

Vocational Education in Nigeria: Standards, Quality and Productivity Assessment

**Emmanuel Ezekiel Caleb¹, Johnbull Oyonru Okotubu², Onyeagwu Ifeanyi Ivan³,
Uyai Emmanuel Akpanobong⁴**

¹Department of Industrial Technology Education, University of Uyo, Akwa Ibom State, Nigeria
Email: ezekielemmanuel@uniuyo.edu.ng, Orcid: <https://orcid.org/0000-0002-8233-1764>

^{2,3}Department of Vocational and Technical Education, University of Delta, Agbor, Delta State, Nigeria

⁴Department of Business Education, University of Uyo, Akwa Ibom State, Nigeria

Abstract

Vocational education in Nigeria should officially be placed under reforms. This is because there are quality and relevance issues that need to be addressed. This paper assesses the standards, quality and productivity of vocational education in Nigeria. Two specific objectives and research questions guided the study. A mixed research method is adopted for the study. This allowed the researchers to carry qualitative analysis through content analysis and expert interviews. The qualitative research involved 10 vocational education experts in Nigeria. Thematic analysis was done, which allowed the researchers to identify keywords from the interviews, code the keywords into categories and further identify themes from the codes. Survey research was also done to ascertain the challenges to reforming vocational education in Nigeria. The instrument was validated by experts and reliability of 0.88 ascertained. The thematic analysis revealed key factors essential for the improvement in vocational education in Nigeria. They were themed into qualitative and productive assessment. Findings also identified challenges to reforming vocational education in Nigeria. These include changes in governance, changes in management structures, lack of civil society involvement in education, emerging trends in international education, inadequate funding, lack of political will and institutional corruption. It was recommended that a statistical model for measuring productivity should be developed and applied for vocational education productivity assessment.

Keywords: Efficiency, Effectiveness, educational reforms, productivity, educational standards, and quality.

1. Introduction

Vocational education training (VET) is one of the formal education schooling systems offered in Nigeria. Nationally, the VET sub-sector policy-wise bridges the gap between school and work. It is also seen as an substitute pathway to formal education and in some cases, as a pathway towards tertiary education. Vocational education in Nigeria as a field of study is diverse, from technical colleges, Polytechnics and Universities, in formal and informal settings. However, its commonality according to Schmidt (2020) lies in its key objective of preparing individuals for work and the labour market in a wide and even emerging areas of vocational skills. In Nigeria, chief areas of formal skills development in VET are automobile, building technology, electrical and electronics repairs, business administration, farming, agriculture, food and healthcare vocations. Vocational education has been

widely praised for its capacity to help enhance the social and economic status of people as well as communities, while also enhancing the productivity of nations. However, in spite of the success of VET in many countries, concerns have been raised relating to the effectiveness of VET and its overall contribution to national development in Nigeria.

Aside from vocational schools, all other forms of education – early childhood, primary education, secondary and tertiary institutions have high level private participations. Individuals and private institutions own formal primary, secondary, polytechnics and universities in Nigeria. However, all formal vocational colleges in Nigeria are public owned. This has made this form of education totally reliant on government for support. There are calls for the justification of funding to all tiers of education including vocational education. This has been exasperated by the

declining quality of products from vocational training institutions across Nigeria. More worrisome for stakeholders have been the challenge of sustained funding for this educational subsector.

This paper contends that the issue of VET in Nigeria is not that whether VET as a system of education is ineffective or not fit for Nigeria, but issues related to standards, quality and productivity. While the VET system is working effectively in nations such as Germany, South Africa and China, the approach towards the practice of VET in Nigeria is at best flawed. The VET system in Nigeria needs reforms. Any process to reform VET in Nigeria should imbibe a benchmark approach. An effective reform process should begin with an evaluation of the standards, quality and productivity of VET in Nigeria.

Educational standards provide a framework for educational stakeholders in setting objectives of education, designing curricula, allocating resources and assessing students' progress, they provide the society with expectations from education. Education standards are also viewed benchmarks set by national governments for the implementation of educational policies. They reflect national objectives, but have an international outlook, where education trends, the tenets globalization and internationalization of education influence educational policies and practice. Quality, on the other hand, relates to the adequacy or appropriateness of objects or processes for the purposes for which they were intended. According to Alhussama, *et al*, (2024), there are varied definitions of quality. Marmar (2020) defined quality as the inherent property of being adequately fit for purpose, meeting specifications, fulfilling expectations by meeting requirements. British Quality Institute (BSI-1991) in Nguyen (2025) defined quality as the summation of structures of a product or service that allow it to meet stated or potential needs.

All functional education system relies heavily on finance, material and human resources. Very few other sectors use the amount of resources and public expenditure like the educational sector. The vocational educational system and in deed, the general education system in Nigeria is presently struggling financially, with attendant effects on infrastructure and services. While the national budget for education grew steadily in the past 30 years, unfortunately, this percentage curve has already begun to flatten. It does not come as a surprise to stakeholders that budgetary allocations to

vocational education will shrink more and more in the future, despite the compelling need to improve quality in VET programmes.

The widening gap between resources and requirements has placed a new demand on VET administrators to source for sustainable ways of programme financing. This is quite challenging, given that almost all vocational institutions in Nigeria are government funded. Nonetheless, they are still required to produce more educational output from available resources. Administrators are to pivot towards internal efficiency as well as external productivity to drive quality. There has to be a justification on the need for more funding to vocational education. This is not just based on what they want to do, but what they have done as a sub sector. Productivity analysis is inevitable in vocational education. It is however, surprising that educational productivity and the demand for productivity has been rather lethargic. Perhaps, people still view education as a public good and measure its productivity based on its contribution to the national labor force and personal emancipation. Nonetheless, educational stakeholders are now seeing the need to better manage and utilize the resources available for education. Vocational education in Nigeria is totally dependent on public funds and the inefficiency of the system is glaring to all. This has also opened vocational education system to public criticism with respect to its lack of productivity. There has been an increased volume of research on educational productivity and output. Mathematical and economic models are now being utilized to evaluate productivity in education. Key terms such as return on investment, now viewed as return on education, cost-benefit analysis, efficiency analysis as well as productivity metrics. The use of so many concepts and philosophical underpinnings related to educational productivity only reflects the growing inter-disciplinary nature of assessing productivity. While this has become the trend, it also raises confusion and misconceptions about educational productivity.

Statement of the Problem

Vocational schools in Nigeria remains a public service and it has come under increasing scrutiny for its persistent low quality and productivity. There has always been this debate about the poor standards of vocational education and education in general in Nigeria. While vocational administrators are expected to function efficiently by adapting policies and practices that will enhance greater productivity, the challenge

however, is that productivity and quality assessment is not rooted in systemic, qualitative and quantitative assessment. Moreover, technology and economic growth of any economy depend on the quality of education in that country. For vocational education, this implies that the failure to effectively evaluate standards, quality and productivity will become a national problem. While most studies have focused on ascertaining challenges faced by vocational education and proffering solutions, this type of research does not take into account certain practices that are done right, but could be made better, neither does it consider societal expectations and futuristic impact of changes in educational practice, technology and innovation. An assessment study on the other hand, takes a holistic approach of identifying current practices and benchmarking them, while also identifying areas of improvement as well as challenges. This study, thus, utilizes the assessment method for evaluating the standards, quality and productivity of vocational education and training in the Nigerian context.

Purpose of the Study

The purpose of the study was to determine the ways of improving vocational education in Nigeria and the challenges to reforming vocational education in Nigeria. specifically, the study determined

1: key factors to be considered for improving VET in Nigeria.

2: the challenges to reforming VET in Nigeria?

Research Questions

The following research questions were stated for the study

1: What are the key factors to be considered for improving VET in Nigeria?

2: What are the challenges to reforming VET in Nigeria?

2. Literature Review

Standards in Vocational Education

The concept of standards is generally used to benchmark performance. Educational standards, describe the expectations, educational focus, technology, training, curriculum and curriculum implementation, evaluation as well as the general outlook of education in a given time. According to Schwartz (2023), standards go beyond the curriculum and its focus is not on the day-to-day activities, but

provide the end-goal for instruction. Educational standards are frameworks that are adopted to improve the process of education. The essence of educational standards is that it allows for comparability and holds stakeholders to accountability. Educational standards are international, national and occupational.

There are identified international standards of education whose key objective is providing global educational frameworks through the collection and analysis of cross-nationally comparable education statistics. The UNESCO (2015) report outlines the functions of international standards as classifying educational programmes and qualifications by fields of study in accordance to the area of content covered. While these standards are agreed by member states of the United Nations, the adoption of its standards are not compulsory, rather, it had complimented national government efforts in managing their own national standards.

National Education Standards are standards prepared by the federal and state governments for application in all tiers and forms of education. Helda and Syahrani (2022) averred that National Education Standards references the international standards for national curriculum development and educational administration to actualize its national education objectives. According to Helda and Syahrani (2022), National Education Standards are planned and directed in a sustainable manner to expand the excellence of education considering local, national and global trends. In planning national standards, the government needs to keep an eye on globalization and the internalization of education. While countries are local, the economy and education have become globally interconnected. Therefore, an educational system that serves a national purpose alone may not meet global skills acquisition. This has implication for national and international job creation and labor market participation. This may have informed the decision of the federal government to adapt the UN curriculum in vocational education and training for Nigerian vocational schools.

Types of Educational Standards

Standards are an important part of the education system, as they provide a framework for educational intervention, goal attainment and measurement. Assessing standards requires a conceptual understanding of the composite of educational standards.

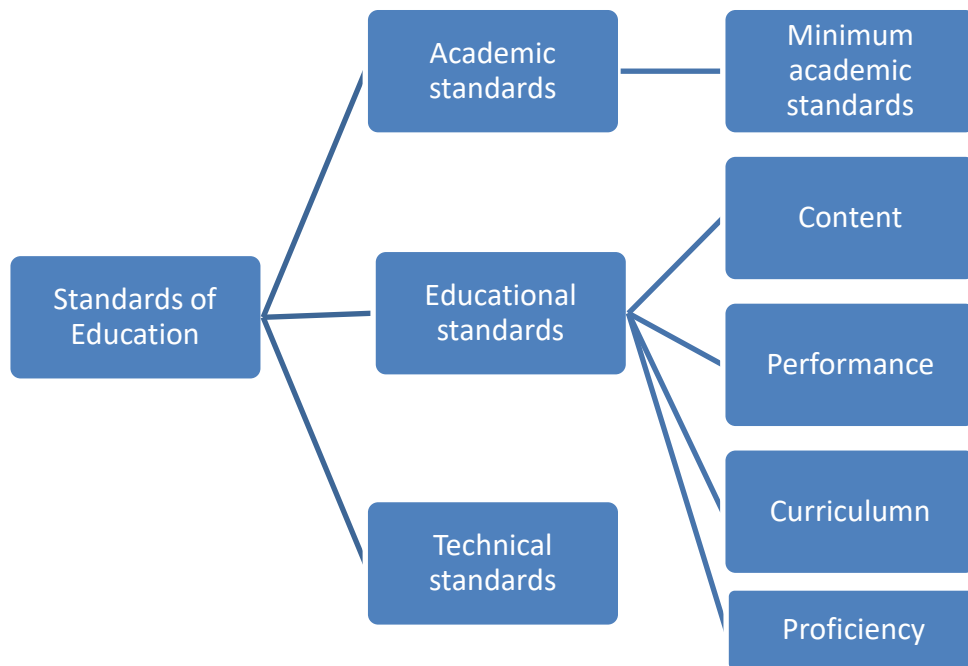


Figure 1: Conceptualizing Standards of Education

Standards of education are broadly categorized into academic standards, educational standards and technical standards. The academic standards encompass the minimum core academic standards adopted by the national government. This is often evident in the core minimum academic standards published by relevant educational curriculum agencies of the federal government, chiefly, the federal ministry of education.

There are four components of educational standards: content standards, performance standards, curriculum standards, and proficiency standards. Content standards outline the knowledge and skills that students should have in specific subject areas, while performance standards are the level of achievement expected of students in these subject areas. Curriculum standards guide how to teach these subjects effectively. Proficiency standards, on the other hand, assess authenticity of learning by determining students' skill to apply knowledge in real-world situations (Hameed, 2023). Technical Standards define how systems interoperate. The breakdown of vocational training into formal, non-formal, and informal systems, the 9-3-4 system of education are all technical standards. The creation of vocational schools, specialized higher education such as universities of technologies, agriculture and medicine all fall under technical standards.

The national educational standards have been revised to reflect best practices. Vocational education in Nigeria is offered in all tiers of education including formal, non-formal and informal systems. Formal vocational education occurs within a structured and hierarchical institutional setting, such as public technical colleges, polytechnics and some universities. Non-formal vocational education are structured, flexible and short term training that occurs outside the formal schooling system. National directorate of employment offers non-formal vocational training as well as some State governments and approved non-governmental organizations. Informal training in vocational education is mostly through apprenticeship programmes, where values, skills and experiences shape skills acquisition.

A review of standards in vocational education reveals that access to vocational training has increased, modes and models of vocational training have also increased. Information technology has expanded the provision and access to vocational training beyond Nigeria. More so, while lessons are offered online, the certification is international, enhancing the skills and opportunities of participants. Apparently, while the focus of online vocational training maybe on helping participants position themselves in the labor market, the reality is that, the objectives of vocational training are being achieved-helping its graduates enhance their employability. The expectations from society and graduates alike have been heightened due to the

success of these training programmes. The skills level and proficiency are comparable to international standards. The study argues that the standards of education are rising. The integration of technology, the new occupations created by technology and taught in vocational education programmes, the level of skills proficiency and smarter student population gives an indication of rising standards of education. Further assessment reveals growing enrollment in non-formal and informal training. However, the apprenticeship system has been on decline. More worrisome for stakeholders have been the lowering enrollment rates in formal vocational education training in Nigeria. The standards may be rising, but there may be challenges with the quality.

Assessment of Quality of Vocational Education Training

This paper makes a clear distinction between standards of education and quality of education. The Department of Education and Training Victoria (2020) defines standards as established criteria of what education should achieve as well as the expectations from students on what they should be able to perform at different levels of education. Standards often become reference point for planning the instructional process as well as assessment of progress. Standards support the development of educational interventions that help improve student learning.

Quality of education defines the extent to the standards of education meets certain requirements (Standard, 2000). Essentially, quality focusses on the satisfaction of the customer-student based on the level of implementation of standards. While the definition and application of quality has been varied and wide, a general consensus exists that quality roughly denotes appropriateness for a certain purpose and efficacy in accomplishing that objective (Alhussama, et al, 2024). Alhussama, *et al*, (2024) classified quality in education into five but interrelated categories- differential; flawlessness; suitability for a specific objective, worthwhile asset; and a catalyst for change.

Concerns about quality of education are not new and this has always been core reason behind educational reforms in Nigeria. Reforms ranging from school reorganization, curriculum review to enhanced stakeholders' participation, the focus has been on enhancing the quality of education in Nigerian schools. Quality assessed how well the level of education is

meeting its stated purpose. Thus, while standards determine the goals of education, quality determines the extent to which the goals have been met. Consequently, the process of examining the quality of education might reveal if there is need for the review of the standards of education.

Quality education is measured by the high education standards as well as positive outcomes assessed through various metrics. This according to Malhoit (2005) is often exemplified by higher and consistent graduation rates, greater opportunities for tertiary education for vocational education participants, better behaved students, higher employability, as well as soft skills for human and community relations. Achieving quality in education often begins an evaluation of the alignment of education with the goals of society and organizations in overall. Thus, a feedback mechanism must be put in place that obtains reactions and inputs from organizations and societies with respect to the state of current educational provisions and a comparative analysis of education standards and quality from neighboring countries. Nigeria has suffered from a drop in general educational attainment and an incapacity to successfully apply high-quality teaching methods (Alhussama, et al, 2024).

Quality and Standards of Education: The Nexus

Standards of education is not quality of education, the standard determines the goals, the quality determines how much of the goals have been achieved. With respect to vocational education standards, the present curriculum covers key occupational areas and the programmes are tailored to cater to the needs of different individuals- from technical colleges, polytechnics to universities, vocational education supports all levels of education. Even non-formal training has been expanded greatly across the country. Furthermore, the digital age has seen the rise of online vocational training which has even recorded more training programmes than formal training. Almost all types of vocational training are supported by online formal, non-formal and informal training. This is increasing the penetration and spread of vocational education training. Access to training has been increased, training itself has been redefined and the curriculum is comparable to other nations. This supports the claim that the standards of education are rising. Multiple channels of educational delivery, curriculum, content, performance and proficiency standards are also rising, indicating the rising standards

of education in Nigeria. Where the challenge lies, however, is in the quality of education. The poor training environment, inadequate skills acquisition and poor programme implementation are all quality related issues.

Assessment of Productivity in Vocational Education

Productivity has a narrow definition with its root in economics. Economics generally view productivity as the analysis of the relationship between outputs and inputs (Kenton, 2025). Mackie (2016) in his conceptualization of productivity averred that quantities of inputs may be needed to produce some units of output. This is particularly the case for education, where the production of graduates requires labour inputs as well as infrastructure among others. Alternatively, both inputs and outputs of education can be aggregated in terms of monetary values. More often than none, prices reflect the comparative values placed on inputs and outputs. This according to Mackie (2016) could be applied for complex production like the education processes. In education, Ladd and Hansen (1999) observed that productivity generally viewed as utilizing the inputs to education in ways that enhance the desired outcomes/outputs. Common quantities for measuring educational outputs/outcomes are students' academic achievement as well as graduate performance upon entering the labour market.

Still, there is a distinction between quality and productivity in education. While educational quality refers to the level of knowledge and skills acquired by individuals, productivity in education is the effect of education on national growth and overall output (McGivney & Winthrop, 2016; Kampelmann, et al, 2018). A scenario where quality and productivity intersect is when graduates of vocational education are over schooled but undereducated, certified but under skilled. This raises questions about quality of education, at the same time concerns about productivity. Certification is supposed to show that one is proficient to perform at a particular level. if they cannot perform, but were certified, then, the quality of education is low. Again, considering all the inputs to training and the expected returns in terms of skills, employment and national development, where graduates of vocational education fail to perform tasks and gain employment, the question of productivity of education arises. Darra (2006) stated that an essential component of any analysis of productivity must include quality. He averred that any economic value with higher output

levels is offset by lower quality, thus, dragging the economy and productivity downward.

Addressing the failure of the formal vocational training system in Nigeria to foster high levels of skills will require that VET system and the labour identify and agree on the types of skills as well as the qualifications essential for enhancing productivity. McGivney and Winthrop (2016) in their reported estimated that nearly 30 percent of variation in labour productivity is attributed to the level of ability used by employees in their jobs. This implies that, skills proficiency and optimization in the workplace are important contributors to productivity. Furthermore, skill mismatch is fast becoming a challenge for the labour market and productivity. McGowan and Andrews (2015) in their study found that both mismatch in terms of qualifications as well as i skills are major causes of lower productivity across the economy. These findings emphasize that skills are beyond schooling, that people can be overschooled, but undereducated. Skills are vital factors in assessing and ensuring productivity. The policy thrust should not be on increasing literacy rate, rather, educational policies should aim to enhance human capital and general productivity by focusing on quality and the importance of skills.

Productivity measurement is problematic in most service organizations including education (Hofmeister, et al., 2024). Assessing educational productivity requires the two-prong amount of efficiency and effectiveness. Efficiency in education is broadly viewed as the degree and quality of service that can be derived from the fixed resources of an educational system. Thus, an educational system is deemed efficient if it increases the volume and quality of service if offers without any corresponding increase in the quantity of inputs used. Economists often measure efficiency using ratios especially those that relate outputs to inputs. In education, efficiency ratios such as enrolment per section or graduate rates have been applied extensively (Darra, 2006). Garrett and Poole (2006) defined effectiveness with respect to productivity as the extent to which an educational system meets the demands of its clientele and stakeholders. The stakeholders in vocational education and training are the students, employers, as well as government. Stakeholder demands may include such outcomes as specialized skills in a specific occupation, career support, employment placement, and the graduation of

knowledgeable, competent, and successful students (Garrett & Poole, 2006).

Martinez-Daza, et al, (2024) developed a model for measuring academic productivity. Data mining technique was applied in reviewing online databases. Key indicators for the creation of a model based on six constructs: bibliographic production, innovation and development, institutional capabilities, research training, social appropriation of knowledge, and human resource training were found in the results.

Reforms in Vocational Education

Vocational education in Nigeria should officially be placed under reforms. From lowering students' enrollment, poor and inadequate skills of graduates, attrition among technical teachers and widespread disregard for the programme, it is essential for stakeholders to reappraise vocational education in Nigeria. According to Akala (2021), reforms in vocational education training often involve significant curriculum review, shifting the focus towards making learning authentic, relevant as well as seen to be responsive to societal needs. In Africa and indeed Nigeria, the experimentation with the Competency-Based Curriculum (CBC) in vocational schools according to Abedi (2024), pivoted towards developing skills, capacities, and values alongside traditional academic knowledge. This also had implications for technical teacher training, with the emphasis on preparing trainers with contemporary pedagogical skills, knowledge and attitudes as well as the ability to fit in technology into teaching practices (Abedi, 2024). Recent reforms have seen a greater integration of information technology into training, both for professional development and instructional development.

The importance of reforms in vocational education is profound and multi-layered. The reforms are beyond tweaks to administrative processes, but as Zajda (2021) pointed out, they are strategic adaptations to the evolving landscape of the labour market and society at large. Vocational education with all of its potentials, faces unique challenges in Nigeria and indeed, Africa. The advocated reforms become essential instruments for addressing the historical heritage of vocational education, fostering inclusivity while also fulfilling its core mandate of developing relevant skills for its participants. Reforms often bridge the gaps in access to education, quality and relevance, distinguishing VET as

an fundamental part of personal empowerment and national development. This is furthered by the objectives of the national policy on education (FGN, 2013) which views vocational education as intertwined with socio-economic development and the promotion of informed and involved citizens. However, an understanding of the challenges faced by educational reformists, gives an idea of the challenge of reforming education in Nigeria. Adeniyi et al. (2024) evaluated how educational innovations affected students' performance: A review in African nations. The mixed research design was used in the study. Both North African and Sub-Saharan African countries were included in the study. The focus of the study was on educational reforms, namely on programs like curricular changes, teacher preparation, and technology integration. The study's findings showed that North African and sub-Saharan nations had different historical, cultural, and socioeconomic trajectories.

3. Methodology

This study adopted the mixed research method. The qualitative research design using interviews was employed for the study. Transcription was done with the data collected from the interviews. Extensive coding of the interview and observation transcripts were conducted by researchers. Thematic analysis was carried out, where recurring patterns and terms were designated as keywords. These keywords were obtained directly from the interviews, representing participants' experiences and perceptions. Keywords were then coded into categories, from where themes were further conceptualized from the study. The quantitative analysis utilized the survey research design.

The initial step in the procedure was the selection of study participants. Purposive sampling was used to select vocational education experts with experience on accreditation exercises by the national university commission as well as proven skills in educational standards and quality assessment. The sample for this research study was 10 vocational education experts drawn from the professorial cadre in south south and south east of Nigeria. Participants' interviews were then conducted. After the completion of interviews, data were organized and preliminarily analyzed. Content analysis was carried out by studying emerging patterns in educational standards, quality and productivity assessment. The interview and

questionnaire were validated by three experts. The reliability of the survey instrument was determined through inter-rater reliability. Thereafter, cronbach alpha was used to determine the reliability index which gave a value of 0.88. Thematic analysis was used to answer research question one, while Mean and

standard deviation were used to answer research question two.

Presentation of Findings

Research question 1: What are the key factors to be considered for improving vocational education in Nigeria?

Table 1. Thematic Analysis of key factors for improving vocational education in Nigeria

Keywords	Codes		
Curricular to achieve mission	Mission focus	Quality Assessment	
Fulfill statutory mandate			
Adoption of strategic plan			
Teacher credentials	Teacher quality		
Performance review			
Community and public service			
Compensation			
Class size	Instructional quality		
Time taught by vocational teachers			
Programmes mounted			
Workshop/practical sessions			
Resources shared with other institutions	Institutional cooperation and collaboration		
Industry-training partnership			
International recognitions			
Infrastructure provision	School Infrastructure		
Infrastructure maintenance			
Effective administrative structures			
Administrative costs comparison	Administrative efficiency		Productivity Assessment
Best management practices			
Elimination of waste/duplication			
Overhead cost			
WAEC/NECO/GCE	Entrance requirements		
FSLC			
NABTEB			
Graduation rate	Graduates achievement		
Employment rate			
Professional examination			
Graduates' continuing education			
Management of school's resources	Resource optimization		
Provision of resources in line with the school's educational goals			

Keywords	Codes	
Expense Data	Financial accountability	
Fees/Tuition Data		
Staffing (number full time)		
Expenditure (by function)		
Addressing teacher concerns	Human resource management	
Teacher continuing education		
Community engagement	Civic responsibilities	
Graduation Rates	Student outcomes	
Retention Rate		
Core knowledge and skills		
Job placement (percentage)		

Keywords from the analysis were Curricular to achieve mission, Adoption of strategic plan, Teacher credentials, Workshop practical sessions, Industry-training partnership, Administrative costs comparison, Graduation rates among others. The keywords were then coded into administrative efficiency, entrance requirements, financial accountability, graduates achievement, instructional quality, institutional cooperation and collaboration, mission focus, teacher

quality, students' learning, student outcomes, school infrastructure, resource optimization, and human resource management. The thematic analysis further identified two broad themes- qualitative assessment and productivity assessment. Thus, key factors essential for the improvement in vocational education in Nigeria are themed into qualitative and productive assessment. This implies that quality and productivity assessment ought to be carried out periodically.

Research question 2: What are the challenges to reforming vocational education in Nigeria?

Table 1. Summary of Mean analysis of experts on challenges to reforming vocational education in Nigeria

S/N	Challenges to reforming vocational education in Nigeria	Mean	Std Dev	Remarks
1	Changes in governance (Lack of Continuity in Commitment to Policy Implementation)	3.59	0.59	A*
2	Changes in management structures	3.44	0.81	A
3	lack of civil society involvement in education	3.47	0.88	A
4	Emerging trends in International education	3.89	0.90	SA**
5	Inadequate Funding	3.65	0.86	A
6	Commitment of government (Lack of Political Will)	3.70	0.78	SA
7	Institutional Corruption	3.72	0.64	SA

*A-Agree; **SA-Strongly Agree

Table 1 presents the summary of mean analysis of experts on challenges to reforms in vocational education. The result shows that the mean range is 3.44 to 3.89. The standard deviation ranges from 0.59 to 0.9.

This shows that the responses are not dispersed from each other. The result shows that all the items have

mean responses above 3.0, indicating that the experts agreed that the identified items were factors militating against vocational education reforms. The factors challenging vocational education reforms are changes in governance, changes in management structures, lack of civil society involvement in education, emerging

trends in international education, inadequate funding, lack of political will and institutional corruption.

4. Discussion of Findings

Findings from the analysis identify categories of improvement. This was later conceptualized as quality and productivity assessments. Educational productivity evaluation is critical to accountability because it addresses the question of whether there is a mismatch between what providers accomplish and what the system requires. This finding is in tandem with Martinez-Daza, *et al*, (2024) who developed a model for measuring academic productivity. The six constructs identified by the study are similar to that identified in this study. These include bibliographic production, institutional capabilities, innovation and development, research training, social appropriation of knowledge as human resource development.

The study also identified challenges to reforming vocational education in Nigeria. The challenges include; changes in governance, changes in management structures, lack of civil society involvement in education, emerging trends in international education, inadequate funding, lack of political will and institutional corruption. These findings are similar to Adeniyi *et al* (2024), who examined educational transformations and their influence on student performance, reviewing African Countries. They identified challenges to educational reforms to include socio-economic factors, contextual factors and funding issues.

5. Conclusion

The study assesses the standards, quality and productivity of vocational education in Nigeria. The study concludes that while standards in vocational education and in deed education generally are rising, quality and productivity are falling. The study concludes that essential factors for reviewing vocational education in Nigeria are assessing the eminence and productivity programmes and training. Key factors influencing quality of vocational education are mission focus, teacher quality, instructional quality, administrative efficiency and students' learning. The challenges to vocational education reforms are different from the challenges plaguing the vocational education training system.

6. Recommendations

Based on the findings of the study, the following recommendations are made

1. A statistical model for measuring productivity should be developed and applied for vocational education productivity assessment by the National Educational Sector.
2. Government should routinely evaluate vocational education and training to provide scientific feedback that can enhance the quality of educational process.
3. Education policy-makers in Nigeria should strive to ensure that national assessments are aligned with other major instructional mechanisms in the education system, such as curricula, teacher education, school capacity building.
4. Comparison is a fundamental tool for assessment, it is important that the education in Nigeria government compare educational processes with those of neighboring countries and benchmark best practices.

References

- [1] Abedi, E. A. (2024). Tensions between technology integration practices of teachers and ICT in education policy expectations: implications for change in teacher knowledge, beliefs and teaching practices. *Journal of Computers in Education*, 11, 1215–1234. <https://doi.org/10.1007/s40692-023-00296-6>
- [2] Adeniyi, I., Al Hamad, N., Adewusi, E., Unachukwu, C., Osawaru, B., Onyebuchi, C., Omolawal, S., Aliu, A. & David, I. (2024). Educational reforms and their impact on student performance: A review in African Countries. *World Journal of Advanced Research and Reviews*, 21(2), 750–762.
- [3] Akala, B. M. M. (2021). Revisiting education reform in Kenya: A case of Competency Based Curriculum (CBC). *Social Sciences & Humanities Open*, 3(1), p. 100107.
- [4] Alhussama, M., Samantab, S., Rayc, A., Kara, B. & Dibatd, A. (2024). Evaluating education quality as a research instrument: A systematic review. *Multidisciplinary Reviews*. 7: e2024115. <https://doi.org/10.31893/multirev.2024115>.
- [5] Darra, M. (2006). Productivity Improvements in Education: A Replay. *European Research Studies*, IX (3-4), 101-124.

- [6] Garrett, T. & Poole, W. (2006). Stop Paying More for Less: Ways to Boost Productivity in Higher Education," Regional Economist (Federal Reserve Bank of St. Louis, January). <https://www.stlouisfed.org/publications/regional-economist/january-2006/stop-payingmore-for-less-ways-to-boost-productivity-in-higher-education>
- [7] Hameed, U. (2023). educational standards. <https://www.10.13140/RG.2.2.30664.90882>.
- [8] Helda, C. & Syahrani, S. (2022). National Standards of Education in Contents Standards and Education Process Standards in Indonesia. *Indonesian Journal of Education (INJOE)*, 2(3), 257-269.
- [9] Hofmeister, J., Kanbach, D.K. & Hogreve, J. (2024). Measuring and managing service productivity: a meta-analysis. *Review of Management Science*, 18, 739–775 <https://doi.org/10.1007/s11846-023-00620-5>
- [10] Johnes, J., Portela, & Thanassoulis, E. (2017). *Efficiency in education*, *Journal of the Operational Research Society*, 68:4, 331-338/ <https://doi.org/10.1057/s41274-016-0109-z>
- [11] Kampelmann, S., Rycx, F. & Saks, Y. (2018). Does education raise productivity and wages equally? The moderating role of age and gender. *IZA Journal of Labor Economics*, 7(1), 18-26. <https://doi.org/10.1186/s40172-017-0061-4>.
- [12] Kenton, W. (2025). What Is Productivity and How to Measure It. <https://www.investopedia.com/terms/p/productivity.asp#:~:text=Productivity%20compares%20the%20level%20of,completed%20over%20a%20specific%20period>.
- [13] Ladd, H.F. & Hansen, J.S. (1999). Improving the Productivity of Schools. In H.F. Ladd and J. S. Hansen, (Eds). *Making Money Matter: Financing America's Schools*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/9606>. National Academies of Sciences, Engineering, and Medicine. Washington, DC: The National Academies Press. pp.134-162. <https://doi.org/10.17226/9606>
- [14] Mackie, C. (2016). Conceptualizing and Measuring Productivity in U.S. Higher Education. Teachers Insurance and Annuity Association of America (TIAA), NY.
- [15] Malhoit, G. C. (2005). Providing Rural Students with a High Quality Education: The Rural Perspective on the Concept of Educational Adequacy A Publication of the Rural School and Community Trust. www.ruraledu.org.
- [16] Marmar, M. (2020). *Total Quality Management in Education*. SAGE Publications Pvt Ltd.
- [17] Martínez-Daza, M. A., Valencia Quecano, L. I., & Guzmán Rincón, A. (2024). Conceptual model for the assessment of academic productivity in research seedbeds from a systematic review. *European Journal of Educational Research*, 13(2), 813-833. <https://doi.org/10.12973/eu-jer.13.2.813>
- [18] McGivney, E. & Winthrop, R. (2016). Education's Impact on Economic Growth and Productivity. [educations-impact-on-productivity.pdf](https://www.oecd.org/education/educations-impact-on-productivity.pdf).
- [19] McGowan, M. & Dan Andrews, C. (2015). Labour Market Mismatch and Labour Productivity Evidence from PIAAC Data." OECD Economics Department Working Paper No. 1209. Paris: OECD Publishing.
- [20] McLaughlin, C., & Ruby, A. (2021). Implementing Educational Reform: Some Reality Checkpoints. In C. McLaughlin & A. Ruby (Eds.), *Implementing Educational Reform: Cases and Challenges* (pp. 193–212). chapter, Cambridge: Cambridge University Press.
- [21] Ministry of Education (2023). National Quality Standards in Education (3-16 years). ministry of education, Government of Malta.
- [22] Nguyen, D.H. (2025). Overview of education quality and education quality management. *IRG journal of arts, humanities and social sciences*, 3(1), 358-368.
- [23] Pro, A., Abd, F., Researcher, U.-M., Mahmoud, N., Abada, M., & Al-Tamimi, A. J. (2017). The Effect of applying Quality Standards in Assessing the Performance of Iraq Universities (An Applied Study). In *Journal University of Kerbala*, 15(4).
- [24] Schmidt, T. (2020). Reformed and reduced: Vocational education and structural oppression. *Power and Education*, 12(3), 276–291.
- [25] Schwartz, S. (2023). What's the Purpose of Standards in Education? An Explainer. <https://www.edweek.org/teaching-learning/swWhats-the-purpose-of-standards-in-education-an-explainer/2023/07>.
- [26] Standard, B. (2000). Quality management systems: fundamentals and vocabulary. B S I Standards.
- [27] The Department of Education and Training Victoria (2020). What is standards of education.

<https://www.education.vic.gov.au/Documents/school/teachers/teachingresources/social/physed/standardsedu.pdf>

- [28] UNESCO (2015). *International Standard Classification Of Education. Fields of education and training 2013 (ISCED-F 2013) – Detailed field descriptions*. UNESCO Institute for Statistics. Montreal, Quebec. Canada.
- [29] United Nations Children’s Fund, UNICEF (2000). *Defining Quality in Education*. A publication of UNICEF Programme Division Education Document No. UNICEF/PD/ED/00/02.
- [30] Zajda, J. (2021). *Globalisation and education reforms: Creating effective learning environments* (Vol. 25). Springer Nature NY.