideas to facilitate learning and understanding. Teaching can take place in a variety of settings, including schools, universities, workplaces, and informal settings. Effective teaching involves the use of appropriate methods and strategies to engage learners, facilitate their learning, and help them achieve their learning goals. The role of a teacher is to create a positive and supportive learning environment, provide guidance and feedback, and help learners develop the skills and knowledge they need to succeed. Good teaching is essential for the development of individuals and society as a whole, as it helps to foster critical thinking, creativity, and innovation (Chauhan, 2015).

Teaching programme is one of the most important programme of the tertiary institutions. Teaching programme is one of the indicator used to measure the standard of tertiary institutions. Teaching is a process in whereby professional individual carry out instruction to the students with the aims of modifying their behaviors. Teaching is a systematic act that involves imparting instructions to the learners in the classroom situation either in basic school, secondary school and tertiary institutions (Ogunode & Ndayebom, 2023). *Teaching* programme is an organized process of attending providing services to the learners. *Teaching* programme is the act the giving instruction in a basic school or a secondary school or in a university. Teaching programme constitutes the teachers, students and teaching and learning resources. The teachers' qualifications, experiences and leadership skills matters in the implementation of teaching programme (Ehichoya, & Ogunode 2020). From the above definitions, teaching in in this paper is a practical or virtual process of imparting on people's needs, feels, altitudes, experiences and behaviour through an organized instruction and resources that make them learn particular things and go higher. Teaching is the process by which a teacher use both innovative teaching and traditional methods to pass knowledge to the learners in the school. Teaching is the process that engages learners in such a way to open their minds to understand new concept, process and how to apply the knowledge practically to solve the problems facing the learners and the society.

Innovative Teaching

Innovative teaching is the process of proactively introducing new teaching strategies and methods into the classroom. The purpose of introducing these new teaching strategies and methods is to improve academic outcomes and address real problems to promote equitable learning (Kaltura 2020). Innovative teaching methods extend beyond the mere incorporation of cutting-edge teaching methods or a constant pursuit of the latest educational trends—they embody distinctive approaches to the teaching and learning process. These modern methods of teaching prioritize students, emphasizing classroom engagement and interaction. Innovative strategies encourage proactive participation and collaboration among students and the teacher. While this demands increased effort from students, the approach is tailored to better meet their individual needs, fostering accelerated growth (Piogroup 2025). From the above, innovative teaching is the process of addressing problem of teaching with technological resources. Innovative teaching is the process of systematically implementing new teaching methods to addressing challenges hindering effective teaching in the classrooms. Innovative

teaching is the implementation of teaching methods that focus more on students engagement and interest in order to promote quality teaching and learning in the classrooms.

Learning

Learning is the process of acquiring new understanding, knowledge, behaviors, skills, values, attitudes, and preferences. The ability to learn is possessed by humans, non-human animals, and some machines; there is also evidence for some kind of learning in certain plants ( ). Learning is a process that is often not under our control and is wrapped up with the environments we inhabit and the relationships we make. It involves encountering signals from the senses; attending to them; looking for connections and meanings; and framing them so that we may act (Infed.org 2023). Learning is a permanent change in behavior from practice or past experiences. Therefore it can be a positive or negative change. It is essential in motivation, activation of previously gained knowledge, and evaluation. In psychology, learning is the application of daily human processes enhanced by past experiences and cognitive, environmental, and emotional factors. It is a process that applies observational learning, operant conditioning, and classical conditioning as observable types of learning. It also uses cognitive learning, which is not observable (Montellin Levitas, & Goodfriend, 2023). From the above definitions, learning in this paper is the process that deal with behaviour modification in the students. Learning is the process that involves in modification of neural function as a result of new experience. Learning deals with the act of practically acquiring skills or knowledge via the cognitive process. Learning is a practical process that involve construction knowledge and developing skills as a result of planned experiences. Learning is the process that involve in change of knowledge, beliefs, behaviour and attitude as a result of experiences in the classrooms.

3.0 Methods

This paper is a position paper. The paper employed the use of secondary data. The secondary data were collected from print and online publications. Content analysis was used for literature selections (Ogunode, & Ukozor, 2024).

4.0 Result and Discussion of Innovative Teaching and Learning Methods can adopt in Tertiary Institutions.

There are many innovative teaching methods that can be adopted in tertiary institutions in Nigeria. Some of them according to Piogroup (2025), includes;

1. Interactive Lessons

Interactive lessons involve innovation methods in teaching that actively engage students in the learning process. Instead of passively receiving information, students participate in activities, discussions, and exercises that require their input and involvement. This approach aims to foster a more dynamic and engaging classroom environment. Interactive lessons can take various forms, including group discussions, hands-on activities, simulations, case studies, and collaborative projects. Teachers may use technology tools, interactive whiteboards, or other resources to facilitate participation and feedback, encouraging students to take an active role in their own learning.

Example of Interactive Lesson

Imagine a biology lesson where students use a virtual dissecting table. Through a touch-sensitive screen, students can virtually dissect a frog. They can drag and drop tools, zoom in for a closer look, and receive real-time feedback on their technique. This interactive approach engages students actively in the learning process, making it more memorable and enjoyable.

2. Using Virtual Reality Technology

Virtual Reality (VR) technology creates a simulated environment that users can interact with, providing a unique and immersive learning experience. In education, VR can be used to transport students to virtual worlds that simulate historical events, scientific phenomena, or complex concepts. For example, students studying history might virtually explore ancient civilizations, while science students could conduct virtual experiments in an engaging learning environment. This technology enhances experiential learning, allowing students to visualize abstract concepts and engage with

subject matter in a new way of teaching. It can be particularly beneficial in fields where hands-on experience is challenging to provide in a traditional classroom setting.

Example of Teaching with VR Technology

In a history class, students can put on VR headsets and be transported to historical events. For instance, they could experience the signing of the Declaration of Independence or walk through ancient civilizations. This immersive experience allows students to better understand historical contexts, fostering a deeper connection to the subject matter.

3. Using AI in Education

Artificial Intelligence (AI) in education involves the integration of AI technologies to enhance the learning experience for students and support educators. AI can be applied in various ways, such as:

Personalized learning

Automated assessment

Adaptive learning platforms

Virtual assistants

Data analysis

Integrating AI into education aims to make learning more efficient, personalized, and adaptive to the needs of each student, ultimately enhancing the overall educational experience.

Example of Using AI in Education

An AI-powered adaptive learning platform can be employed in mathematics. The system assesses each student's strengths and weaknesses, tailoring lessons to their individual needs. If a student struggles with a specific concept, the AI provides additional exercises and resources to reinforce understanding. Conversely, if a student excels, the AI advances them to more challenging material, ensuring personalized and efficient learning experiences.

4. Blended Learning

Blended learning is an educational approach that combines traditional face-to-face instruction with online learning components. It seeks to leverage the strengths of both in-person and digital learning to create more flexible and personalized learning strategies and experience. An example of blended learning might involve students attending in-person classes for lectures and discussions while also completing online modules, interactive simulations, or collaborative projects outside of the classroom. This approach allows for a mix of teacher-led instruction, self-paced online learning, and interactive activities, catering to different learning styles and promoting student engagement. Ogunode, and Ukozor (2024) noted that blended learning can be defined as blended learning – is an organized learning model that provides an alternative to traditional means of learning and provides varieties of different means of learning that permit more access and convenience for learners. The blended learning model is a planned model that is learner-centred and provide opportunities for offline and online or traditional face-to face learning and eLearning.

Example of Blended Learning

In a blended learning scenario, a history class might have students attend traditional lectures and participate in classroom discussions. Additionally, the teacher could integrate online modules featuring interactive timelines, virtual tours of historical sites, and collaborative research projects. Students might use online discussion forums to share their insights and engage with peers beyond the physical classroom. The blend of in-person and online activities aims to enhance the overall learning experience and provide students with more flexibility in how they access and interact with course content.

5. 3D Printing

3D printing, also known as additive manufacturing, involves creating physical objects layer by layer based on a digital model. In education, 3D printing is utilized to bring concepts to life in a tangible and visual way. Teachers and students can design and print three-dimensional models that represent scientific structures, historical artifacts, mathematical concepts, or prototypes. This hands-on approach enhances understanding by allowing students to interact with physical representations of abstract ideas.

Example of 3D Printing

In a science class studying the solar system, students could use 3D printing to create accurate models of planets, moons, and other celestial bodies. By designing and printing these objects, students not only gain a deeper understanding of the spatial relationships within the solar system but also develop skills in design and technology. The tactile experience of holding and examining 3D-printed models can significantly enhance the learning process and make complex topics more accessible.

6. Use the Design-thinking Process

The design-thinking process is a problem-solving approach that emphasizes empathy, ideation, prototyping, and testing. It encourages a creative and collaborative mindset to address complex challenges. In education, the design-thinking process can be applied to foster critical thinking, innovation, and real-world problem-solving skills among students.

Example of Design-thinking Process

Let's consider a design-thinking project in a high school setting. Students might be tasked with addressing a local environmental issue, such as waste reduction. The process would start with empathizing, where students research and understand the perspectives of different stakeholders affected by the problem. Next, they would ideate, generating creative solutions to address the issue. In the prototyping phase, students might create physical or digital prototypes of their proposed solutions. Finally, they would test and refine their prototypes based on feedback and real-world observations. This design-thinking approach integrates various skills, including research, collaboration, critical thinking, and problem-solving, providing students with a holistic learning experience.

7. Project-based Learning (PBL)

Project-Based Learning is an instructional methodology that centers around students completing projects that require them to apply their knowledge and skills to real-world challenges. PBL emphasizes hands-on, collaborative learning, fostering critical thinking and problem-solving skills.

Example of Project-based Learning

In a biology class, students could engage in a PBL project focused on environmental conservation. The project might involve researching local ecosystems, identifying environmental issues, proposing solutions, and implementing a community awareness campaign. Throughout the project, students would not only deepen their understanding of biology but also develop research, communication, and teamwork skills as they work towards a tangible goal.

8. Inquiry-based Learning

Inquiry-Based Learning is an approach where students actively explore and investigate topics, posing questions and conducting research to construct their understanding. This method encourages curiosity, critical thinking, and a deeper engagement with the subject matter.

Example of Inquiry-based Learning

In a physics class, students could engage in an inquiry-based project to explore the principles of motion. They might formulate questions about the factors affecting the speed of an object and design experiments to test their hypotheses. Through hands-on exploration and data analysis, students would

develop a conceptual understanding of physics principles while honing their research and analytical skills.

9. Jigsaw

The Jigsaw technique is a cooperative learning strategy where students work collaboratively to become experts on specific topics and then share their knowledge with their peers. This promotes teamwork, communication, and a sense of shared responsibility for active learning method.

Example of Jigsaw

In a history class studying a particular time period, each student could be assigned to become an "expert" on a different aspect, such as political, economic, social, or cultural elements of that era. After researching and becoming knowledgeable in their area, students would then form new groups with members who have expertise in different aspects. In these new groups, students share their knowledge, creating a comprehensive understanding of the historical period through collaborative learning.

10. Cloud Computing Teaching

Cloud computing teaching involves leveraging cloud-based technologies to enhance the learning experience. This includes storing and accessing data, collaborating on projects, and utilizing online tools and resources for teaching and learning.

Example of Cloud Computing

In an IT class, students might use cloud computing platforms to collaborate on coding projects. They could use cloud-based development environments to write and test code, store project files on cloud storage, and collaborate in real-time using cloud-based collaboration tools. This approach allows for seamless collaboration, easy access to resources, and the flexibility to work on projects from different locations, promoting a more modern and connected learning experience.

11. Flipped Classroom

The flipped classroom model reverses the traditional teaching approach by delivering instructional content, such as lectures, through digital media outside of the classroom. Class time is then used for interactive activities, discussions, and application of knowledge.

Example of Flipped Classroom.

In a math class, instead of the teacher delivering a lecture on a new concept during class time, students might watch a pre-recorded video lecture at home. Class time would then be dedicated to working on math problems, engaging in group discussions, and receiving personalized assistance from the teacher. This allows students to learn at their own pace, receive more individualized support, and actively apply what they've learned in a collaborative setting.

12. Peer Teaching

Peer teaching involves students taking on the role of the teacher to explain concepts or assist their classmates in understanding specific topics. This approach reinforces understanding through teaching and encourages collaboration.

Example of Peer Teaching

In a language class, students could pair up to practice conversational skills. Each pair is responsible for teaching and correcting each other's pronunciation, grammar, and vocabulary usage. This not only provides additional practice for the students but also promotes a supportive learning community where students take an active role in each other's learning.

13. Peer Feedback

Peer feedback involves students providing constructive feedback to their peers on their work, presentations, or projects. This encourages a culture of collaboration, communication, and continuous improvement.

Example of Peer Feedback

In a writing class, students could exchange drafts of their essays with a peer. The peers would then provide feedback on the structure, clarity, and overall effectiveness of the writing. This process not only helps students improve their writing skills but also enhances their ability to critically evaluate and provide constructive feedback.

14. Crossover Teaching

Crossover teaching involves educators from different subjects collaborating to integrate content from multiple disciplines. This interdisciplinary approach aims to show the interconnectedness of different subjects and enhance the relevance of learning.

Example of Crossover Teaching

In a high school setting, a history teacher and a literature teacher might collaborate on a unit exploring a specific historical period. Students could read literature from that era, analyze historical documents, and discuss the cultural and social context. This crossover teaching approach helps students see how knowledge from different subjects can complement and enrich their understanding of a particular topic.

15. Personalized Learning

Personalized learning tailors the educational experience to the individual needs, preferences, and pace of each student. This can involve adapting content, pacing, and innovative methods of teaching to align with the unique learning styles and strengths of each learner.

Example of Personalized Learning

In a science class, students might engage in personalized learning through adaptive online platforms. The educator support platform assesses each student's strengths and weaknesses and provides customized learning paths, offering additional resources or challenges based on individual progress. This approach allows students to move at their own pace, reinforcing concepts they find challenging and advancing more quickly through material they grasp easily.

16. Active Learning

Active learning involves strategies that engage students in the learning process through activities, discussions, and participation, rather than passive listening. It encourages students to think critically and apply their knowledge actively.

Example of Active Learning

In a biology class, instead of a traditional lecture format, students might participate in a hands-on lab where they conduct experiments to understand cellular processes. The teacher facilitates discussions, and students actively work together to analyze results and draw conclusions. This hands-on approach not only reinforces theoretical knowledge but also enhances critical thinking and problem-solving skills.

17. Gamification

Gamification integrates game elements into non-game contexts, such as education, to enhance engagement and motivation. Points, levels, challenges, and rewards are used to make learning more enjoyable.

Example of Gamification

In a language learning app, students earn points for completing lessons, quizzes, and interactive exercises. As they accumulate points, they unlock new levels and earn virtual rewards. This gamified learning approach incentivizes consistent learning, provides a sense of achievement, and makes the language learning process more enjoyable and interactive.

18. Problem-Based Learning

Problem-Based Learning (PBL) is an instructional method where students learn through solving real-world problems. It promotes critical thinking, collaboration, and the application of knowledge to practical situations.

Example of Problem-Based Learning

In a physics class, students might be presented with a real-world problem, such as designing a sustainable energy solution for a community. Working in groups, students would need to research, analyze, and propose a solution that considers the principles of physics, environmental impact, and cost-effectiveness. This approach not only deepens their understanding of physics but also develops problem-solving skills in a practical context.

19. Mistake-Led Teaching

Mistake-led teaching emphasizes the value of mistakes as opportunities for learning and growth. Instead of penalizing mistakes, this approach encourages reflection, analysis, and understanding through the process of making and correcting errors.

Example of Mistake-Led Teaching

In a mathematics class, when students make mistakes in problem-solving, the teacher could use those mistakes as teaching moments. Instead of providing the correct answer immediately, the teacher facilitates a discussion where students analyze the errors, identify misconceptions, and collectively work towards the correct solution. This fosters a positive learning environment where mistakes are viewed as a natural part of the learning process.

20. Collaborative Learning

Collaborative learning involves students working together in groups to achieve shared learning goals. It promotes communication, teamwork, and the exchange of innovative ideas in education.

Example of Collaborative Learning

In a history class, students could be assigned a research project on a specific historical event. Each group member is responsible for investigating different aspects of the event, such as political, social, and economic impacts. The group collaborates to synthesize information and create a comprehensive presentation. This collaborative approach not only deepens individual understanding but also enhances teamwork and communication skills.

4.1 Benefits of Innovative Teaching Methods

Piogroup (2025), listed the below as benefits of innovative teaching methods:

Encourage Research:

Innovative approaches to education motivate students to delve into new things, utilizing various tools to broaden their horizons and foster a spirit of exploration.

Enhance Problem-Solving and Critical Thinking:

Creative and effective teaching methods empower students to learn at their own pace, challenging them to brainstorm novel solutions rather than relying on pre-existing answers in textbooks.

Facilitate Incremental Learning:

New teaching approaches involve breaking down information into smaller, more digestible parts, making it easier for students to grasp fundamentals while avoiding overwhelming them with a deluge of knowledge.

Cultivate Soft Skills:

Integrating complex tools into classwork enables students to acquire advanced skills. Engaging in individual or group projects teaches time management, task prioritization, effective communication, collaboration, and other vital soft skills.

Assess Understanding Beyond Grades:

Innovation method of teaching enables educators to monitor classes actively, gaining deeper insights into students' challenges and learning capacities beyond what traditional grades and exams may reveal.

Promote Self-Evaluation:

Innovation teaching methods provided by teachers empower student learning to assess their own learning. Understanding what they have mastered and identifying areas for improvement enhances their motivation to learn specific topics.

Create Vibrant Classrooms:

Innovation of teaching methods in education inject excitement into classrooms, preventing monotony. This dynamic approach encourages students to actively participate, speak up, and foster increased interaction.

5.0 Findings

The study revealed that interactive lessons, virtual reality technology, AI in Education, blended learning, 3D Printing, design-thinking process, project-based learning (PBL), inquiry-based learning, jigsaw, cloud computing teaching, flipped classroom, peer teaching, peer feedback, crossover teaching, personalized learning, active learning, gamification, problem-based learning, mistake-led teaching and collaborative learning as some of the innovative teaching methods available that tertiary institutions in Nigeria adopt to enhance students engagement.

5.1 Conclusion and Recommendations

This paper discussed the various innovative teaching methods available that tertiary institutions in Nigeria can adopt to enhance students engagement. The paper concluded that interactive lessons, virtual reality technology, AI in Education, blended learning, 3D Printing, design-thinking process, project-based learning (PBL), inquiry-based learning, jigsaw, cloud computing teaching, flipped classroom, peer teaching, peer feedback, crossover teaching, personalized learning, active learning, gamification, problem-based learning, mistake-led teaching and collaborative learning as some of the innovative teaching methods available that tertiary institutions in Nigeria adopt to enhance students engagement.

Based on this findings, the paper recommend that tertiary institutions management should encourage the academic staff to adopt any of the innovative teaching strategies that suit their teaching and learning environment. Also, the management of tertiary institutions in Nigeria should constantly organize capacity building for academic staff on innovative teaching methods and how the methods can be used in the various institutions.

References

1. Chauhan, K.K. (2015). Teaching meaning, definition, characteristics.
2. Ehichoya, E & Ogunode N,. J (2020) Teaching Programme in Nigerian Higher Institutions: Challenges of Implementation and Way Forward. *American Journal of Social and Humanitarian Research* 5(1), 82-100.
3. Federal Republic of Nigeria (FRN) (2013). *National policy on education* (6th Ed.). Abuja: NERDC press.
4. Ibrahim, A. O., Gana, C. S., Hassan, A. A. & Uno, E. U. (2017). Perception on the use of Blended learning method among distance education students in North-Central, Nigeria. *Journal of Science, Technology, Mathematics and Education*, 13(4),120-127
5. Infed.org (2023). What is learning ? https://infed.org/mobi/learning-theory-models-product-and-process/

6. Kaltura (2020). What is innovative teaching? https://corp.kaltura.com/blog/innovative-teaching-strategies/
7. Levy, M. (2009). Technologies in use for second language learning. Modern Language Journal, 93(1), 769–782.
8. London School of Science and Technology (2023). Innovative Teaching Methods in Higher Education: Empowering Mature Non-Traditional Learners. https://www.lsst.ac/blogs/innovative-teaching-methods-in-higher-education-empowering-mature-non-traditional-learners/
9. Maki, C. (2008). Information and Communication Technology for administration and management of secondary schools in Cyprus. *Journal of Online Learning and Teaching,* 4 (3).
10. Montellin, L,. Levitas, J & Goodfriend, W. (2023). What-is-learning-understanding-effective-classroom-strategies?. https://study.com/academy/lesson/what-is-learning-understanding-effective-classroom-strategies.html
11. Ogunode, N,. J. & Ukozor, C,. U (2024). Tertiary Education and Blended Learning: Benefits, Challenges and Way Forward. *Journal of Adaptive Learning Technologies,* 1 (2),5-16
12. Ogunode, N. J. & Adamu, D. G. (2021). Shortage of Academic Staff in the Higher Institution of Learning in Nigeria. *Central Asian Journal of Social Sciences and History, 2*(3), 109-123.
13. Ogunode, N, J (2025). Benefit of Digital Literacy for Academic staff and Students of Tertiary Institutions in Nigeria. *American Journal of Alternative Education,* 2,(2),43-53
14. Ogunode N,. J. & Ndayebom, A,. J (2023). Problems Faced by Teaching Programme in Nigerian Public Tertiary Institutions and way Forward. Kresna Social Science and Humanities Research Proceedings of the International Conference on Sustainable Development: Problems, Analysis And Prospects, 203-212
15. Oluwuo, S.O. (2021). Management of Innovation Education for the Attainment of Sustainable Development Goals. At the conference organized by university of port harcourt chapter of nigerian association for educational administration and planning (naeap) held at ebitimi banilgo hall abuja unipark, university of port harcourt from Monday 17th to thursday 20th may, 2021.
16. Piogroup (2025). 20 innovative-teaching-methods with examples. https://piogroup.net/blog/20-innovative-teaching-methods-with-examples-how-to-implement-in-education-process
17. Proctoredu (2023) Tertiary Education - Definition & Meaning https://proctoredu.com/glossary/tertiary-education.
18. Serdykor, P.C. (2017). Innovation in education. Journal of Research in Innovation,Teaching and Learning, 10(1), 4-33.
19. Tophat, 2024). What is education technology. https://tophat.com/glossary/e/educational-technology/