

CURRICULUM DESIGN AND IMPLEMENTATION QUALITY INDICATORS FOR QUALITY ASSURANCE IN THE OFFICE TECHNOLOGY AND MANAGEMENT PROGRAM OF POLYTECHNICS

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Abstract

The study was carried out to assess the curriculum design and implementation quality indicators available for quality assurance in the Office Technology and Management program of Polytechnics in North Central Zone of Nigeria. The study was designed as a descriptive survey. The population of the study consisted of 87 Lecturers and Instructors employed in the OTM departments of Polytechnics in North Central Zone of Nigeria offering the NBTE accredited Office Technology and Management program as at December, 2018. The instrument for data collection was a structured questionnaire with reliability index of 0.887. Mean and Standard deviation were the tools used to analyze the research questions while the hypotheses were tested using the independent t-test statistics at 0.05 level of significance. The analysis of data showed that the curriculum design and implementation quality indicators available for quality assurance in the Office Technology and Management program of Polytechnics in North Central Zone of Nigeria is generally adequate as only one item (i.e. the number of times the curriculum in use has been revised) out sixteen indicators identified was rated as inadequate. The researchers, therefore, recommended that NBTE should make necessary arrangement to ensure regular review of the curriculum and the proprietors of the institutions increase funding for the Office Technology and Management program to improve upon the quality indicators which were rated as just adequate to make them very adequate for quality assurance in the program.

Introduction

Education can be described as a veritable instrument for introducing and sustaining social change in human societies, as well as shaping its destiny. Education imparts knowledge, teaches skills, and instils attitudes to the recipients. Imparting knowledge means putting across facts, current thinking, theories, principles or laws; teaching skills is imparting practical skills, comprehension and ability to see implications or solve problems; instilling attitudes include inculcating tolerance, open-mindedness, scientific detachment among others. (Ifenkwe, 2013). Education can be provided at the formal or informal level. Formal education in Nigeria is provided basically at the basic, post-basic and tertiary education levels.

A polytechnic is a tertiary technical institution offering post-secondary technical Education programmes leading to the award of diplomas and or certificates such as the National Diploma (ND) and Higher National Diploma (HND). The purpose of setting up polytechnics is to achieve the twin goals of academic excellence as well as meeting the manpower requirements of the national economy. The educational objectives, in view of its broad goal of producing competent middle and higher level technicians, technologists, or professionals include: striving for excellence in education through acceptable curricula that are designed to produce well-groomed graduates; endeavouring to expose students to such educational standards and programs that are designed to improve their global competitive advantage; acquiring sufficient facilities, both in

physical and human terms, and rationalizing their use with a view to giving the best instructional training to its graduates; as well as encouraging meaningful interaction between staff and students both in-house and externally; encouraging members of staff to contribute to learned journals or publications and also create an atmosphere conducive for publication of textbooks and reading materials, scientific research and inventions. The minimum entry requirement is the senior secondary school certificate or its equivalent with credit passes in at least five subjects relevant to the programme or their equivalents. (NBTE, 2014).

The Office Technology and Management program offered in polytechnics in Nigeria is designed to equip students with secretarial skills for employment in various fields of endeavour. Students of this program are exposed to courses in their special areas as well as courses in general education. In addition to the acquisition of quality vocational skills in Office Technology and Management, the students are equipped with quality work competencies which are very necessary to book a place in the present knowledge based economy (NBTE, 2004). To offer the program, the National Board for Technical Education (2014) requires that institutions should put in place quality facilities and employ quality staff to manage available resources to prepare students for the workplace in line with set objectives.

Quality, in education, refers to investment of excellent inputs and production of exceptionally high outcomes that are assessed in terms of the internal resources of an institution, such as student's inclination to learning, employees productivity, number of academic staff with terminal degrees, number of soft and hard copy volumes in the library, as well as reputation and magnitude of endowments. Quality is transformational, performance driven, outcome-based, and can best be measured in terms of the competencies that students gain from educational institutions. (Kpolovie, 2013).

Quality assurance is a planned and systematic review process of an institution or program to determine whether or not acceptable standards of education, scholarship, and infrastructure are being met, maintained and enhanced. Quality assurance is said to be a problem-solving approach and preventive measure against wastage and failure. It includes the procedures, processes or systems used to safeguard and improve the quality of education and other activities in an educational institution.

There are a number of mechanisms put in place by agencies and or organs responsible for the management and control of Polytechnic education in Nigeria to ensure the quality of programs run in the institutions. The mechanisms include: program monitoring assessment, and accreditation; assessment or evaluation of the existing staff strength, students and infrastructure; prescribing, producing and periodically reviewing documents on minimum standards by responsible state organs; external moderation exercises; capacity building for teaching and non-teaching and non-teaching personnel; Industrial Work experience scheme for academic staff and students; and the Universities, Polytechnics, Monotechnics and Colleges of Education Examinations (Adepoju & Akinola, 2016).

The National Board for Technical Education was established by Act No. 9 of 1977 as an agency of the Federal Ministry of Education specifically for handling all aspects of technical and vocational education falling outside university education. In pursuance of its mandate to ensure quality of programs run in accredited polytechnics (NBTE, 1993; NBTE 2004; NBTE, 2014) spelt out standards in the areas of curriculum design, implementation and evaluation, staffing, school facilities, students support services, staff professional development as well as program management structure which must be available in each accredited polytechnic for it to get the approval to start or to continue offering a program. These publicised minimum standards are the quality indicators which accreditation teams beam their searchlight on when on accreditation visits for purposes of ensuring quality assurance in all approved programs

Statement of the Problem

The general realization that a well-educated workforce is essential for increased productivity and for maintaining a competitive edge in the global as well as knowledge based economy has led to increasing concern for quality assurance processes in higher education around the world. The ever increasing demand for quality education to meet the needs of a competitive global workplace has brought the issue of quality assurance to the front-burner in national discourse especially in respect of Polytechnic education.

In the field of Office Technology and Management, special observation and anecdotal inferences suggest that the program introduced in the year 2008 may be beset with challenges that may make it incapable of fully attaining its objectives. This situation demands full attention and quick resolution because of the important role of Technology and Management in National Development in the management of official communication; the administration of the office; as well as the processing of information in modern organisations. A number of studies have been carried out to address issues, problems as well as challenges of the Office Technology and Management program since it started running in Polytechnics across Nigeria.

According to Abubakar, Kazaure, and Yusuf (2013) in spite of the existence of hundreds of polytechnics and other technical/vocational colleges, educational outcome of technical and vocational institutions has, to a large extent, been disconnected from the industrial and socio-economic needs of the country due to undue emphasis on paper qualification at the expense of competence.

The problem of this research work, in view of the aforementioned issues, is to assess the curriculum design and implementation quality indicators available for quality assurance in the Office Technology and Management Program of Polytechnics. A curriculum is a written plan that drives instruction. It delineates the skills and concepts taught and evaluated to enhance student achievement. The term “curriculum” is generally understood as the courses or programs of study offered by an educational institution. In view of the ever-changing time, there is the need to constantly review the curriculum in line with the aspirations of the people. Emmanuel as cited in Ibrahim (2014) described a curriculum as a plan that consists of learning opportunities for a specific time frame and place, a tool that aims to bring about behaviour changes in students as a result of planned activities. These include all learning experiences received by students with the guidance of the school. It is not possible to have a uniform curriculum for all the countries for all the time, because education is related to social, economic and political changes in each country. Curriculum content should therefore, be based on current information and not on the past information which have been proved to be false or outdated and unusable. There is therefore the need to constantly change and update the curriculum content.(Praveen, 2016).

According to Stabback, Male and Georgescu (2011) a curriculum is considered qualitative if the development of the curriculum was planned and systematic, inclusive and consultative and led by curriculum professionals, cyclical in nature, and sustainable. Such curriculum should value

each child and hold that every child matters equally; comprise high quality, relevant and appropriate 'content' which can contribute to the, development of competence, and is well organized and structured, and underpinned by a set of assumptions about how children learn. In addition the implementation of such curriculum should place new expectations on students, teachers, schools or learning environments, as well as education systems and authorities.

According to Schweitzer (2017)curriculum design implies the purposeful, deliberate and systematic organization of instructional blocks within a program, class or course. In other words, it is a way for teachers to plan instruction. When educators design curriculum, they identify what will be done, who will do it, and when. The ultimate goal of curriculum design is to improve student learning. In designing curriculum, effort should be made by designers to ensure that learning goals are not only aligned but also complement each other from one stage to the next. There are three basic types of curriculum design i.e. subject, learner as well as problem-centred design. Learner-centred curriculum design acknowledges that students are not uniform and should not be subjected to a standardized curriculum and therefore takes into consideration individual needs, interests and goals in its design which empowers learners and allow them to shape their education through choices. The Subject-centred curriculum design revolves around a particular subject matter or discipline e.g. web page design or Desktop publishing. This design focuses on the subject rather than the individual learner as the design dictates what needs to be studied and how it should. The third type of design i.e. the problem-centred curriculum design is a student-centred design which focuses on teaching learners how to examine a problem and come up with a solution to it. This design exposes learners to real-life issues, which helps them develop skills that are transferable to the real world. Problem-centred curriculum design enhances students' creativity and innovation while learning (Schweitzer, 2017).

Curriculum design quality indicators are those indicators relating to the statement of program vision and mission, goals and objectives; source, content and quality of curriculum in use as well as modalities, policies and regulations for its implementation for development of attributes expected of a graduate of the program.

The curriculum for the National Diploma (Office Technology and Management) program consists of four main components, for the National Diploma program: General education; Foundation courses, Professional courses and the Supervised Industrial Work Experience Scheme (SIWES). The general education component includes courses in citizenship education and Communication which are compulsory and accounts for not more than 15% of total contact hours for the program. The foundation courses include courses in economics, business mathematics, business administration, accounting, Nigerian legal system, and entrepreneurship. The foundation courses account for between 10 - 15% of the contact hours of each semester. The professional courses - are courses, which give the student the theory and practical skills needed to practice as a secretary. The professional courses account for between 60-70% of available contact hours. In addition, the Supervised Industrial Work Experience Scheme (SIWES) is taken during the long vacation following the end of the second semester of the first year (NBTE, 2004).

The curriculum for the OTM program is drawn in unit courses. In designing the units, the principle of modular approach by end product has been adopted, thus making each of the professional modules, when completed to provide the student with professional operative skills, which can be used for employment purposes. As the success of the credit unit system depends on the articulation of programs between the institutions and industry, the curriculum content has been written in behavioural objectives, in an attempt to publicize the expected performance of the student on successful completion of some of the courses of the program. The staff of the department teaching the program are also expected to enrich their own curriculum by stating the conditions existing in their institution under which performance can take place and to follow that with the criteria for determining an acceptable level of performance. Departmental submission on the final curriculum may be vetted by the Academic Board of the institution. The aim is to continue to encourage a solid internal evaluation system in each institution for ensuring minimum standards and quality of education in the programs offered throughout the Polytechnic system (NBTE, 2004).

Curriculum implementation is the effective and desired implementation of the curriculum contents on the basis of aims and objectives specified in the curriculum. Curriculum implementation incorporates decisions about the contents and effective planning for providing learning experiences for its learners on the bases of content, organization of planning, administration or implementation of the organized planning and evaluation of the implementations by the implementer and the experts in the relevant field (Praven, 2016). Implementation of curriculum is a much difficult task because it is based on theoretical and practical aspects as well. Two basic considerations need to be born in mind while planning implementation processes. One is the context in which implementation is carried out in terms of the physical and social characteristics of the setting. The second relates to teachers who actually are to implement the curriculum – their capabilities and attitudinal dispositions. Thus, adaptations by teachers to the changing demands of the physical and social settings where the curriculum is implemented, as well as their own proficiency in various methods of implementation becomes effective and meaningful.

The indicators of quality Curriculum implementation in institutions include those indicators relating to regularity of curriculum revision and improvement in view of the ever-changing technology and processes in the industry; nature and regularity of orientation program to freshers about the institution and the program; the nature and impact of the instructional processes in use; extent of the interconnectedness among the various components of the program curricular activities and preparation for practice as a Professional; evaluation protocol used by the institution/ department as well as mechanism employed for gathering, consolidating, disseminating and use of evaluation data.

Some of the requirements of effective curriculum implementation include: planning; clarity of thought; knowing how we will transact; review of the work; team responsibility; clarity of communication; addressing different levels of students; knowing, observing and understanding students at all times; time management; alertness; material organization; room set up; the way teachers reach out to students; as well as ready alternatives.

Curriculum implementation could be in the form of group work; project work, seminar presentations; assignments; symposia; discussions; workshop practices; preparation of learning materials; self and peer evaluation; micro teaching sessions; club activities; citizenship training camp; study tour; business sessions; use of information and communication technology; portfolios; quiz; debates; peer teaching; brainstorming; power point presentations; book reviews;

research colloquium etc. note making; thought for the day presentation by the students; extension activities; panel discussion; extempore speeches; paired leaning; criticism and discussion

classes; album preparation; role play and simulation; black board sketches; co-operative learning; study circle; tutor-ward system etc. The OTM curriculum and course specifications (NBTE, 2004) requires that the teaching of the theory and practical work should, as much as possible, be integrated.

Purpose of the Study

The main purpose of this study was to assess the curriculum design and implementation quality indicators available for quality assurance in the Office Technology and Management program of Polytechnics in North Central Zone of Nigeria. Specifically, the work will seek to:

1. Assess the curriculum design quality indicators for quality assurance in the Office Technology and Management program of Polytechnics.
2. Assess the curriculum implementation quality indicators for quality assurance in the Office Technology and Management program of Polytechnics.

Research Questions

1. What are the curriculum design quality indicators for quality assurance in the Office Technology and Management program of Polytechnics?
2. What are the curriculum implementation quality indicators for quality assurance in the Office Technology and Management program of Polytechnics?

Methodology

The study was designed as a descriptive survey. The population of the study consisted of 87 Lecturers/Instructors in the OTM departments of Polytechnics in North Central Nigeria offering the accredited Office and Technology and Management program as at December, 2018. No sample was drawn as the total population was studied. The questionnaire was the instrument for data collection. The research questions for the study were analysed using mean score for each item while hypotheses constructed for study were tested using the t-test tool of the Statistical package for Social Sciences was used with alpha established at 0.05 level.

Results

Research question One: What are the curriculum design quality indicators for quality assurance in the Office Technology and Management program of Polytechnics?

Table 1: Mean and standard deviation of respondents' assessment of curriculum design quality indicators available for quality assurance in the Office Technology and Management program of Polytechnics.

S/N	Quality indicator	N	Mean	Std. Dev.	Remarks
1	Participation of stakeholders (i.e. business educators, curriculum planners, the industry etc.) in the development of the OTM curriculum presently in use in the Polytechnic.	86	2.7907	.67067	Adequate
2	Compatibility of the goals and objectives of the OTM program in the Polytechnic with Nigeria national educational goals as well as best practices in the secretarial profession.	86	3.0465	.63072	Adequate
3	Clarity of laid down modalities, policies and regulations for implementing the OTM curriculum	86	2.8837	.65832	Adequate
4	Flexibility allowed in the OTM curriculum to cater for emerging concerns and expectations from professional secretaries in modern organisations.	86	2.8953	.71995	Adequate
5	Adequacy of the operational curriculum content for development of attributes expected of a Professional Secretary in the present digital era.	86	2.9535	.73416	Adequate
6	Adequacy of resources specified for curriculum transaction in the current curriculum for content delivery in view of present realities in the industry.	86	2.6860	.75555	Adequate
Grand Mean			2.8759		Adequate

Source: Field survey, 2019

Table 1 shows that respondents' rated all items listed under curriculum design quality indicators such as participation of stakeholders in the development of the OTM curriculum in use ($\bar{x} = 2.7907$); compatibility of the goals and objectives of the OTM program with Nigeria national educational goals ($\bar{x} = 3.0465$); clarity of laid down modalities, policies and regulations for implementing the curriculum of the OTM program ($\bar{x} = 2.8837$); flexibility allowed in the OTM curriculum to cater for emerging concerns ($\bar{x} = 2.8953$); adequacy of the operational curriculum content for development of attributes expected of a Professional Secretary in the present digital era ($\bar{x} = 2.9535$); as well as adequacy of resources specified for curriculum transaction in the current curriculum for content delivery ($\bar{x} = 2.6860$) as "adequate"

Research question Two: What are the curriculum implementation quality indicators for quality assurance in the Office Technology and Management program of Polytechnics?

Table 2: Mean and standard deviation of respondents' assessment of curriculum implementation quality indicators available for quality assurance in the OTM program of Polytechnics. (N = 86)

S/N	Quality indicator	N	Mean	Std. Dev.	Remarks
1	Number of times the national curriculum in use has been revised in view of the ever changing technology and processes in the industry.	86	2.4419	.80593	Inadequate
2	Curriculum improvement undertaken the OTM department in the Polytechnic in view of continued changes in technology and processes in the industry.	86	2.5581	.66163	Adequate
3	Standing arrangement for comprehensive orientation to fresher's about the Polytechnic and the OTM program on an annual basis.	86	2.5698	.77521	Adequate
4	The Instructional methods in use for curriculum delivery by teachers in the OTM department to ensure attainment of program goals	86	2.7442	.67189	Adequate
5	interconnectedness among the various components of the OTM program offered by curricular activities for the program in the polytechnic	86	2.6395	.66709	Adequate
6	Preparation for practice as Professional Secretary provided in the OTM department through various in-house hands on experiences including simulated practice.	86	2.5581	.72930	Adequate
7	Mechanism in place for using assessment and evaluation outcomes by the OTM department and the Polytechnic for enhancing competence of OTM students in addition to grading and certification.	86	2.7442	.73862	Adequate
8	The evaluation protocol in use in the OTM department in the Polytechnic to ensure coverage of the objectives of the program within the minimum time specified in the curriculum.	86	2.7326	.71000	Adequate
9	Implementation of the practical components of the program using laboratory facilities as specified in the curriculum. (especially for professional courses in the ratio of 50:50 or 60: 40 as specified in the guidelines)	86	2.7907	.72138	Adequate
10	Students success rate in the OTM program within the minimum number of four semesters	86	2.9651	0.58305	Adequate
Grand Mean			2.670		Adequate

Source: Field survey, 2019

Table 2 shows that respondents rated the number of times the curriculum in use has been revised ($\bar{x} = 2.4419$) as "inadequate". Other items listed under curriculum implementation quality indicators such as: Curriculum improvement undertaken the OTM department in the Polytechnic in view of continued changes in technology and processes in the industry ($\bar{x} = 2.5581$); standing arrangement for comprehensive orientation to fresher's about the Polytechnic and the OTM program on an annual basis ($\bar{x} = 2.5698$); the instructional methods in use for curriculum

delivery by teachers in the OTM department to ensure attainment of program goals ($\bar{x} = 2.7422$); interconnectedness among the various components of the OTM program offered by curricular activities for the program in the polytechnic ($\bar{x} = 2.6395$); preparation for practice as Professional Secretary provided in the OTM department through various in-house hands on experiences including simulated practice. ($\bar{x} = 2.5581$); mechanism in place for using assessment and evaluation outcomes by the OTM department and the Polytechnic for enhancing competence of OTM students in addition to grading and certification. ($\bar{x} = 2.7442$); the evaluation protocol in use in the OTM department in the Polytechnic to ensure coverage of the objectives of the program within the minimum time specified in the curriculum ($\bar{x} = 2.7326$); the implementation of the practical components of the program using laboratory facilities (especially for professional courses in the ratio of 50:50 or 60: 40 as specified in the guidelines) ($\bar{x} = 2.7907$) as well as students success rate in the OTM program within the minimum number of four semesters ($\bar{x} = 2.9651$); were rated as “adequate”.

Conclusion

In view of the findings in tables 1 and 2 above, it can be concluded that the curriculum design and implementation quality indicators available for quality assurance in the Office Technology and Management program of Polytechnics in North Central Zone of Nigeria is generally adequate as only one item (i.e. the number of times the curriculum in use has been revised) out sixteen indicators identified was rated as inadequate.

Recommendations

In view of the findings and conclusion of the study, the researcher recommends that:

- I. Adequate measures should be put in place by the National Board for Technical Education to ensure the regular revision of the curriculum in use so the objectives of the program could be achieved.
- II. Proprietors and management of institutions offering the Office Technology and Management program should improve funding for the program to ensure that the quality indicators for the program are improved upon to make them very adequate for assurance purposes.

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