

## ENHANCING EDUCATION THROUGH INNOVATION AND CREATIVITY

**OHIA OKECHUKWU**

Department of Educational Foundation, School of Education  
Federal College of Education (Technical),  
Omoku, Rivers State.  
[Ohiaokechukwu74@gmail.com](mailto:Ohiaokechukwu74@gmail.com)  
08038553062

**CHUKWU ELIZABETH OGECHI**

Educational Management  
Imo State University, Owerri Imo State  
[liziogechi@gmail.com](mailto:liziogechi@gmail.com)  
09069500516

**ONYIGE VICTORIA OFUNNEKA**

School of Secondary Education (Arts and Social Science)  
Department of Social Studies  
Federal College of Education (Technical), Omoku  
[onyigevictoriaofunna@gmail.com](mailto:onyigevictoriaofunna@gmail.com)  
07067381844

### *Abstract*

*The developments of countries are always based on the efforts of their creative people, as the spread of an organizational culture that stimulates creativity and innovation and sponsors its owners. Therefore, this paper explores the potential of innovation and creativity to enhance education in Nigeria. It discusses the current state of the Nigerian educational system, challenges, and opportunities for improvement through innovative approaches. It therefore recommends that the university continue prioritizing creative thinking activities and innovation training for students while addressing challenges related to resistance to change and access to information. Further integration of creativity and innovation concepts into the curriculum may also be beneficial, along with continued use of technology tools and techniques to enhance these skills in education.*

**Keywords:** Educational System, Creativity, Innovation.

## INTRODUCTION

Education is a vital sector that shapes the future of individuals and societies. In Nigeria, the educational system faces numerous challenges, but innovation and creativity can help address these issues and improve learning outcomes. It is a crucial social institution that is necessary for the survival and prosperity of society. It must not only be thorough, long-lasting, and excellent, but it must also constantly adapt to keep up with the rapidly changing and unpredictable globalized world. This transformation must be systematic, reliable, and expandable. Therefore, school teachers, college professors, administrators, researchers, and policy makers are required to innovate in the theory and practice of teaching and learning as well as all other aspects of this intricate organization to guarantee that all students are well-prepared for life and work with high-quality education.

The success of countries in a constantly changing global economy is heavily reliant on the caliber and amount of knowledge, innovation, and creativity skills that their human resources possess. Effective strategies employed by modern economies are centered on creativity, innovation, and quality systems. These strategies aim to generate and adopt new knowledge to enhance the worth of products, processes, and services provided to consumers. Policymakers and industry professionals worldwide have acknowledged these factors as a means of gaining a competitive edge.

In an effort to move away from dependence on oil and towards a knowledge-based economy, developed countries have recently implemented educational and research reforms. In Nigeria, these changes include combining the ministries of education and higher education, building new universities and research facilities, and establishing centers for innovation and technology. These efforts are aimed at promoting creativity and innovation through various programs (Khan et al., 2022). However, Bakry, *et al* (2019) note that despite Nigeria's spending on education, the state of knowledge delivery in the country is still below expectations compared to other nations. They suggest that building a national culture that promotes knowledge generation and innovation is necessary to encourage people's drive towards making efficient use of newer knowledge.

Creativity is thinking up new things. Innovation is doing new things. Creativity is one of the topics that have drawn the attention of man since ancient times, due to its importance in developing what civilization has produced in the material or intellectual aspects, or inventing what was not present in it. The aim of this is to facilitate human life and make it more tender and joyful.

Innovation is widely recognized as one of the primary drivers of economic development and society improvement. Enhancing creativity and successfully managing innovation processes have emerged as key strategies for raising the caliber of social services, including education (OECD, 2010). In the past ten years, both national and international agents working to improve education have prioritized developing and implementing policies for the education sector's

innovation, defining and measuring educational innovation, and fostering innovative pedagogies (Cachia et al., 2021).

### **Concept of Education**

Education is a process of acquiring knowledge, skills, and values that enable individuals to contribute to society. It is an important asset for improving human resources (Sumanik et al., 2023). So that through innovation and creativity, education equips students in the world of work so that they must be equipped with knowledge related to technologies. Creativity, as the ability to generate original ideas, allows educators to design interesting and relevant learning methods. Meanwhile, innovation is the process of putting those ideas into practice. The combination of the two is essential to foster a dynamic learning environment and explore students' potential optimally. Creativity and innovation are two main pillars that are very important in the world of educational system. The importance of creativity and innovation in education is also evident in the development of digital technology, which provides new opportunities to deliver subject matter, expand access to education and enhance collaboration between students. The use of online platforms, learning apps and interactive technologies can stimulate interest and increase student engagement.

Creativity serves as the starting point that generates fresh ideas, while innovation is the implementation of those ideas into products or services that provide added value to education. Creativity in the context of educational system can be defined as the ability to generate new ideas that have not existed before. It includes the ability to look at problems from different angles and find unique solutions. Creative in educational system have the ability to adapt to change and recognize new opportunities (Rambe et al., 2024).

Creativity and innovation in education are interrelated and are key factors for academic success. In the face of changing challenges, educationists need to be able to think creatively and innovate in order to survive and thrive. Encouraging a supportive environment for creativity, investing in training and collaborating with others are some of the strategies that can be employed. By utilizing creativity and innovation, students can not only solve problems, but also create new value that has a positive impact on the economy as a whole. However, the implementation of creativity and innovation in education is not free from challenges. Resistance to change, budget restrictions and lack of training for educators are often obstacles to adopting new approaches. Therefore, an in-depth understanding of how to stimulate and manage creativity and innovation is needed so that they can be well integrated in the practice of educational learning environment. Today's education system has to face the challenges of a rapidly accelerating real world, there needs to be a synergy between creativity and innovation. Thus, education not only serves to transfer knowledge, but also to prepare individuals who are creative, innovative, and ready to face future challenges. Educational system based on creativity and innovation can contribute to the development of a better and sustainable society.

## Origin of Education

Education has its roots in traditional Nigerian societies, where knowledge was passed down through generations. The Nigerian education system has undergone several changes over the years. From indigenous education, all the way to the western education system that is in effect today, the history of education in Nigeria is an incredibly eye-opening topic that is sure to spark the interest of any history buff out there. This article will attempt to create a helpful timeline with some details that will help you visualise the way in which the education system in Nigeria has evolved over time, and talk a little about the ways in which these systems of education differed from each other.

**Pre-Colonial Education:** Before western education breached Nigerian borders, children were taught two different kinds of education across the country:

**Religious Education:** Northern Nigeria was prominently taught purely Islamic religious education before the British occupation in the 1840s. Each Muslim community in Nigeria had a mallam who taught children as early as 5 years old the teachings of the Qur'an and the Arabic alphabet. In larger cities, communities set up schools that also taught science and math. By 1913, almost all Islamic schools were built in the north, save for a few exceptions, and were approximately 19,073 in total, with over 143,000 students enrolled.

In the 1970s, the government seized control of all the Islamic schools, but in 1990, the schools were given the ability to operate independently, without government intervention once more.

**Indigenous Education:** The indigenous form of education was the second form of education that existed in Nigeria before the 1840s. In this system, children were taught practical skills that were necessary depending on the needs of the local community and general society within a certain area. Children as young as two to three years old belonged to an age group, and each age group was assigned specific duties around their village, such as clearing brush or sweeping lanes. As the children grew older, they were given specific tasks depending on their sex; boys were taught farming or more specialized tasks, such as drumming and wood carving, whereas girls were also taught domestic skills. The boys would also enter into apprentice-style relationships with master craftsmen, and this style of education is also still practiced in Nigeria today.

**Post-Colonial Education System:** In 1840, British missionaries introduced the first form of western education to Nigerian land, when they started the first primary school. 9 Years later, in 1954, the first Anglican Church Missionary Society (CMS) grammar school was opened by Christian Missionaries in Lagos, becoming the first secondary school to open in Nigeria.

When the northern and southern territories of Nigeria were brought together by Lord Lugard in 1914, the demand for schools had increased dramatically. Due to this demand, the growth of western education was incredibly rapid and led to the establishment of the University of Ibadan in 1948, which was the very first Nigerian university.

At the same time as the public schools and universities were being formed, many private schools were founded and built as well, creating a multitude of choices for the different social classes in Nigeria.

### State of Nigerian Educational System Today

Nigeria's educational system faces significant challenges, including a large population of out-of-school children, underfunding, poor infrastructure, a shortage of qualified teachers, and outdated curricula, leading to poor quality education and reduced access, especially for girls in northern regions. There is a critical need for a comprehensive overhaul to address these issues and improve educational standards, with ongoing efforts to shift towards a new basic education model (Haan, 2017).

6. **Out-of-School Children:** Nigeria has the world's highest number of out-of-school children, with 10.5 million children aged 5-14 not in school, a crisis disproportionately affecting girls, especially in the north.
7. **Poor Infrastructure & Funding:** Schools lack adequate funding, leading to poor facilities, including insufficient classrooms, inadequate teaching aids like computers and projectors, and a lack of essential resources.
8. **Teacher Shortages & Quality:** There is a chronic shortage of qualified teachers, particularly in secondary education, making it difficult for teachers to provide individualized attention, and an overall low quality of teaching.
9. **Outdated Curriculum:** The curriculum is often outdated and does not effectively prepare students for the demands of the modern world, failing to foster technical skills and innovation.
10. **Corruption & Mismanagement:** Corruption and mismanagement of funds divert resources away from schools, further exacerbating the existing problems and hindering progress.
11. **Low Quality & Standards:** The quality of both primary and tertiary education has been ranked poorly compared to other countries, leading to graduates struggling to find employment.
12. **Socio-Economic Barriers:** Factors like poverty, geographical location, and cultural norms in the northern parts of the country contribute to lower educational access and participation, particularly for girls.

### Importance of Education

According to Ruiz (2019), Education is crucial for Nigeria's overall development, as it fuels economic growth by creating a skilled workforce, fosters social cohesion and democratic engagement, improves public health, and reduces poverty. It is seen as the most effective force to drive national progress, promoting innovation and enabling citizens to make informed decisions,

ultimately building a more stable and prosperous nation. It is essential for personal development, economic growth, and societal progress.

The importance of Education is a significant issue in one's life. It is the key to success in the future and to have many opportunities in our life. Education has many advantages for people. For instance, it illuminates a person's mind and thinking. It helps students to plan for work or pursue a higher education while graduating from university. Having education in an area helps people think, feel, and behave in a way that contributes to their success, and improves not only their personal satisfaction but also their community. In addition, education develops human personality, thoughts, dealing with others and prepares people for life experiences. It makes people have a special status in their own society and everywhere they live in.

Everyone is entitled to have education "from cradle to grave". There are various benefits of having education such as having a good career, having a good status in society, and having self-confidence. First of all, education gives us the chance of having a good career in our life. We can have plenty of chances to work at any workplace we wish. In other words, opportunities for a better employment can be more and easy. The highly educated we are the better chance we get. Moreover, education polishes our mind, reinforces our thoughts, and strengthens our character and behaviors toward others. It equips us with information in various fields in general and our specialization in particular; especially what we need to master in our job career. Therefore, without education we may not survive properly nor have a decent profession. Furthermore, education grants us a good status in society. As educated people, we are considered as a valuable source of knowledge for our society. Having education helps us teach others morals, manners and ethics in our society. For this reason, people deal with us in a considerable and special way for being productive and resourceful.

In addition, education makes us a role model in society when our people need us to guide them to the right way or when they want to take a decision. Thus, it is an honor for us to serve our community and contribute towards its advancement. In fact, being educated is an advantage to help our people and build a good society. Besides, it is very well-known that having self-confidence is always generated from education. It is a great blessing for us to have self-confidence which leads to many advantages and success in life. For example, it helps us manage specific tasks, tackle life's challenges and maintain positive stands. Additionally, having self-confidence is typically based on proper education; paving the path for us to success. Accordingly, self-confidence makes us aware of how well we perform a task or a range of actions. In short, being educated is undoubtedly being self-confident and successful in life. All in all, education is the process of acquiring knowledge and information that lead to a successful future. As discussed above, there are a lot of positive traits of having education; such as having a good career, having a good status in society, and having self-confidence. Education makes us view obstacles as challenges to overcome with no fear; facing new things. It is the main factor behind successful people and the merit of developed countries. Therefore, education is deemed a real success behind any future success.



## Challenges of Education in Nigeria Today

Nigeria's education system faces challenges including inadequate funding leading to poor infrastructure and a shortage of quality teachers, a shortage of qualified and trained teachers, and an outdated curriculum that is disconnected from job market needs. Other significant problems include corruption within the system, inconsistent policies, the negative impact of poverty on access, and gender disparities, particularly in northern regions (Calvo, 2020). Some of the challenges facing the Nigerian educational system include:

**Inadequate funding:** Inadequate funding of education leads to numerous issues, including a lack of resources like classrooms and libraries, a decline in the quality of instruction, and a failure to meet rising enrollment demands, ultimately impacting student learning, hindering national development, and leading to increased unemployment and social problems. Factors contributing to this problem often include insufficient government budget allocations, particularly in countries like Nigeria which fall short of international benchmarks, and a lack of private sector investment due to uncertain returns.

**Poor infrastructure:** Poor education infrastructure, seen in Nigeria and globally, encompasses inadequate buildings, a lack of safe water and sanitation, insufficient learning materials, and a shortage of technology, leading to decreased student motivation, poor concentration, increased dropout rates, and hindered academic performance. This crisis stems from underfunding and poor maintenance, creating unsafe and unhealthy learning environments. Addressing these issues requires increased investment, public-private partnerships, and community involvement to improve facilities and provide quality education.

**Insufficient qualified teachers:** Nigeria is experiencing a shortage of qualified teachers in its basic education system due to factors like low salaries and poor welfare, skewed deployment to urban areas, lack of government investment in teacher development, and high attrition rates, leading to the employment of unqualified individuals. This teacher shortage results in poor student performance and learning poverty, particularly in rural areas. The government's commitment to stricter teacher regulation through the Teachers Registration Council of Nigeria (TRCN) is aimed at addressing this problem by ensuring only qualified teachers are in the system

**Corruption:** Corruption in education involves academic and financial malpractices that undermine the integrity and quality of educational systems, leading to a loss of social trust, worsened inequality, and stifled national development. Common forms include bribery and embezzlement of funds for school supplies and salaries, academic dishonesty like cheating and plagiarism, and corrupt appointments and admissions based on nepotism or favouritism, rather than merit. These actions disproportionately affect disadvantaged students and communities, hindering their access to quality education and limiting opportunities for personal and societal advancement

## Educational Innovations in Nigeria

Educational innovations in Nigeria span policy reforms, technological integration, and pedagogical shifts, including the shift to the 9-3-4 education system, the introduction of the Universal Basic Education (UBE) program, and the growing adoption of digital tools like eReaders and AI for teaching. Other innovations involve curriculum development focused on 21st-century skills, the use of mobile learning, and a renewed emphasis on practical, student-centered approaches to bridge learning gaps and foster workforce readiness. Some innovative approaches in Nigerian education include:

**Technology integration:** Technology integration is the purposeful incorporation of digital devices, software, and internet-based tools into daily routines and workflows to enhance efficiency, learning, or work processes. In education, it means using technology to deepen student understanding, support pedagogical goals, and prepare students for a tech-driven world, rather than just for basic skill practice. Effective integration involves selecting appropriate tools, making them accessible, and ensuring they align with curriculum goals to transform how learning or tasks are accomplished

**Online learning platforms:** Online learning platforms offer various options, including academic courses and professional skills, through university partnerships like Coursera and edX, skill-based marketplaces like Udemy and Skillshare, and free educational resources from providers such as the Nigerian Federal Ministry of Education's e-learning portal. Platforms like Teachable and Thinkific empower instructors to create and sell their own courses, while others specialize in specific fields, such as technology (e.g., Udacity) or creative learning (e.g., MasterClass).

**STEM education:** STEM education is an integrated approach to teaching Science, Technology, Engineering, and Mathematics that connects classroom concepts to real-world problems and applications, fostering skills like critical thinking, creativity, and collaboration through hands-on, project-based learning. The goal is to cultivate student interest in these vital fields, preparing them for future studies and careers that drive innovation and economic growth, and address global challenges.

**Entrepreneurship education:** Entrepreneurship education is a formal teaching and pedagogical process designed to provide individuals with the knowledge, skills, and attitudes needed to pursue entrepreneurial activities, including innovation and business creation, at all educational levels. Its core aim is to transform job seekers into job creators by fostering self-reliance, increasing employment, and developing dynamic, competent entrepreneurs for socio-economic growth.

## Creativities in Nigerian Educational System Today

Creativities in the Nigerian educational system today are hindered by a focus on rote learning, insufficient resources, and outdated curricula, though some initiatives are emerging to foster innovation through new technical courses and the integration of technology in learning. There's a



growing recognition of the need for a shift from reproductive to productive thinking and hands-on skills, but this transition is challenged by inadequate funding and a system largely based on colonial structures that emphasized conformity and theoretical knowledge. Creative approaches in Nigerian education include:

- **Rote Learning:** The system still heavily emphasizes memorization and theoretical knowledge over practical application and independent thinking, discouraging problem-solving and original ideas.
- **Curriculum:** There is a lack of curricular provision for creativity as a distinct subject, leading to a system that often produces "half-baked" graduates with limited practical skills.
- **Funding and Resources:** Insufficient funding results in poor infrastructure and a lack of resources, including counseling services, which limits the potential for fostering a creative environment.
- **Colonial Legacy:** The inherited colonial education model, which focused on producing a workforce for administrative tasks, continues to influence a system that does not favor the generation of new ideas.
- **Emerging Creative Initiatives:**
  - **New Technical Courses:** A new curriculum for 2025 includes courses in IT, robotics, plumbing, makeup, solar energy, beekeeping, and construction, indicating an attempt to integrate practical and vocational skills.
  - **Technology Integration:** There is a move towards using computers as tools for learning and facilitating innovation, alongside efforts to incorporate other technologies like open distance learning and blended learning.
  - **Shift in Educational Philosophy:** There is a growing realization among educators and policymakers of the crucial role of creativity and innovation, pushing for deliberate policies that support a culture of innovation.

### Factors Affecting Creativity & Innovation

The level of creativity and innovation in an educational system is influenced by a variety of interacting factors. Some of the key factors that can influence creativity and innovation are as follows educational environment, an environment that supports the exploration and testing of new ideas, both in schools and colleges, encourages students and teachers to think creatively. Adequate facilities also influence innovative learning spaces and adequate technological resources can stimulate new ideas in teaching methods.

The second factor is stakeholder support, the need for commitment from leaders in the form of support and a clear vision from the leadership of educational institutions is very important to encourage innovation. Parent and community involvement is also an influential factor through collaboration with parents and communities can generate fresh ideas and be relevant to local needs.

The third element relating to pedagogical skills and competencies, as well as ongoing training and professional development, is critical for educators to enhance their capacity to implement new and inventive instructional methodologies, encouraging greater adaptability and receptivity to change; this in turn, facilitates the incorporation of innovation into the educational process. The fourth element, which includes technology and access to information, along with the utilization of educational technology in particular, the incorporation of digital tools and online learning platforms have the potential to enrich the educational experience and stimulate creativity. Sufficient access to contemporary information and research empowers educators and learners to maintain relevance and innovation. The incorporation of technology into entrepreneurship education can result in transformative learning experiences, inspiring students to cultivate entrepreneurial mindsets and competencies. Learning approaches are also a factor in influencing creativity and innovation, with project-based learning teaching students to think critically and creatively, and to work together to solve real problems. Collaborative learning can teach students to work together in groups, stimulating new and innovative ideas.

Policies and regulations are an important part of the factors supporting creativity and innovation, government policy support in educational innovation, such as funds for research or innovation programs, can facilitate new ideas. Green leadership can make a significant contribution to the promotion of sustainable entrepreneurship in higher education institutions, fostering a culture of innovation and environmental responsibility. (Alghamdi, 2024). Furthermore, student motivation and aspirations can help students in creating and innovating through student interest and engagement, i.e. students who are motivated and engaged in the learning process tend to be more creative and innovative. Students' career aspirations can encourage them to seek out innovative and relevant learning experiences. The next factor is interdisciplinary interaction, collaboration between disciplines by combining knowledge from different fields can lead to new ideas and innovative approaches in education. Conducting interdisciplinary projects with activities involving different disciplines can encourage creative and collaborative thinking. Focusing on the role of contextual factors the influence of family, teachers and role models on the development of excellence highlights the importance of a supportive environment in fostering talent and ambition. (Rocha et al., 2024).

Challenges faced crises or social changes, emergencies or changes in society can be the impetus for educational innovation to meet new needs. Challenges faced by society are often a source of inspiration for creating innovative educational solutions.

## Prospects of Nigerian Educational System

The Nigerian educational system shows limited and uneven growth, hindered by chronic issues such as underfunding, dilapidated infrastructure, a shortage of qualified teachers, and high rates of out-of-school children. Despite official policies promoting free basic education, these are often not implemented, leading to poor quality learning environments, corruption, and social vices. However, there is a clear recognition that education is vital for national development, with prospects for improvement through better policy implementation, increased funding from both public and private sectors, investment in technical and vocational education, and a focus on quality and innovation to foster critical thinking and economic growth (Cooke, 2021). The Nigerian educational system has prospects for growth and improvement through:

- **Increased Funding and Investment:** A significant increase in funding from both the government and private investors is crucial to improve infrastructure and resources across all levels of education.
- **Emphasis on Technical and Vocational Education:** Developing and funding technical education and innovation centers can help Nigeria move away from technological dependence.
- **Reorientation and Professional Development:** A reorientation of stakeholders and continuous professional development for teachers are necessary to improve the quality of teaching and educational outcomes.
- **Effective Policy Implementation:** A concerted effort is needed to properly implement existing policies and laws, particularly regarding free basic education, to ensure access for all.
- **Promoting Critical Thinking and Innovation:** Adoption of innovative technologies is the process by which individuals and organizations accept, integrate, and use new tools or systems to gain benefits like improved efficiency, productivity, and competitiveness. This adoption is influenced by factors such as the perceived advantages, compatibility, complexity, and observability of the innovation. Success depends on strategic planning, senior management support, thorough training, and continuous monitoring to ensure the technology provides value and is effectively integrated into existing operations. Fostering an environment that encourages critical thinking and innovation can lead to better problem-solving and socio-economic development.
- **Public-Private Partnership:** Collaboration between public and private sectors is essential to inject resources and expertise into the growth and rejuvenation of the educational system.
- **Teacher training and development:** According to Cambridge International, Teacher Professional Development (TPD) “involves a continuous process of reflection, learning and action to further a teacher's knowledge and skills, leading to enhanced teaching practices that positively impact on students' learning.

## Conclusion

Creativity and innovation are essential skills that should be incorporated into educational curriculums. These skills are crucial for students to develop as they prepare for the future workforce, which is increasingly focused on innovation and problem-solving. The primary objective is enhancing education through innovation and creativity, assess challenges and opportunities in Nigeria. Innovation and creativity can enhance education in Nigeria by addressing challenges and improving learning outcomes.

## Suggestions

Some Suggestions for enhancing education in Nigeria include:

University continue to prioritize and invest in creative thinking activities and innovation training for students.

Efforts should be made to address the challenges of resistance to change and access to information in order to further enhance creativity and innovation opportunities.

Increased funding for education

Investment in teacher training and development

Encouragement of public-private partnerships

Finally, continued use of technology tools and techniques should be encouraged as they were found to enhance creativity and innovation in the educational system.

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