EVOLUTION OF ACCREDITATION SCHEME IN THE NIGERIAN TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING INSTITUTIONS AND STRATEGIES FOR DEVELOPING THE SCHEME

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ABSTRACT: *Quality technical and vocational education and training (TVET) is undoubtedly the fulcrum for national technological growth and development. It empowers individuals to be skillful, creative, employable and become responsible citizens. Accreditation has been regarded as an effective quality assurance instrument to assess quality of education including TVET globally. Accreditation ensures that institutions or programmes offered to the public have met the minimum prescribed standards and complied with the agreed minimum requirements. This paper examines the evolution of accreditation schemes especially among TVET institutions in Nigeria. The new development introduced into accreditation by NBTE over time and strategies that should be deployed to make accreditation a significant contributor to national development are examined in this study.*

KEYWORDS: Accreditation, Qualifications, Standards, Curricula, Polytechnics.

INTRODUCTION

The National Board for Technical Education (NBTE) was established principally to coordinate all aspects of technical education falling outside the Universities in Nigeria. One of the key achievements of NBTE from inception is the establishment of an accreditation scheme for all TVET institutions in Nigeria. The scheme has been successfully implemented and thus fully integrated into the Nigerian educational system to address the need for quality education. The essence of accreditation therefore guarantees to the nation that good quality technical manpower from institutions whose programmes have been accredited would be produced than those without accreditation (Obadara & Alaka, 2013; Ogunode & Samuel, 2022).

For instance, past diplomates of accredited programmes should be able to communicate better than apprentices, and live as citizens who know their rights and privileges. The employers would prefer to select from a pool of competent technical manpower from accredited institutions for employment purposes than considering unaccredited institutions. For educational institutions, accreditation makes articulation of courses and certificates easier to evaluate. The prospects for individuals from accredited programmes are bright, as they can further their studies without any hindrance. Some of the professional bodies have now made it easier for HND holders to register as professionals by admitting them as graduate members and after two to three years of work experience they can take the final professional examinations. When they are successful, they apply to be full or corporate members of such professional bodies.

A number of studies in the literature discussed the evolution of accreditation across various countries to address the need for quality tertiary education. A study by Hämäläinen, Mustonen and Holm (2004) found that different systems of accreditation have been developed in Europe since the late 1980s. Kehm (2006) analysed the rationale behind the introduction of accreditation into the German education system in 1998. Accreditation was seen as an instrument of quality assurance and an important element of modernising higher education in Germany to meet international and European standards. In Germany, institutions are free to choose an accreditation agency which allows for competition and bargaining or negotiation between the institution and the accreditation agency on the cost per programme.

Furthermore, Coria, Deluca and Martínez (2010) reported that the National Commission for University Evaluation and Accreditation (CONEAU) of Argentina was established in 1995 but began accreditation of programmes in 2000. The accreditation process in public and private institutions involved stages of self-evaluation by the institution, peer review of the programmes to be accredited and decision by CONEAU based on the recommendation of the accreditation team members. The study found that accreditation processes helped to implement changes in curricula which were difficult to implement when there was no accreditation. Utuka (2011) mentioned that the National Accreditation Board (NAB) was established in 1993 by the Ghanaian Government to assure and monitor the quality of the tertiary education sector in the country. NAB performed accreditation of both public and private tertiary institutions as well as programmes they offer similar to the practice of accreditation in the United States of America. The study proposed that NAB should encourage Ghanaian institutions to perform self-assessment of their operations, and identify appropriate means for continuous enhancement.

Sin, Tavares and Amaral (2017) found that quality assurance schemes were already implemented in Portugal between 1980s and 1990s, before the Bologna Process launched in 1999 by not less than 29 European countries. The outcome of the Declaration was the development of European standards and guidelines (ESU) which is a common framework for the operations of European quality assurance agencies. The Portuguese Agency for Assessment and Accreditation of Higher Education was later established to perform programme accreditation across Portuguese higher education institutions in 2009. The qualitative analysis based on academic, administrative and relationship qualities revealed that the main problems are with programmes offered by most private institutions which are related to academic quality. Hegji (2017) submitted that accreditation started in the USA in the last decade of the 19th century as part of the evolution of the American higher education system. The first voluntary association of post-secondary institutions was formed in 1895 to develop procedures and guidelines for peer review as a condition to be a member. However, the USA does not have a centralised agency that has national control over tertiary institutions. The Department of Education and Council for Higher Education Accreditation (CHEA) were established to scrutinise the quality of higher education accrediting agencies. These agencies are broadly classified as regional, national and specialised accrediting agencies. The study observed that the current accreditation framework in the US should be reviewed to deal with transparency of the accreditation process and potential conflict of interest issues during the peer review accreditation process.

Pham and Nguyen (2019) established that Vietnam Education Testing and Accreditation (GDETA) was created in 2003 to construct and develop a national accreditation system in Vietnam while all tertiary institutions were mandated by law to establish their own quality assurance departments. The study suggested that Vietnam could learn from other countries in the Asian region to achieve more through accreditation activities. Kumar, Shukla and Passey (2020) submitted that the first quality assurance body for higher education in India was established in 1929 specifically for agricultural programmes. Later, in 1994, National Assessment and Accreditation Council (NAAC) was established for institutional level assessment and accreditation while National Board for Accreditation was founded to perform programmes assessment and accreditation in India. The study showed that accreditation affects the ranking of institutions, peer perception, academic reputation and internationalisation of institutions. In addition, it was found that direct accreditation has a positive impact on research, community engagement, teaching and learning and employability.

From the foregoing, evolution of accreditation has been widely studied in the literature but to the best of our knowledge, there is no study on evolution of accreditation in Nigeria especially within the TVET sector. This study thus attempts to provide an historical development of accreditation within the Nigerian Polytechnic system before it was extended to other tertiary institutions in Nigeria. Accreditation has been an exercise that gives opportunities to the academic and non-academic staff to discuss their challenges with the Management of their institutions who tend to listen during the period. The implication of accreditation exercise is that it drives the visitors or proprietors of TVET institutions in Nigeria to provide more funds to give a face lift to their campuses, build new laboratory and workshop buildings or orders for state-of-the-art equipment and machinery, and employ additional staff to meet up with the standards. Facilities that were poorly equipped would receive attention, deteriorating structures would be renovated, academic activities such as

practical works, final year projects and examinations moderation would be properly documented. The accreditation visitations have changed Nigerian VET institutions for good and it is strongly hoped that this trend will continue and not be compromised based on flimsy reasons (Oduma, Okafo, Mpieri & Muhammad, 1997).

The rest of this paper is organised as follows. Section two presents the evolution of the accreditation scheme in Nigeria. The recent development especially after the establishment of NBTE accreditation scheme is discussed in section three. The possible strategies to develop accreditation schemes as a catalyst to national development are enumerated in section four. The concluding remarks are presented in section five.

EVOLUTION ON THE ACCREDITATION SCHEME IN NIGERIA

Historical Background

During the third national development plan (1975 - 1980), it was noted that all existing Polytechnics in the country have an enrolment capacity of less than fifteen thousand which is not enough to achieve the objectives of the plan. The Federal Government decided to provide matching orders to States to establish new institutions and expand their existing institutions. The Federal Government in 1977 established six Polytechnics in addition to Yaba College of Technology, Yaba to be able to admit and train young school leavers as technicians. This was in tandem with the Federal Government agenda to establish more institutions to provide technical manpower for national development in the fields of technology, commerce and agriculture (Yabani, 1987). Also in 1977, the Federal Government established NBTE based on Act 9 of January 1977 and made huge investments in technical education. The NBTE enabling Act mandates it as the agency of the Federal Government to lay down the standards of skills to be attained in technical institutions and also after laying down the standards to ensure that these standards are maintained. The NBTE has chosen to maintain the standards of skills through the accreditation scheme.

Between 1977 and 1979, NBTE considered various methods of evaluating academic programmes at post-secondary level, it exhaustively identified the category of personnel to be trained and existing methods of evaluating such programmes. NBTE felt that the technologists must be able at the end of their training to perform the professional skills in their fields. It was agreed that an effective way of assuring the quality of programmes was to institute a national accreditation scheme. This resolution was based on the decision of the Federal Government to adopt a one-tier Nigerian National Diploma (NND) programme. The programme was to last for four years and it was to include a one-year supervised industrial experience as a component of the curriculum to produce well trained practically orientated technologists for the economy. The matters of accreditation and the award of the Nigerian National Diploma (NND) were taken simultaneously. With the epithet "National" preceding the diploma, it was not clear who should award the diploma. The Polytechnics were of the view that it was not the business of NBTE to award diplomas. They claimed that it was the responsibility of the Academic Boards of each institution, but the Polytechnic Acts did not state that they should award Nigerian National Diploma. To clarify issues, the matter was referred to the Federal Ministry of Justice by NBTE in April 1979.

NBTE accepted the advice of the Federal Ministry of Justice that it could not on its own award the NND certificates. It therefore decided as follows (Yabani, 1987):

i.   that the Polytechnics should award the NND;

ii.   that since the NND is a national award, the certificate should indicate that it was awarded on the authority of NBTE. Details of how this would be done were to be worked out by NBTE in consultation with the Committee of Heads of Polytechnics and Colleges of Technology (COHEADS);

iii.   that the roles of NBTE in the award of the NND should be based on the principle of accreditation of institutions offering the programmes, accreditation of each NND programme, approval of programme, providing guidelines for institutions on system of examinations, staffing and training facilities among others;

iv.   that only institutions offering programmes that are accredited by NBTE would be authorised to award NND.

When the Federal Government scrapped the NND in March, 1980 and introduced the National Diploma (ND) and Higher National Diploma (HND) qualifications to replace it, the early decisions on NND stated above were upheld. Having accepted that the roles of NBTE in the award of the NND (later ND and HND) should be based on the principle of accreditation of Institutions, and programmes, NBTE then produced the "standard of the accreditation of diploma programme offered by polytechnics and similar post-secondary technical institutions booklet" in May 1980. At this time, the new two-tier system of ND and HND had just been introduced following the Presidential budget speech in March 1980.

After the first set of visitations in 1982, a review of the method of reporting the findings of the panel and composition of the visitation panels for each programme were improved upon. Having accepted accreditation in principle, the standard for accreditation produced by the NBTE to guide preparation of institutions for accreditation visits was approved. At inception, there were some constraints, these constraints were unavoidable because of limited resources available to NBTE.

Prior to the introduction of the NND programmes in 1977, each Polytechnic offered institutional diploma qualifications such as Ordinary Diploma (OD) and Higher Diploma (HD) programmes. There was no national curriculum in use throughout the country and there was no National Diploma or Higher National Diploma qualifications. As at 1977 when the directives to change from two-tier to one-tier NND programmes were announced, NBTE was only three months old, having been inaugurated in May 1977.

The first national curricula for all the NND Programmes were yet to be produced by June, 1978. One year supervised industrial experience was yet to commence, so the award of the NND in 1978 simply meant that the curricula for the institutional diploma programmes such as OD and HD which the Federal Government wanted to improve upon by introducing NND was used to graduate the students in June, 1978. NBTE however granted provisional accreditation to all OD and HD programmes offered by Polytechnics which were converted to NND, hoping that by 1980, the curricula would have been ready to be used for accreditation (NBTE, 1982; Yabani, 1987).

In March 1980, the Federal Government however changed the structure from one tier (NND) back to a two-tier system (that is, National Diploma (ND) and Higher National Diploma (HND)). Since the award was still to be "National", NBTE therefore conceded a further two years for institutions to adjust to the new scheme. The first ever accreditation visit was carried out at the Federal Polytechnic, Ado-Ekiti (formerly at Akure) for eleven National Diploma programmes and eleven Higher National Diploma programmes in May, 1982. The proposal to visit all institutions from 1982 was met with mixed feelings by existing Polytechnics. Provisional accreditation was later given to the institutions for a period of two years (1978 to 1980) for them to get ready for visitations. At the request of the institutions through COHEADS, the provisional accreditation period was extended for another two years (1980 to 1982) and again for another two years (1982 to 1984) (NBTE, 1982; Yabani, 1987).

In spite of the initial resistances and concerns especially about the cost and modality for carrying out the visitations by NBTE, Polytechnics and other post-secondary institutions were later convinced that there was a need to have accreditation of programmes like it was done in many advanced countries to maintain quality. After the visit to Akure in 1982, NBTE carried out accreditation in six monotechnics across the country in 1983. These were: Imo State College of Agriculture, Umuagwo-Ohaji; Federal School of Agriculture, Umudike; Federal School of Forestry, Jos; Federal School of Oceanography & Marine Fisheries, Lagos; Federal School of Animal Health and Husbandry, Vom; and Federal School of Surveying, Oyo. A number of applications later trickled in during the 1983/1984 academic session, among them were those of Yaba College of Technology, Federal Polytechnic, Idah and Kaduna Polytechnic, Kaduna (NBTE, 1982).

Initial Tactics to implement Accreditation Scheme in Nigeria

Since the beginning of the accreditation exercise, NBTE has been firm, fair and friendly. But some Polytechnics did not appreciate these attributes exhibited by NBTE. It has remained firm on a number of issues connected with the accreditation exercise, because it realised that for the nation to achieve the desired goal and objectives of technical and vocational education as stated in the first and subsequent editions of the National Policy on Education, there cannot be any mid-course. The standard of skills to be attained must be seen to exist in these institutions before the programmes deserve national recognition.

In order to implement the accreditation scheme, NBTE introduced its first sanction on institutions that did not submit their applications for accreditation by June 1984 by refusing to pay stipends to their students undergoing Students Industrial Work Experience (SIWES) unless their programmes were accredited. As soon as this sanction was introduced, more Polytechnics applied before the deadline of December 1984. Consequently, NBTE visited more than twenty Polytechnics between January and June, 1985. Based on the outcomes of these visits, time has vindicated NBTE that there was merit in subjecting all Polytechnics to the accreditation exercise.

Furthermore, it was recognized also that the process of change from established norms to new ones was difficult especially in a situation where the change means that a Federal Government agency was established to supervise what was regarded earlier as someone's empire. Efforts were made to convince the general public that NBTE exists to assist the institutions to grow, and thus to improve that quality of Programmes so that the much needed technical manpower that will be produced shall be the pride of the nation. While some of the

Polytechnics made efforts to correct their deficiencies, others were more interested in requesting for provisional accreditation. This was rejected because NBTE owes the country a duty to protect the students and the society in general from poor quality technical education and defend the need for all TVET institutions to be accredited (Oduma, Okafo, Mpieri & Muhammad, 1997)

It is now a policy of NBTE that no institution can admit students into unapproved programmes. All institutions are aware of the consequences of admitting students into unapproved ND and HND programmes as illegal. These may include inability of the institutions to:

i.   Present the students for Students Industrial Work Experience Scheme (SIWES);

ii.   Mobilise the graduates of such HND programmes for the National Youth Service Corps (NYSC);

iii.   Nominate students enrolled into such programmes for scholarship awards and bursary schemes;

iv.   Secure funding or intervention for such programmes from relevant agencies of Government.

Between 1982 and 1987, the Board accredited programmes in twenty-six out of twenty-seven Polytechnics existing in the country. It also visited six Colleges of Agriculture and related fields, two departmental schools of training. The Programme Evaluation Forms were used by team members during the visitation to all the Polytechnics and Monotechnics. The final decision on team members' composition for the visitation is that of NBTE. As much as possible, interests of the profession and Federal character or spread were considered in choosing team members. Both new and old experts were considered as team members during visitations. But in order to ensure that the same standards of evaluation are used at all times, experienced resource persons or former Heads of Department were engaged as team members that have taken part in the previous visitations (Yabani, 1987).

As part of Government's effort to strengthen accreditation exercise in Nigeria and give it legal backing, the Education (National Minimum Standard) Decree 16 of August 1985 was promulgated by the Federal Government of Nigeria. It vested the responsibilities of accrediting diploma programmes offered by technological institutions and polytechnics leading to national awards on the NBTE after consultations with the Honourable Minister of Education. It also gave power to other tertiary education regulatory agencies in Nigeria (NUC and NCCE) to accredit institutions and programmes under their purview and makes it illegal for any institution to award national qualifications without being subjected to the process of accreditation. Each of these regulatory agencies has developed its own approaches to accreditation based on the peculiarities of its sub-sector or system.

NEW DEVELOPMENT IN THE NBTE ACCREDITATION SCHEME

Collaboration with Professional Bodies

At the inception of the accreditation scheme, NBTE involved many stakeholders including the professional bodies without any formal agreement with them. With the need for past diplomates of TVET institutions to practise their professions, earn promotion or bid for contracts, NBTE and some professional regulatory bodies have formal arrangements whereby past diplomates or graduates of TVET institutions are allowed to register or sit for professional examinations after graduation. This is facilitated by Memorandum of Understanding (MoU) which is signed by the two parties to undertake joint accreditation and resources inspection visits to institutions. It also covers development or review of curriculum and course specifications, review of criteria for carrying capacities of approved programmes offered by TVET institutions. The accreditation team is composed of one representative of the professional regulatory body(s) who by default is the Chairman or Chairperson for the accreditation team while NBTE will nominate other team members from similar institutions, private or public organisations.

The Chairman is expected to lead the team to inspect, interact, review records and documents during the accreditation or resource inspection visitation while during curriculum development or review workshops, he or she chairs the activities of the panel. The Chairman would present the summary of his team's findings to the head of the institution during exit interview by highlighting major areas of concerns or weaknesses. When a programme is given approval to commence by NBTE, this shall be deemed to have been approved by both parties. NBTE is responsible for communicating results of quality assurance visitations to the institutions concerned, Joint Admissions Matriculation Board (JAMB), Industrial Training Funding (ITF), and National Youth Service Corps (NYSC).

Currently, NBTE is having Memorandum of Understanding (MOU) with the following bodies and the results are encouraging:

i. Architects Registration Council of Nigeria (ARCON);

ii. Computer Professionals Registration Council of Nigeria (CPN);

iii. Council for the Regulation of Engineering in Nigeria (COREN);

iv. Council of Registered Builders of Nigeria (CORBON);

v. Nigerian Institute of Science Laboratory Technology (NISLT);

vi. Surveyors Council of Nigeria (SURCON);

vii. Town Planners Registration Council of Nigeria (TOPREC); and

viii. Chartered Institute of Bankers of Nigeria (CIBN)

The agreements between NBTE and professional bodies even though could be terminated but the mutual understanding, cordiality and patriotism have played major roles to resolve any form of disagreement that may occur in their collaborative activities.

Adoption of Technological Innovations

As accreditation was evolving so also technological innovations were being adopted and integrated into the process from the starting point to completion stage. Between 1982 and 1999, accreditation reports, self-study questionnaires, documents and letters were typed using manual or electric typewriters. Financial transactions especially payment of allowances, honoraria and other related expenses were paid in cash with all the risks and errors involved. Accreditation team depended on the typists or secretaries provided by the institutions to produce their reports. Somehow the confidentiality of the reports could not be guaranteed and the process was slow due to the large number of documents to be typed by few typists in a Department. When there were errors in the reports, correcting fluid was used to effect changes. This affected the quality of the reports or documents by the team. However, with the availability of affordable laptop computers coupled with intensive ICT training organised for NBTE staff in the early 2000, accreditation documents are now produced and processed using appropriate software packages and payments are made through electronic payment platforms.

Prior to the introduction of the global system for mobile communication (GSM), the Board was using radio link system, surface mail, telegram, landline telephones and fax machines to communicate with individuals, institutions and organisations and this could sometimes be slow and cumbersome. With the introduction of GSM technologies in Nigeria in the early 2000, this really enhanced communication between NBTE and its stakeholders involved in accreditation activities. NBTE could now reach several resource persons as soon as possible. Today with the adoption of technological innovations such as Internet and web technologies, information about accreditation are communicated using e-mail services, short message services (SMS), messaging apps or video calls, while the social media networks are used to stay connected with resource persons and staff of TVET institutions.

The results of technological innovations on accreditation scheme include:

i. Efficient and effective services are rendered to the stakeholders of NBTE. It has promoted quite, neat and conducive work environment;

ii. Staff productivity, creativity and satisfaction have been greatly enhanced;

iii. Cost of carrying out statutory mandates of NBTE has reduced. For instance, many of the typing and typesetting jobs previously handled by a large pool of typists are handled by professional staff. Also, official documents can be scanned and sent to all institutions through emails without incurring postage expenses;

iv. NBTE staff could connect with each other anytime and anywhere to communicate and collaborate on important assignments. It has really helped NBTE staff and resource persons to work in teams and contributed to the development of the TVET sector;

v. Confidentiality, security and protection of the quality assurance reports are maintained using technological innovation;

vi. Improvement in the overall experience and skills of NBTE staff to solve problems on quality assurance and development of curricula.

Internal Restructuring of NBTE

NBTE was initially structured into four departments: Programmes; Planning; Finance, Administration Departments and Audit unit in 1977. The Programmes Department was charged with the responsibilities of undertaking quality assurance visits, curriculum development and review, coordination of establishment of TVET institutions, and maintenance of academic standards in TVET institutions.

Between 2015 and 2016, NBTE Governing Board approved the splitting of the defunct Programmes Department into three new departments in order to adequately coordinate the growing number of TVET institutions under the purview of NBTE. These new Departments are:

   i.   Polytechnic Programmes;

  ii.   Monotechnic Programmes; and

 iii.   Vocational, Technical and Skills Development

The Polytechnic Programmes Department handles matters relating to Polytechnics and the programmes they offer or intend to offer. Monotechnic Programmes Department deals with the matters relating to the Monotechnics and specialised institutions and their programmes whether existing or proposed ones. Vocational, Technical and Skills Development Department focuses on the enterprise institutions offering National Vocational Certificates and National Innovation Diploma (NID), Technical Colleges that award National Business and National Technical Certificates (NBC and NTC) and coordinate the quality assurance activities and training with respect to the National Skills Qualifications in Nigeria. The establishment of these Departments has helped NBTE to achieve more, cover more institutions, and promptly attend or resolve issues regarding programme accreditation.

Furthermore, in 2021, two more Departments were created to handle some of the functions that were previously handled by these Departments. This is to ensure that other services rendered by NBTE are delivered to the satisfaction of the public without compromising the mandates of NBTE to perform accreditation. The newly created departments are:

i.   Curriculum Development; and

ii.   New TVET Institutions Registration

The Curriculum Development Department was established with the mandate to develop new curricula, national occupational standards or review existing ones and to produce them. New TVET Institution Registration Department coordinates application, approval and licensing process for individuals, groups or organisations that intend to own and operate TVET institutions to award national qualifications.

In summary, from one Department that coordinates numerous activities between 1977 and 2015, have grown into five (5) Departments to address concerns and criticisms from some of the NBTE stakeholders. To a greater extent, there is much improvement nowadays in the quality of services rendered to the institutions, organisations and the general public by NBTE.

Private Sector Involvement in Establishment of TVET Institutions in Nigeria

Before the late 1980s, only Federal and State Governments were permitted to establish tertiary institutions in Nigeria. However, when the Education (minimum standards and establishment of institutions) Act of January 1993 (amendment) or CAP E3 LFN 2004 was enacted, individuals and groups became much involved in the establishment of private tertiary institutions in Nigeria. The prospective proprietors are guided through the process of establishing private institutions. After the preliminary assessment, the proposed institutions are visited, assessed and when the available resources are found adequate, they are recommended by NBTE to the Honourable Minister of Education for approval and licensing as a private tertiary institution (NBTE, 2014).

From the available records, several proprietors were granted approval and operational licences to operate private owned TVET institutions between 1990 and 2022, while many other applications are being processed currently. The number has increased from the first private Polytechnic to award ND qualifications in Nigeria in 1991, that is, Our Saviour Institute of Science, Agriculture and Technology (OSISATECH), Enugu, to more than eighty as at the end of 2022. This could be seen as a positive development in view of the ministerial strategic goal of increasing access for young Nigerians into tertiary institutions. Figure 1 shows the number of private Polytechnics and similar TVET institutions in Nigeria from 1990 to end of 2022 while figure 2 shows the number of private colleges of health technology and related disciplines established from 2013 till the end of 2022.

Table 1 shows the number of accredited TVET institutions owned by Governments and private individuals and groups in Nigeria and the Departments in the NBTE saddled with the responsibilities to coordinate the accreditation of their programmes. Out of 743 approved Nigerian TVET institutions in 2023, 352 are owned by either private individuals or groups. That is 47% of our TVET institutions are controlled by the private sector. The impact is the accelerated growth in the number of TVET institutions in the Country to serve close to two million youths seeking admission into tertiary institutions every year. This has widened and increased access to TVET institutions in Nigeria. Many students who could not gain admission into public institutions now have alternatives to further their education. This has brought appreciable contribution to the training and development of technical manpower in Nigeria by pooling the expertise and resources in the private sector into the TVET sector. Thus, the number of programmes and institutions to be accredited by NBTE has also increased greatly over the years.

Table 1: Summary of TVET Institutions Regulated by NBTE

Department	Institutions	Number of Public TVET Institutions	Number of Private TVET Institution	Total
Polytechnics Programmes	Polytechnics	90	78	168
Monotechnics Programmes	Colleges of Agriculture and related disciplines	33	0	33

	Colleges of Health Technology and related disciplines	80	21	101
	Specialised Institutions	38	16	54
Vocational, Technical and Skills Development	Innovation Enterprise Institutions	12	167	179
	Vocational Enterprise Institutions	14	68	82
	Technical Colleges	124	2	126
Total		**391**	**352**	**743**

Source: *NBTE Directory of Accredited Programmes (2023)*

The biggest challenge facing the private TVET institutions is how to raise enough funds to manage the affairs of their institutions after it has been established without engaging in illegal activities. This is an important issue that should be considered by any prospective individual or group who may wish to establish TVET institution(s). They must be aware that there may not be direct funding or support from agencies of Government to them. They need to have solid and concrete plans on how to sustain the development of their institutions through alternative sources of generating revenues to meet their financial obligations. It is strongly opined that the current and prospective proprietors of private TVET institutions in Nigeria should demonstrate adequate capability and capacity to run their institutions just like most private basic and secondary schools in Nigeria had done which made them to compete favourably with the Unity and public schools in Nigeria.
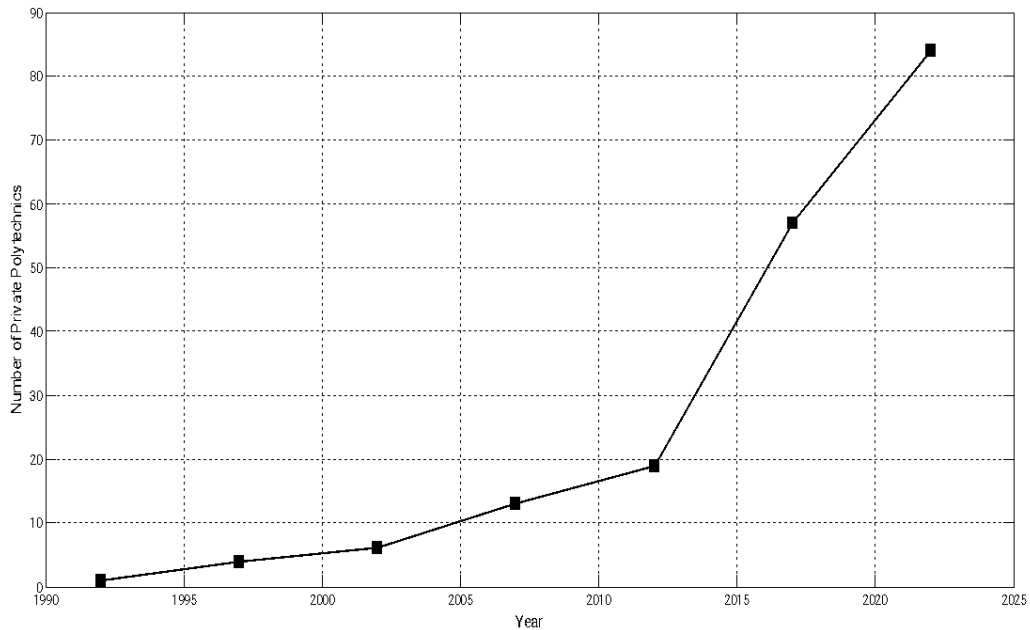
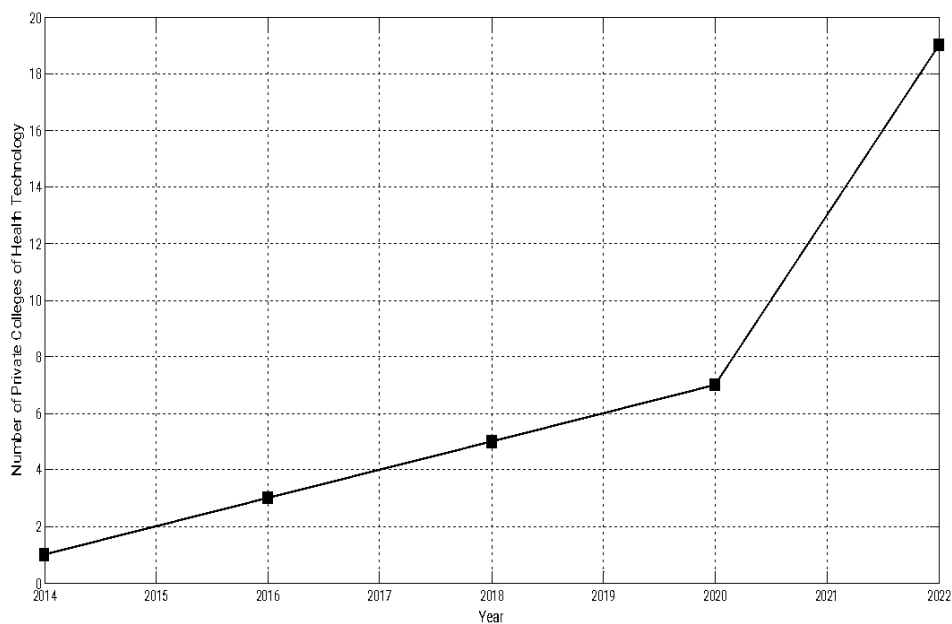**Figure 1 Trend of establishment of private Polytechnics in Nigeria**

Figure 2 Trend of establishment of Private Colleges of Health Technology and similar institutions in Nigeria

STRATEGIES FOR DEVELOPING ACCREDITATION SCHEME

The following strategies are suggested to deepen and strengthen the successes recorded so far and improve Accreditation of TVET institutions and their programmes as presently coordinated by NBTE.

Sustainable and Adequate Funding

a) TVET institutions need to create sustained awareness for non-governmental organisations, philanthropists, alumni associations, foundations, revenue yielding agencies and development partners to donate funds or resources in order to secure accreditation. International donors, organisations or institutions should be contacted to provide technical and financial assistance by TVET institutions.

b) The Proprietors of TVET institutions should increase annual budgetary allocations to TVET institutions and service providers to accredit their programmes. Special and research grants should be given to TVET institutions to meet up with the requirements of accreditation.

c) TVET institutions should promote establishment and operations of viable firms or enterprises to generate funds internally to reduce the financial burden of accreditation visits among others.

d) TVET institutions should collaborate with industry to promote commercialization of the intellectual properties, patents and inventions by these institutions.

e) There is a need for the Federal Government to establish a Skills Development Fund specifically to address the infrastructural gaps in TVET institutions, financing high priority projects, innovative ideas and initiatives, and provide scholarships for out of school children and staff development.

Improving Quality of Education and Training

a) TVET institutions should constantly enrich the curriculum in use with high demanding and employable skills and competencies. New courses and emerging technologies that will stir up creativity, critical thinking, problem solving, and leadership skills among learners in the TVET institutions should be included in their programme curricula.

b) Vocational career guidance and counselling, and teaching of foundation, pre-technical and pre-vocational skills at basic and post basic levels should be strengthened to increase enrolment into technology based programmes in the TVET institutions.

c) Cutting-edge research and innovation should be promoted across all TVET institutions as well as local exhibitions to showcase projects or works of creative and talented students and their mentors.

d) NBTE should improve its quality assurance activities and regulatory functions through capacity building, adequate remunerations for its staff, and application of technological innovations.

e) TVET institutions should establish well equipped Skills Development Centres (SDC) to ensure that each graduate of TVET institution has National Skills Qualification (NSQ) in relevant skills or occupational trades in addition to the ND or HND qualifications they obtain at the end of their studies.

f) TVET institutions should prioritise training and re-training of their staff especially on the application of modern teaching methods, tools and assessment approaches.

g) Vital infrastructures and facilities to aid practical-based learning of technical and vocational programmes or trades should be provided and upgraded regularly by the proprietors of TVET institutions. This should take into account the needs of the physically challenged in the design of all physical facilities in TVET institutions.

h) TVET institutions should ensure that there is a strict compliance to the approved academic standards, academic and physical master plans and approved enrolment figures or students' intake.

i) Small and medium enterprises (SMEs) and corporations should be encouraged to partner with TVET institutions to provide efficient services and develop infrastructure for high quality training.

Digital Transformation and Engagement

a) The process of approval, licensing and accreditation of ICT training providers to award national qualifications should be transparent, simplified and friendly.

b) Gender balance in access to ICT training and employment opportunities should be encouraged by all proprietors of TVET institutions.

c) Access of physically challenged persons to computer training facilities and digital engagement should be taken into consideration from the point of project design to completion stage.

d) Usage of ICT resources to facilitate and impart technical and vocational skills in the TVET institutions should be accelerated and prioritised.

e) All national curricula should be enriched with the basic and advanced digital skills by TVET institutions adopting and implementing them.

f) All hardware, software, ICT resources and utility services in TVET institutions should be upgraded constantly for effective delivery of ICT training.

g) More start-up ecosystems, technopreneurship and innovation hubs connected to TVET institutions should be established to start or grow digital based enterprises or firms. This would also create internship and industry based training opportunities for students.

h) Software and hardware development through collaboration between TVET institutions and foreign or local manufacturing industries should be explored and encouraged.

i) TVET institutions should organise world class training and retraining programmes at affordable rates to ICT students and graduates to attract foreign direct investment into

Nigeria, and supply competent manpower to the hardware manufacturers and software developers.

j) Digital transformation of TVET institutions should be supported to make them more competitive globally, satisfy requirements of international standards, address socio-economic challenges of the country and meet the demands of their stakeholders efficiently.

k) TVET institutions should partner with relevant government agencies to promote cyber security and fight Internet fraud, cybercrime and social vices on their campuses.

Green Technology and Sustainable Development Practices

a) Good environmental practices such as adoption of green technologies, biodiversity, resource conservation, environmental management, reduction of carbon gas emission and environmental pollution, energy conservation and sustainability should be included and encouraged in the activities, operation and training of TVET institutions.

b) TVET institutions should emphasise the use of eco-friendly training materials, consumables, resources and equipment to achieve their goals and objectives.

c) TVET institutions should promote effective renewable energy, waste management practices, sustainability in their research studies and students' projects.

d) Application of renewable energy sources as alternative to public main supply or fossil fuel based generators in TVET institutions should be encouraged to save cost and make them environment friendly.

e) Academic and non-academic staff should be fully sponsored to undergo training on green technologies, sustainable development, prediction of environmental hazards and degradation, natural disasters, and mitigation against their effects.

4.5 Effective Administration of TVET System

a) TVET managers or administrators should be equipped with skill sets on leadership, planning, entrepreneurship skills development, policy analysis and implementation, revenue generation approaches, and digital skills.

b) The quality of academic staff of TVET institutions should be improved through relevant in-service training, industrial work experience and the linkage between the industry and TVET institutions.

c) Bursaries, scholarships and financial support from time to time should be provided to the vulnerable, excluded, disadvantaged, physically challenged persons, drop-outs and indigent learners to improve the inclusivity in the TVET sector.

d) Innovation, research and development among students and staff of TVET institutions should be facilitated and rewarded towards sustained economic growth.

e) The conditions of service for technical manpower in organisations and staff of TVET institutions should be enhanced and favourably compared with other sectors.

f) The governance structure and appointment of principal officers of TVET institutions should be done in such a way to promote merit, competency and national spread.

g) Functional TVET management information system to store and process TVET related data, plan, monitor and evaluate activities in the TVET sector should be established.

h) Adequate publicity to project a positive image of the TVET sector should be put in place to attract more students or learners to acquire flexible and demand driven skills.

i) National anti-graft and security agencies should collaborate with the regulatory agencies and TVET institutions to curb qualifications fraud, certificate racketeering and operations of illegal TVET institutions in Nigeria.

j) Centres of Excellence in the relevant traditional fields of study, emerging technologies and specialised areas to export of labour across the globe should be established in the six geo-political zones of the country.

Development of the Non-formal TVET Sector

a) TVET institutions should relate with the informal sector to provide opportunities for the apprentices and master trainers in the non-formal sector to acquire formal qualifications based on the skills and knowledge acquired through informal training and work experience.

b) Gender equality, diversity and non-discrimination of trainees should be promoted in the informal and non-formal TVET sector.

c) The practice and implementation of the traditional apprenticeship system in Nigeria should be studied by TVET institutions with an intention to speed up national technological and economic growth.

d) TVET institutions in collaboration with the organised private sector should provide training and support for craft unions and trade associations in the non-formal sector and apprenticeship training system in line with best global practices.

e) TVET institutions should develop operational guidelines for stakeholders in the informal TVET sector and use print, outdoor, digital or broadcast media to educate the public on the need for activities in the informal sector to be regulated.

Collaboration for Industrial and Entrepreneurial Development

a) TVET institutions should prioritise and support production and procurement of locally made facilities, equipment, instruments and consumables to increase national productivity and foreign earnings.

b) TVET institutions should collaborate with Nigerian and/or international agripreneurs to own and operate mechanised and organic farms, create employment, develop agricultural innovative techniques for improved livestock management, crop production and preservation and increase annual production of agro-allied products.

c) TVET institutions should introduce compulsory agro-business courses in the TVET curricula to create job opportunities and contribute to GDP growth.

d) Business incubation and innovation centres in conjunction with TVET institutions should be provided to train and raise entrepreneurs, build the capacity of technical manpower in the public and private industries, facilitate start-up funding for young entrepreneurs to establish cottage industries.

e) TVET institutions should focus their research studies on production and development of high quality goods, equipment, spare parts and services by small, medium and large-scale enterprises.

f) More opportunities should be created by industries to engage students of TVET institutions for internship and industrial training.

CONCLUSION

Accreditation is one of the well-established quality assurance instruments and has become a global phenomenon. Accreditation uses internal and external reviewers to assure the public that an institution has complied with the prescribed criteria and academic standards. Across nations, accreditation has helped to improve academic quality and public accountability of higher educational institutions, promote and encourage institutions to attain excellence and address their weaknesses that might be unnoticed or overlooked for a long period of time. The outcomes of the accreditation visitations to TVET institutions show the true picture of the status of the academic programmes run by them. The accreditation visitations show the strengths and deficiencies in each academic programme. The composition of the visitation panels ensures that professionalism and objectivity are taken into consideration.

The history of accreditation in the Nigerian TVET institutions is rich and has contributed to improve the processes and practices of running programmes. Application of technological innovations, restructuring of NBTE organisational structure and involvement of the private sector to own and operate TVET institutions have contributed positively to reshape the accreditation scheme in Nigeria. It is sad to note that some institutions may attempt to avoid accreditation because of the unpleasant truth revealed by the exercise to meet the high standards expected by the accreditation exercise. It is the role of the proprietors of these institutions and not the NBTE to address any defect and deficiency by providing adequate funding, qualified staff and capable management team to run their institutions.

When an institution fails to accredit its programme(s) or is granted interim accreditation, this may look like an indictment and may feel so threatened. Such outcomes should however elicit some remedial actions that should be taken by the institution. This may produce positive changes such as improvement in terms of academic matters, staffing or physical facilities. The long-term effect of accreditation is the development of skilled technicians and technologists produced at various levels of the economy. Accreditation is helping TVET institutions to grow and when coupled with regular inspection and monitoring, their results on the technological development would be glaring.

With adequate funding of the accreditation scheme coupled with commitment and patriotism, TVET institutions can develop indigenous or adapted solutions to further address the socio-economic challenges confronting Nigeria. Learners and other key stakeholders would be protected from low-quality programmes, degree mills and illegal institutions. Transnational

or cross-border education due to globalisation would also be properly regulated to the benefit of Nigerians and international students.

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