Quality Control in Organizations: The Nigeria Issue

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Abstract: This article which is qualitative in nature examines quality control in organizations with emphasis on Nigeria’s manufacturing and the education sector. Secondary source constituted the main source of data for this article. The essence of this article is to explain the objectives and steps towards the implementation of quality control plan in an organization. Because it is imperative to ensure and maintain quality standards in an organization, to ensure that product quality is maintained, manufacturing errors are reduced or eliminated, and the quality of service are improved. The study recommend that the government should meet the recommended 26% educational spending prescribed by UNESCO, which will boost higher education system in Nigeria. Higher institutions in Nigeria should set up internal quality assurance and monitoring of lecture units to enhance good quality delivery. There should be a review of curriculum content in order to meet the current societal needs of the people. The article further recommended that for the manufacturing sector, organizations should be able to device the quality control measure suitable for their products and be able to fund their quality control plan and measure, this will enhance the quality of their products and the trust the customer have on them. And the government monitoring team should intensify effort in monitoring and certifying the products produced in these organizations.

Key Words: Quality control, Education sector, Manufacturing sector, Agencies of Quality control, Service-oriented organizations

I. INTRODUCTION

All over the world organizations are expected to be efficient and effective in the provision of their services. But in most cases, these organizations fail to deliver quality services. Despite some effort made by the governments of various nations and employers to improve on the quality of products and services of these establishments, some of these organizations still produce or supply sub-standard products in the case of manufacturing organizations and poor services in non-manufacturing organizations. This trend when left unchecked portends danger to the economy and the society. It is therefore imperative to ensure and maintain quality standards in the education sector and, to ensure that product quality is maintained, manufacturing errors are reduced or eliminated, and the quality of service are improved in the manufacturing organizations. Quality control as a process involved in ensuring quality products and services in organizations becomes necessary. A major aspect of quality control is the establishment of well-defined measures that will help standardize production, delivery, and reactions to quality issues. Quality control requires organizations to create an environment in which both management and employees strive for perfection, a perfection that will reflect in the output of the organizations.

1. Conceptual issues

A close look at the concept “quality” is necessary at this point in understanding quality control. The word quality comes from the Latin word *qualitas* (meaning - property, quality, value, characteristic, feature, ability). In a highly competitive world with increasing consumer demands, quality has become the key factor of survival in the market, of profitability and development, not just for individual sectors and organizations, but also for a nation’s economy, (Vlašić, Vale, & Puhar, 2014). According to Gbadedyan and Adeoti (2005), quality is the degree to which a specific product conforms to a design or specification. For Anyanwu (2013) cited in Marire, Nwankwo, and Agbor (2014), quality is the feature and characteristic of a product or service that contributes to the satisfaction of a customer needs. Marire, et al (2014) maintain that quality is a term that carries important meaning for both producers and consumers.

To achieve and maintain a satisfactory level of products quality is a very difficult task, and to achieve this, the following steps should be considered:

a) Product must possess a minimum level of quality so that it could be easily sold in the market.

b) In order to measure quality, accurate standard measurements must be established.

c) Reasonable deviation from the pre-determined standards must be determined.

d) Satisfactory level of quality must be achieved with a minimum cost.

The definitions above have shown the relevance of quality in product and service delivery and also that quality is not to be compromised in any organization.

This brings us to the issue of “quality control”. Quality control ensures that in an organization, product quality is maintained or improved and manufacturing errors are reduced or eliminated in manufacturing organizations. It is a set of methods for maintaining standard in production line. Quality control is a process of ensuring that the output of an organization meets the required and anticipated standard so as to gain the confidence and acceptance of the people. Juran (2000) defines quality control as a universal managerial process for conducting operations so as to provide stability to prevent adverse change and to maintain the status quo.

Quality control involves measuring of units and determining if they are within the specifications for particular products and...
services. The purpose of the testing is to determine any needs for corrective actions in the manufacturing process and quality of service in the education sector. Good quality control helps organizations meet consumer demands for better products and services. In quality control each step of the service is rendered by the organization is tested. In a manufacturing organization, there is the testing of raw materials and test of the finished product. Testing at the various stages of manufacturing helps identify where a production problem is occurring and the remedial steps it requires to prevent it in the future. In the education sector, emphasis is on man power scrutiny to ascertain whether they are capable of delivering the services that will portray the goals of the institution and garner recommendations from members of the public.

II. QUALITY CONTROL IN MANUFACTURING AND SERVICE-ORIENTED ORGANIZATIONS

To maintain quality control in an organization requires the creation of a quality control plan, that will specify those things the organization would want to do to ensure that the products meet the requirements of the consumers before they are released to the market. With this in mind the basic objectives of quality control are as follows:

1. To establish the desired quality standards which are acceptable to the customers,
2. To discover flaws or variations in the raw materials and the manufacturing processes in order to ensure smooth and uninterrupted production.
3. To evaluate the methods and processes of production and suggest further improvements in their functioning.
4. To study and determine the extent of quality deviation in a product during the manufacturing process.
5. To analyse in detail the causes responsible for such deviation.
6. To undertake such steps which are helpful in achieving the desired quality of the product.

Steps to Implementation of Quality Control Plan in an organization

The plan for achieving quality control identified below is not solely the only processes; this is because the plan could vary depending on the peculiarity of the organization. But the plan identified here would will ensure quality control in both product and service organizations.

Quality Control Plan in Service-Oriented Industries

1. The plan must define and specify the processes to follow to ensure quality control in the organization.
2. The quality control plan must be designed and customized to fit the ability of every department involved. Management and team leaders in each department must be asked to review the plan and see if they would like to add any additional changes or if they have ideas about an easier way to control the quality of the product.
3. Once it has been determined that the quality control plan designed is sufficient then it is time to train everyone on how to begin working on it.
4. Employees need to have a clear understanding of the purpose of the plan and why they are being asked to do certain things. Training requires everyone to learn how to use the methodology so it can be used on a regular basis.
5. After training, the next thing in quality control plan is to ensure everyone is using it. Some people have a hard time with change and they might go right back to the way they were used to. Therefore, supervisors have to remain on top of the situation and pay close attention.
6. Controls can put in place to ensure the plan is being used; such as re-assessing the specifications used by the employers.
7. Once a quality control plan is in place and has been working for at least a month or a minimum of two weeks, everyone will be able to get together and offer their input on the plan. This will give people the opportunity to communicate issues on bottlenecks with the processes, improvements, and ideas.
8. Implementing a quality control plan must be done in steps to ensure it is successful. Always ensure that people are using the plan and continue on a regular basis to find ways that the plan can be improved.

For Marire, Nwankwo, and Sydney-Agbor (2014) quality control takes place through the use of feedback loop. They maintain that feedback loop is universal and fundamental to any problem in quality control and applies to all types of operations, whether in service or product. Marire et al (2014) identified the feedback loop as follows:

1. The choice of the control subject – here the feature of the product (good or services) becomes a control subject derived from sources which include stating customer needs for product features, technological analysis to translate customer needs into product and process features, process features which directly impacts the product features, Industry and government standard, and needs to protect human safety and environment.
2. Measurement Establishment – the means of measuring the quality of the goods or service is established. For Marire, et al (2014) in the establishment of measurement, there is need to clearly specify the means of measurement, the frequency of measurement, the way to convert the data to usable information and how the measurement reflects on the product.
3. Establish Standard of Performance - there is need to establish standard for performance, a quality goal,
target or objective. A standard of performance is a guide for achievement toward which effort is expanded.

4. **Measure Actual Performance** - The next step is to measure the performance of the product or process. To make this measurement, a sensor is needed. A sensor is a specialized detecting device designed to recognize performance and the resulting data (information) then becomes the basis of decision making.

5. **Standard Comparism** - Mariere, et al. (2014) stated that the act of comparing actual performance to standard is seen as the role of an umpire. The umpire may be human being or technological devices. This umpire is expected to carry out the following activities in standard comparism - compare the actual performance to the quality goal, interpret the observed difference, decide on the action to take and stimulate corrective action.

III. AGENCIES OF QUALITY CONTROL IN MANUFACTURING SECTOR OF NIGERIAN

Nigeria like any other country of the world has vested interest in regulating the quality of products and services. And just like any other country it has specific regulations, legislations, guidelines and acts, which are considered necessary and to be adhered to by the organizations in the production of goods and services. This is done with the sole aim of reducing or completely eliminating sub-standard products in the country. Policies were formulated establishing some agencies saddled with the responsibility of maintaining quality control in organizations. Prominent among the agencies is the Standard Organization of Nigeria (SON) for the manufacturing sector. SON is established by Act No. 56 of 1971 and has been amended three times in 1976, 1984, and 1990. The agency is a statutory body that is solely responsible for standardizing and regulating the quality of all products in Nigeria.

The National Agency for Food and Drug Administration and Control (NAFDAC) is another quality control agency in Nigeria. It is the major agency saddled with the responsibility of ensuring standards in the quality and safety of food products and process standards in Nigeria, (Joseph, 2017). The formation of NAFDAC was inspired by a 1988 World Health Assembly (WHO) resolution requesting countries of the world to help in combating the global health threat posed by counterfeit pharmaceuticals. NAFDAC was established by Decree 15 of 1993 and amended by Decree 19 of 1999 and the National Agency for Food and Drug Administration and Control Act Cap N1 Laws of the Federation of Nigeria, 2004. The agency replaced an earlier Federal Ministry of Health body, the Directorate of Food and Drug Administration and Control, which was considered ineffective because of the lack of laws concerning fake drugs.

Another quality control agency is the Consumer Protection Council of Nigeria (CPC). This agency was established under Consumer Protection Council Act, Cap 25, 2004 Laws of the Federation of Nigeria, to promote and protect the interest of consumers over all products and services. It is empowered to eliminate hazardous and substandard goods from the market, to provide speedy redress to consumer complaints and end the unscrupulous exploitation of consumers. Other quality control agencies include National Institute for Pharmaceutical Research and Development (NIPRD), Pharmacists Council of Nigeria (PCN). There are regulators for specific sectors of the supply side of the economy such as Nigerian Communications Commission (NCC) for telecommunications, Nigerian Electricity Regulatory Commission (NERC) for power & electricity, Nigerian Civil Aviation Authority (NCAA) for air transportation, Central Bank of Nigeria (CBN) and Securities & Exchange Commission (SEC) for financial and investment matters. In the education sector there is, Academic Staff Union of Universities (ASUU), National University Commission (NUC), National Teachers Institute (NTI), National Primary Education Commission, West African Examination Council (WAEC), the Joint Admission and Matriculation Board (JAMB), etc.

IV. QUALITY CONTROL IN EDUCATION/ACADEMICS SECTOR OF NIGERIAN

Human development is important for any society to make a mark in the world and the means to achieving this is through a veritable educational system put in place by the society. Though the primary and the secondary school level of education in Nigeria provide the basic socialization for individuals, the higher education is the key for human development towards a sustainable and overall wellbeing of the society. Higher education is a fundamental instrument for the construction of a knowledge economy and the development of human capital all over the world. Higher education is the facilitator, the bedrock, the driving force for the strong socio-economic, political, cultural, health and industrial development of a nation. Higher education institutions are key mechanisms increasingly recognized as wealth and human capital producing industries, (Peretomode, 2007). World Bank (2004) maintained that higher education is fundamental to all developing countries if they are to prosper in a world economy where knowledge has become a vital area of advantage.

Asiyai and Oghuvbu (2009) maintained that the quality of knowledge generated in institutions of higher learning is critical to national competitiveness. Quality education sharpens the minds of the individual and help transform the society economically, socially and politically. To achieve this is dependent on the quality of education in the higher institutions in Nigeria. The Federal Ministry of Education (2014) section 8 (59) outlines the aims of higher education as follows:

i. Contribution to national development through high level manpower training.
ii. Development and inculcation of proper values for the survival of the individual and the society.
iii. Development of the intellectual capabilities of the individual to understand and appreciate their local and external environment.
iv. Acquisition of both physical and intellectual skills which will enable the individual to be self-reliant and useful member of the society.
v. Promotion and encouragement of scholarship and community services.
vi. For national unity and the promotion of national and international understanding and interaction.

Section 8 (60) of the Federal Ministry of Education (2014) further stated that higher education in Nigeria should pursue these goals vigorously through teaching, research and development, knowledge generation and dissemination and international cooperation etc.

Quality of education is a dynamic, multi-dimensional concept that refers not only to the educational model, but also to the institutional mission and its goals, as well as to the specific standards of the system, facility, program or event. For Vlašić, Vale, & Puhar (2014) the pedagogical theory and practice has been trying to determine what the quality of education is. In education, it is only possible to determine the quality by comparing the results with the given goal, or by comparing it with previously established standards. Any human activity is identified by the quality of its product. The same rule applies to education. The quality of education is therefore responsible for the quality of its "product" students. To achieve the objectives of higher education in Nigeria standard must be maintained. For education to really serve as a veritable vehicle for socioeconomic growth and development as well as for the actualization of these lofty objectives of education in tandem, educational institutions must function optimally in relation to the set standards. It therefore becomes imperative for good quality in the administration, teaching and learning in Nigeria higher institutions. To achieve these some agencies, exist to see that quality is maintained in Nigerian higher institutions.

V. AGENCIES OF QUALITY CONTROL IN NIGERIAN EDUCATION SYSTEM

The National Universities Commission (NUC) was established as an advisory agency on higher education in the cabinet office of the First Republic of Nigeria. The NUC was charged with the responsibility of advising government on financial needs of the universities and to handle the planning of a balanced and coordinated development of university education in Nigeria. According to Adeoti (2015) these functions were further expanded with the enactment of Decree No. 1 of 1974 that transformed NUC from advisory capacity to a statutory body. And this was as a result of the centralization of university education in the country that saw the Federal Government take over all the existing regional universities in the country. University education in Nigeria increased in recent time with the efforts by governments, the private sector and religious organizations in establishing new universities and expanding the existing ones. Summarily functions of the commission include:

   i. Granting approval for all academic programmes run in Nigerian universities
   ii. Granting approval for the establishment of all higher educational institutions offering degree programmes in Nigerian universities;
   iii. Ensure quality assurance of all academic programmes offered in Nigerian universities; and
   iv. Channel for all external support to the Nigerian universities

Another agency for quality control in academics is the National Board for Technical Education (NBTE). NBTE is a principal organ of Federal Ministry of Education specifically created to handle all aspects of Technical and Vocational Education falling outside University Education. It was established by Act No. 9 of 11th January, 1977. In addition to providing standardized minimum guide curricula for Technical and Vocational Education and Training (TVET), the Board supervises and regulates, through an accreditation process, the programmes offered by technical institutions at secondary and post secondary school levels. It is also involved with the funding of Polytechnics owned by the Government of the Federation of Nigeria. The vision and mission for this agency is to be a world class regulatory body for the promotion of Technical and Vocational Education and Training in Nigeria; and to promote the production of skilled technical and professional manpower for the development and sustenance of the National Economy.

The last agency for quality control in education in Nigeria to be considered is National Commission for Colleges of Education (NCCE). This Commission for Colleges of Education was established by Decree (now Act) 13 of 17th January, 1989 (Amended Act 12 of 1993) to supervise teacher education in the country. The establishment of the commission was a resultant effect of the utmost importance accorded to quality teacher education by the Federal Government of Nigeria. Since inception, the Commission has continuously pursued goals of quality assurance in teacher education. The pride of the commission is based on the seminal philosophy in the National Policy on Education (NAPE) which states that “no education can rise above the quality of its teachers, (NCCE, 1993).

VI. METHODS OF QUALITY CONTROL IN EDUCATION

As earlier stated, quality control in education is an important issue, as parents, educators, and other stakeholders want to ensure that all students receive adequate training for the future. To ensure quality control in education the following methods may be employed:
i. **Standardization:** Quality control in education begins with the formation of school standards. Which involve a determination of what the students need to know at each level. This could be done by the institution or the government through the agents of quality control in education. The quality control standard establishes the requirement that students must meet for enrolment and promotions in the school. Quality control standards also lay out guidelines for the education requirements for teachers, such as possession of a valid teaching credential. Once school standards are set, the overseeing board can implement a cycle of investigation, policy changes and additions, and implementation that ensures that a school meets its standards.

ii. **Standardized testing:** In using this method students are given a test that measures their aptitude in required subjects. These tests are often administered by the teachers or a third party (external examination body). Standardized tests let school authorities know the level of student education as compared to the existing standard.

iii. **Teacher review:** In many regions, teachers are periodically observed by quality control experts, colleagues, or school management in order to assess their success at meeting quality standards. In determining a teacher's performance, observers may interview students, examine recent grades given, and judge whether the methods used in the classroom are truly adding to education. Using many different tactics to determine teacher performance level is often considered very important; teachers rated based on standardized testing alone may leave out important areas of learning that cannot be measured by tests.

iv. **Students and teachers feedback:** Teachers can give a clear picture of how a particular class is struggling or succeeding, while students are often full of valuable information about how teachers manage a classroom and how it could be improved. Paying careful attention to feedback can help create solutions to quality control lapses.

v. **Laws:** Laws are used to help improve quality control in education. Government can make laws establishing the functional prerequisites of the school and teachers qualification.

vi. **Inspection:** This is the periodic check of schools by a constituted authority to determine whether the school and programmes complied with the standard stipulated and to also judge the extent to which the schools comply with the standards established by the institution, State, or the National body.

VII. **IMPORTANCE OF QUALITY CONTROL IN AN ORGANIZATION**

Quality control is very essential both in the education and non-education sector. Below are some of the relevance of quality control:

a. **Encourages quality consciousness:**

The most important advantage derived by introducing quality control is that it develops and encourages quality consciousness among the workers in the manufacturing organization and the teachers in academics. This sense of quality will greatly help in achieving desired level of quality in service delivery.

b. **Satisfaction of consumers:** Consumers and students are greatly benefited and satisfied as they get better quality products and sound education on account of quality control.

c. **Reduction in production cost:** By undertaking effective quality control inspection and control over production processes and operations, production costs are considerably reduced. Inferior products and wastages are checked thereby bringing down the cost of production considerably.

d. **Most effective utilization of resources:** Quality control ensures maximum utilization of available resources thereby minimizing wastage and inefficiency of every kind. In academics teachers are employed following a stipulated qualification and standard thereby enhancing the quality of education.

e. **Reduction in inspection costs:** Quality control in academics and other organizations brings about economies in inspection and considerably reduces cost of inspection.

f. **Increased goodwill:** By producing better quality products to satisfying customer’s needs in an organization and producing of sound graduates in schools, quality control raises the goodwill of the concern in the minds of people.

g. **Improved employer-employee relations:** Quality control develops better industrial atmosphere by increasing morale of employees which ensures cordial employer-employee relations leading to better understanding and closeness between them.

h. **Increased sales and turnover:** Quality control ensures production of quality products which is immensely helpful in attracting more customers for the product thereby increasing sales and recommendations for the school. It is greatly helpful in maintaining existing demand and creating new demand for the product and enrolment in the school.

VIII. **CHALLENGES OF EFFECTIVE QUALITY CONTROL IN NIGERIA**

Nigeria like any other country strives to maintain some measure of quality control. But some factors appear to militate against effective quality control in Nigeria. Prominent among the challenges that hamper effective quality control in the
education sectors in Nigeria is inadequate funding. This is the greatest challenge facing Nigeria and making it difficult for good quality education that is capable of bringing about sustainable development is inadequate funding by federal, state and local governments. Lack of funding has made many academics and non-academics to work under difficult circumstances. Higher institutions lack lecture halls, well equipped laboratories, and workshops.

Politicization of Education is another big challenge to achieving quality control in education. Today, many educational institutions are run on political ground. In Nigerian schools today admission in universities, colleges, polytechnics, monotechnic, secondary and primary schools are sometimes guided by politics and not academic performance. A sensitive issue that crippled the development of education is the manner and the why the politician influence the recruitment exercise of teachers. Many people today are after securing job for their children just to have meal ticket not bothering whether their wards qualified or not. This has contributed to recruitment of many unqualified teachers in the school in Nigeria, (Mahmoud and Mador, 2013).

Poor implementation of Educational policies in Nigeria over time has affected the education sector. However, several factors appeared to hinder the smooth implementation of educational policies which result to poor quality delivery. According to Romina (2013) Nigerian educational policies are written by knowledgeable writers who have foresight and believe strongly in what they write for the future but the problem is when it comes to translating theory into practice by implementers. However, several factors could be added as inhibitors to smooth implementation of educational policies and thereby resulting to poor quality delivery. Such factors may include underfunding of education and misuse of available funds by school administrators, and other related agencies. When the funds meant to effectively facilitate the smooth running of a policy is diverted or misappropriated, it will hamper the objectives of such policy thereby leading to a dip in the quality of education offered by those institutions.

Furthermore, lack of vibrant staff development programmes hamper the quality services of the education sector. Most institutions of higher learning in Nigeria lack staff development programme for training and re-training of staff. Vibrant staff development programme on a continuous basis will help academics and non-academics to clarify and modify their behaviour, attitude, value, skills and competencies, (Romina, 2013). In this way, they grow and develop in their knowledge and thus become more effective and efficient in the performance of tasks. Romina (2013) further stated that staff development is paramount because knowledge of today is only sufficient for today. In this era of knowledge explosion and emergent knowledge-based economy, staff development should be the priority of any nation.

The quality of education in Nigeria has been hampered by poor leadership at the government level, the agencies of quality in Education, and school administrators. Various government Nigeria have not shown enough commitment to higher education development in Nigeria. One of the several indices for properly evaluating government commitment to educational development in any country is budgetary allocation and disbursement to education, (Romina, 2013). UNESCO had recommended 26% budgetary allocation to education based on GNP but the amount allocated to education by Nigerian government has continued to be smaller when compared to other African countries. Additionally, Romani (2013) maintained that poor leadership of some Nigerian university administrators has been a bane to the attainment of quality in higher education in Nigeria. The duty of leadership is to reduce problems within the system in order to enhance efficiency. But research has shown that most staff disputes in Nigerian institutions of higher learning since the nineteen eighties were attributed to the high handedness and tyranny of some administrators of the institutions (ASUU, 1994).

IX. CHALLENGES OF QUALITY CONTROL IN MANUFACTURING AND SERVICE-ORIENTED ORGANIZATIONS.

In Nigeria the manufacturing and service-oriented organizations face the challenge of non-awareness of techniques. Firms could encounter problems in the quality control practice if, it is not aware or ignorant of quality control techniques. Others are as follows:

i. Inability to understand the needs of customers: where a firm is unable to know what its customers need or their taste, it fails to produce quality products that will satisfy its customers taste.

ii. Cost of application: Sometime, a firm may know what its customers need and available techniques of quality control, the cost of applying the quality control techniques become a problem. This is because, applying quality control techniques could be very expensive and where a firm cannot afford the cost, it becomes a problem.

iii. Non-availability of equipment: This could constitute a problem to quality control practice in a firm where the needed equipment for effective quality control is not available due to cost and other reasons.

iv. Management attitude: The attitude of firm’s management can go a long way in affecting the quality control practice in the firm. Where management attitude is negative, may be the management does not care about the quality of products its firm produce or where management is not interested in providing all necessary equipment, finance and other supports needed then, it becomes a problem.

X. CONCLUSION

Human lives are dependent on the quality of products and services. To undermine quality in production could lead to economic waste and loss of life. So, to see to quality control is to establish well-defined controls that will help standardize
both production and reactions to quality issues. Therefore, the issue of quality control in an organization should not be toyed with by the owners of the organizations and the government.

XI. RECOMMENDATIONS

Due to the relevance of quality control in both the educational and manufacturing sector, the following recommendations were made:

The Education funding should be given urgent treatment. The government should meet the recommended 26% educational spending prescribed by UNESCO, which will boost higher education system. Institutions of higher learning in Nigeria should set up internal quality assurance and monitoring of lecture units to enhance good quality delivery. Adequate staffing should be properly enhanced so as to ensure efficiency and high productivity. There should be a review of curriculum content in order to meet the current societal needs of the people.

In the manufacturing sector, organizations should be able to device the quality control measure suitable for their products as will help in controlling the quality of the products. Organizations should be able to fund their quality control plan and measure; this will enhance the quality of their products and the trust the customer have on them. Finally, and the government monitoring team should intensify effort in monitoring and certifying the products produced in these organizations.

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