

System Approach as a Synopsis in Framing University Internal and External Quality Assurance

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Introduction

Internal and external quality assurance mechanisms are integral parts of university management designed to build and boost confidence of stakeholders in the products of the university in terms of student learning and character, innovation and research outputs as well as community servicing. At the same, the mechanisms encompass monitoring, assessment and evaluation of activities done by the university leading to increase in effectiveness and efficiency of the institution. It expresses the management consciousness of the labour market moving forces and her ability to brand product(s) in manners so conformable. Both assurances are complementary and mutually inclusive (Kolimullin, Khodyreva, and Koinova-Zoelher, 2016) though internal quality assurance is assumed to take precedence and pre-eminence over external. Besides, internal quality assurance tends to reflect more of peculiarities of a university while external quality assurance underscores the importance of group uniformity, comparability, exchange of information and student mobility among a consortium of universities in a nation or region.

With the passage of time, since the adoption and adaption of the concept of quality assurance into education from manufacturing and production industries, global trend of events has created the need to consistently review the means of doing the exercise. More so that the products of education including university education are considered not as tangible as in the industries nor are they quantifiable in precise terms (Babalola, Adedeji, and Erwat, 2007). In addition, it is a fact that the globe is dynamic and so are the expectations of stakeholders on relevance and essence of university education. A rider and agitating question is, will the university education satisfy diversity of expectations of the stakeholders? A related issue is that competition among universities nationally and abroad to attract patronage and participation in order to be solvent and for recognition is increasing and becoming

stronger. As a result, a university is expected to be run as a corporation and in collectivisation of access, commercialisation of learning, commoditisation of knowledge, computerisation of education and connectivity of institutions (UNESCO in Shehu, 2005) amidst dwindling resources. Similarly, globalisation, internationalisation and development in information and communication technologies (ICTs) space now affect and will continue to critically influence the thinking about procedure of quality assurance, most especially in breaking university monopoly, increasing international competitiveness, growing academic mobility and providing flexible access to education.

Following the description and development of quality assurance with a brief on influencing factors, it is clear that the last word is not yet said about how to deploy quality assurance in educational institutions, particularly in universities. For emphasis, changes in the immediate and remote milieu of universities presuppose regular review of quality assurance process, particularly for benefits of ensuring that universities, especially in developing countries like Nigeria, provide quality university education. In exacting, assurance of quality education explains why some universities are more subscribed to than the other. Other benefits of offering valuable and qualitative education are that it engenders stronger student and staff loyalty, lowers vulnerability to economic changes, and promotes ability to command higher funding and more autonomy (Vukasovic, 2002). Again, that there is no finality on the development and mechanism of quality assurance in university education, suggests there is room for improvement. Therefore, this paper deploys system approach to explain the relationship between three major components of the university – students, staff and facilities- and its influence on quality assurance structure and process. It is an exploratory and implicative paper. On describing the theoretical trusts of quality assurance and reviewing the place of university students, staff quality, and nonhuman resources of money, material and time in quality assurance system, implications for quality assurance reform, regarding information generation and management, assessment and reorganisation of administrative structures, inclusive participation and reward system for improved university productivity, are then drawn.

Quality Assurance as an Integrative System

Quality assurance (QA) is an amalgam with quality describing assurance. Amid, quality signifies standard, excellence, value, worth, eminence, made fit for use or purpose, indispensable characteristics or distinguishing attribute of a product or service and assurance represents certainty, confidence, promises, satisfaction, trust, or declaration that affirms or tend to affirm confidence in the product or service. With the consideration of the meaning of the two words, quality assurance may be defined as recognition, establishment and or continuance of the good worth, excellent level or standard of a good or service in a way to satisfy the end-users, stakeholders or

consumers. Simply, QA is a continuous building and sustenance of the stakeholders' confidence or trust in a good or service. That is, it is a process, and not one-short affair, spanning through every stage of production with attention paid to every stage in accordance to set standard and for the production of product fit for use or according to specification. For emphasis, in the process of assuring quality, high premium is placed on the product as determined by the consumers as well as the process. QA is then a process driven approach which leads to defining goals regarding product design, development and production for the product to meet the needs and expectations of customers with respect to functionality, design, reliability, durability and price (Vukasovic, 2002). In this wise, QA imbues responsibility and accountability into the production system. In other words, someone is responsible or accountable in ensuring that standard is adhered to at every stage of production in order to attract and sustain customers' confidence or trust. Conversely, the system should also reward outperforming workers. In addition, being a process, it necessitates testing the quality of the input, through-put and output against benchmark set by the organisation or supervisory agency using acceptable tools.

Now, imputing QA to education is to consider it as an industry with university and other educational institutions including kindergarten, primary school, secondary school, monothechnic, polytechnic, university, adult literacy centres and non-formal adult education institutes as examples of production firms. The university is responsible for the production of highly skilled and knowledgeable manpower with associated values well as delivery of other related services. In view of that, quality assurance process in the university is geared towards producing quality graduates to the satisfaction of the graduates themselves, their sponsors and the society. The QA process is equally goal driven and contextual. With reference to Nigeria, the goals of university education as stated in the National Policy on Education (Federal Republic of Nigeria, 2013: 27) are to

- a) Contribute to national development through high level manpower training;
- b) Provide accessible and affordable quality learning opportunities informal education in response to the needs and interest of all Nigerians;
- c) Provide high quality career counselling an lifelong learning programmes that prepare students with the knowledge and skills for self-reliance and world of work;
- d) Reduce skills shortages through the production of skilled manpower relevant to the needs of the labour market;
- e) Promote and encourage scholarship, entrepreneurship and community service;
- f) Forge and cement national unity; and
- g) Promote national and international understanding.

As a reminder, these stated goals suggest standard to be attained and they stand for declarations or promises that tend to arouse or arouse stakeholders' confidence in the university and university education. They represent primary or secondary qualities of the university. Primarily, a university is expected to generate knowledge as well as hard and soft skills in form of learning. Secondary qualities are manifestations of the primary qualities outside the university in the society, In essence, while a university may take pride in producing university graduates with honour degrees, the society would be interested in their contribution to their immediate and remote communities. The goals then present indices of quality assurance in university education and provide direction regarding what to assess or test and who could do the assessment but not how to assess. It may, therefore, be appropriate to say that process of quality assurance in education and university education in particular begins with the assessment of the philosophy and goals of the university or programme.

For emphasis, quality assurance has to do with production process (Lawal, 2019) and it requires knowledge of production variables which are inputs, production process, outputs and the environment. The environment could be likened to a store house that supplies the resources or inputs and in reverse, it receives products from the process as well provides informational feedback about the product on its quality, standard and relevance based on perceptive or formal assessment. The inputs comprise students as the principal 'raw materials', academic staff, non-academic staff, facilities, equipment, building, and policies. These inputs are processed through various interactions-students-staff interaction, students-students interaction students-facilities interaction and the like. As the interactions take different forms, they also take place in diverse situations such as committee meetings, in the classrooms, in staff offices, in the laboratories, on the sport fields and in examination halls. After processing, the students who are the raw materials are transformed to become the products with additional knowledge, improved skills and refined culture while other inputs are used up. Other by-products include research outputs, innovations, and community benefits. It is expected that the quality of the inputs and that of the processes will be assured through routine checks and testing to ensure that standards set are strictly adhered to. To that extent, the quality of the product is assured internally and/or externally. In other words, the quality of the product is a function of quality of the inputs and the manner the inputs are processed. The quality of the product is proven by the class of degree, performance at the level of education, competency and attitude in the labour market and as adjudged by the society (See figure 1). This description of QA reflects the position of UNESCO (1998) and Bhuiyan and Molla (2009) on quality assurance in higher education as the outcome of relationships among subsystems in terms of functions and activities taking place in higher educational institutions: teaching and academic programmes, research and scholarship, staffing, students, buildings, faculties, equipment, services, finance and the academic environment. These functions

and activities are safely classified as student characteristics, personnel factor and non-human-factor while the outputs are delineated as immediate and long-range outcomes (see figure 1). However, the figure does not project the essence of QA and the ‘how’ of assuring quality in university education as discussed in the next section.

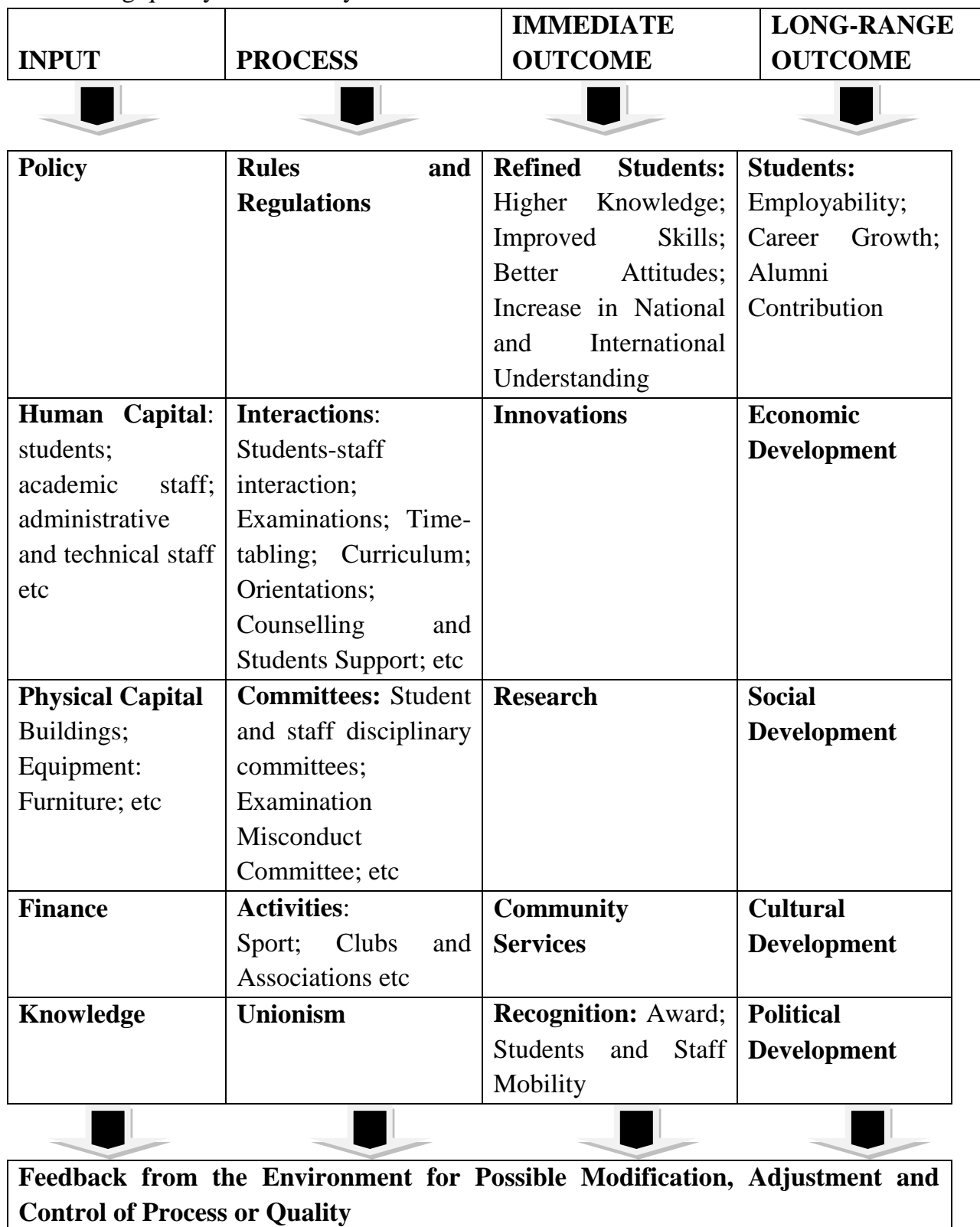


Figure 1: Quality Assurance as an Integrative System.

Ensuring Quality of University Educational Programme

Approaches, techniques and tools for quality assurance culminate into ‘how’ to assure quality of learning and programme development. Precisely, the ‘how’ reflects reasons for ensuring quality of university education; demonstrates interrelatedness and interdependence of inputs, process, immediate outcomes, and long range outcomes; and suggests, according to Gajanayake and Gajanayake (1993), information needed, sources of information, techniques to be used in getting information, who should be involved in collecting information, tools necessary to get information, how to analyse the information obtained and how the results will be used. In short, it is a process, regularly done by the university or external agent, which assesses activities and functions being carried out by the university as against predetermined standard or norm and with the purpose of satisfying expectations of the stakeholders, in terms of outcomes. In other words, even though achievement of result is paramount the process of achieving the result is of equal importance.

In a further explication, the authors are of the opinion that the process of how to assure quality of the university education should be guided by the purposes for QA exercise. On the whole QA is to ensure that concerned university or universities deliver on their mandate to the satisfaction of all stakeholders, including students, staff, university management, employers and professionals/professional bodies. In particular, QA makes university and its management to be accountable and strive to reposition the university or university system for improve delivery of its functions and services; enables informed decision-making on structures, facilities, methodology and administration on learning from the previous exercise(s); provides opportunity for information, knowledge and resource sharing among peers in order to instigate best practice and healthy competition; and encourages stakeholders to work together in supporting the university and also in providing valuable information that can foster improvement in the quality of university education. In the same vein, Council of Europe (2013), agreed that quality of education was closely linked to four inter-related purposes, namely: preparation for sustainable employment; preparation for life as active citizens in democratic societies; personal development; and development and maintenance, through teaching, learning and research, of a broad, advanced knowledge base.

On the consideration of the foregoing and with reference to figure 1, it is not in doubt as observed by the European Commission (2018) that QA approaches in university education would have to be holistic covering the entire system, its operations and actors to monitor the system performance, policy implementation, university and staff effectiveness, and individual student outcomes. Accordingly, the Commission prescribes external and internal mechanisms with external mechanisms providing information important for policy-level decisions and resource allocation, while internal devices offering information imperative for effective and efficient

management of the university, most especially in support of teaching and learning. The approaches are further delineated as accreditation, assessment, audit (Santiago, Tremblay, Basri and Arnal , 2008) and institutional visitation (Uvah,2005) with accreditation being comprehensive and focusing on mission, resources and processes; assessment or evaluation emphasising outputs; audit stressing processes; institutional visitation involving a systems appraisal visitation to an institution. Mostly, accreditation of programmes or universities are carried by external agencies and or professional associations using experts for the purpose of giving approval to establish programmes or universities; or giving right to continue to run such. Similarly, the locus of control of institutional visitation is external, usually at the instance of the visitor to the institution in question. In the case of audit, it is a mechanism of reviewing and certifying internal quality management, hence its locus of control is internal while that of assessment is in-between the two approaches, that is it either internal or/and external (Uvah, 2005; Santiago, Tremblay, Basri and Arnal, 2008). As expected, for internal quality assurance, the assessors, auditors or reviewers are predominantly from within the university comprising members of the university community including students whereas accreditation team and members of visitation panel are usually drawn from outside the university.

Techniques and Tools in Quality Assurance

Quality of Environment

This aspect is not being considered as important as it deserves. In contrast, it is important to interrogate the environment in which a programme is being run, from government administrative structure, government policies to the university's academic culture; goals, mission, interest and aspiration; administrative structure; and ideology. There are many questions one can raise concerning the influence of the environment on the quality of a programme, such as: Do Government policies obligate accountability and transparency? Are the policies supportive, directional and clear? How positive and strong is the relation between the University and the University? What are the resources available in the environment? Answer to these questions and related ones may suggest reasons why a programme has not received adequate resource support from the environment for the improvement of the quality of the programme. .

Techniques and Tools

- Appraisal of government policies regarding supportiveness, clarity and adequacy could be done through analytical study of relevant policy documents.
- Historical study of intervention(s) by relevant agencies.

- Interview could be conducted and depending on the reading level of .the population questionnaire could be administered on a randomly selected population to seek information about government attitude, community needs and so on.
- Observation or inventory of institutions, organisations, and resources in the environment could be carried out
- Particular to the University's internal environment, views of the members of the university community could be sought on the university vision, mission, goals, and aspiration; administrative performance; and academic culture that would enhance programme quality through case studies, simulation, interview and peer-review with other university or universities running similar programme.

Quality of Inputs

Again, inputs refer to every resource used up in the production of 'refined' output(s) Fajonyomi and Biao (2003), learners' interest before his or her exposure to a programme, available resources and what the programme has to offer (Obanya in Fajonyomi, 2003) or a collection of interrelated variables (Lawal, 2019 for details of indicators). Evaluation of the quality of the inputs could be likened to examination of the strength of a building foundation. This step informs decision-makers of whether adequate preparation has been made for the take off of a programme and indicates quality of materials to use in building up the programme. The following areas may be assessed:

- a. The entry level of the participants-knowledge, skills, experience, attitude prior to intervention;
- b. Available physical materials, conditions and quantity;
- c. Staff strength in terms of quantity and quality and administrative capacity;
- d. Adequacy and relevance of curriculum-textbooks, instructional materials, etc.

Techniques and Tools

- A survey of the characteristics of newly admitted students should be done-sex; marital status; age; social, economic and educational background of sponsor;
- Survey of the characteristics of academic and non-academic staff
- Assessment of attitudes and interests of newly admitted students
- Administration of battery of psycho-social tests on staff and students.
- Inventory and assessment of facilities or resource verification.
- Trying out and pretesting of learning materials and instructional media to ascertain relevance and suitability through qualitative and quantitative means.

Quality of Process

This entails assessment of the operation quality to inform stakeholders of the areas so far covered, emerging challenges and possible steps to improve quality. Assessment could cover areas such as students' attitude; students' achievement level; syllabus; mode of communication; reward system; interaction between academic staff and students; interaction between non-academic staff and students; interaction between students and available facilities; and, interaction among students.

Techniques and Tools

- Through dialogue, interview, or questionnaire information about students' interest, attitude or perception of the programme could be generated.
- Staff attitude towards the programme should be evaluated through interviews, informal discussions and questionnaire.
- Observation of academic and non-academic staff at work to assess quality of work.
- Keeping and examination of records of attendance, withdrawals and scores in teacher-made test would be of importance.
- Obtaining information with the use of checklist and inventory format about teaching load, space utilization, time utilization and global utilization would also be of value.
- Assessment of student support system- This is important as student support services play vital roles in university life, contributing to the academic, social, financial and personal support of students and potential entrants to enable them to succeed and flourish in higher education (Anca Priscariua,).

Internal Quality of Programme

This has to do with assessment of the quality of the product vis-à-vis the set goals for the programme which rests principally on the structures and mechanisms within the University. Mostly, information on academic and related activities to achieve the purposes for floating the programme with the support given by the university and other agencies in respect of the programme would be needed. According to Ulewicz (2013), it reflects the following dimensions: qualitative dimension with assessment of the goals and methods of their implementation; quantified dimension, involving periodic assessment of the total and current work; time dimension, which is assessment of the future and the past of performed tasks. In all, emphasis is placed on customers' satisfaction, in this case, principally the students

Techniques and Tools

- Construction of test on level of cognitive achievement and administration of social and emotional intelligence scales to assess affective disposition.
- Exposing students to tasks with performance evaluated using valid and reliable instrument.
- Administration of questionnaire, significantly open-ended questionnaire for students to freely express their views about the benefits derived.
- Capturing of indicators of programme efficiency-persistence rate, wastages and so on.
- Review of minutes of meetings of committees, department hosting the programme, or student association through the use of designed framework.
- Interviews and or informal discussion with selected sample of stakeholders including staff, students and their sponsors using interview checklist and discussion guidelines.

External Quality of Programme

This aspect involves determination of the impact of the programme on agencies outside the university, larger systems and the public (Weiss in Fajonyomi, 2003). The procedure engages accreditation, assessment, audit and visitation. The process tries to link programme performance in terms of immediate outcomes to long-range/impact outcomes. Al-Hassnawi and Al-Fatlawi (2013) described external quality assessment as a process that involves one or more external reviewers who report on a site visit and on the veracity of the information generated from the internal assessment process in order to improve standards and enhance quality of the programme. EQA through the accreditors and auditors mostly relies on a self-assessment study (Portfolio) done by the concerned university to authenticate and review information therein as against approved quality standard. Conventionally, the portfolio presentation covers the following areas:

- Programme mission and goals with philosophy and content.
- Departmental leadership and administrative structure (Department hosting the programme).
- University governance and relationship with the Department.
- Facilities, equipment and resources (e.g. libraries, recreation, laboratories and buildings) dedicated for the programme.
- Teaching and learning processes with all levels of interaction.
- Staff and student strength.
- Sources of financing the programme.

- Modes of communication among stakeholders including students.
- Evidence of shared responsibility, accountability and motivational mechanisms.

Techniques and Tools

- Data and information for this purpose can come from interviews with community leaders, employers of labour as well as observation of graduates at work places, and public forums, and the like.
- Analysis of rate-of-return to the programme.
- Survey research on the contribution of the programme to individual and or societal development
- Interviews of leaders in the community and selected sample of community members.
- Seeking of the opinions of employers, relevant professional bodies, officials of relevant ministry, agencies and departments.
- Opinions of alumni about the programme could be of immense benefit in assessing programme relevance to the world of work.

Implications for Improving Quality Assurance in University Education

Relatedness and Interdependency of Stages

System approach draws attention to the fact that QA, internal quality assurance or external quality assurance, is a process consisting of interrelated and interdependent stages and activities with performance and quality at every stage or of every function having bearing on others and determining the quality of the final outcomes. Similarly, Matorera (2018) noted that QA system in education consists of a corpus of integrated, aligned, complex elements that relate in some sophisticated way. Thus, it is imperative that every stage and every function or activity should be quality driven which calls for cooperation, collaboration and understanding among affected stakeholders in the QA process and in the acceptance and usage of results for the development of quality programme. It is important to add that students are critical stakeholders and they should be deeply involved from the beginning to the end of the QA process (Al-Hassnawi and Al-Fattawi, 2013). In situations where differences in opinion emanate along the chains of events such could be resolved through dialogue, negotiation and counselling (Balami and Fajonyomi, 2003) for all to relate together to achieve a common goal of quality programme delivery. Again, programme quality is mutually influenced by the immediate and distant environments (including international university community), therefore all-concerned should be sensitive to developments in the environments for direction on how to improve the programme.

Data Collection and Information Gathering

It is incontestable that QA process as proven by the system approach demands collection of large information and data (Kalimullin, Khodyreva and Koinova-Zoellner, 2016) on the quality of environment, inputs, throughputs, outputs and outcomes. One important thing is that the data and information well as the procedure must be reliable and valid for such to generate informed decision that will lead to the improvement of the quality of the programme. The temptation of falsifying data and information to earn commendation should be totally discouraged for its untold consequences on discovery. Another related issue is on data and information analysis, result collation and presentation of report. In all of this, high premium should be placed on the interests and level of understanding of the end-users or stakeholders. Perhaps, mode of presentation should be in a considerable mix of qualitative and quantitative form. More important is that the result of the every QA exercise should be effectively published and accessible to all stakeholders to encourage accountability and transparency.

Quality Culture and Reward System

Culture is simply described as ‘a way of life’. In that wise, assuring quality or ‘quality’ itself should be part and parcel of the ‘life’ of an organisation like university. Culture is learned, shared and dynamic (Bodley, 2009). So, quality culture (QC) is expected to be developed through structural, procedural and behavioural changes at the university level (Jawad, Jamshaid and Wahab (2015) and to this extent it *can be seen as the ability of the institution, program etc to develop quality assurance implicitly in the day to day work of the institution and marks a move away from periodic assessment to ingrained quality assurance* (Vukasovic, 2002:8). Based on this position, academic community should not see the process of quality assurance as imposition and mandatory compliance to standard externally imposed rather as an obligation requiring shared responsibility and commitment of every stakeholder. Entrenching QC in a university structure, therefore, would necessitate (as advised by Loukkola and Zhang, 2010; Sattler and Sonntagg, 2018; and others) sustainable and long term strategic planning; provision of a conducive university climate and appropriate infrastructure that foster participation, commitment, effective interaction, innovation without fear of losing pride; responsibility, accountability and empowerment through training and retraining ; monitoring, assessment and evaluation of academic and administrative processes against collectively defined standard as well as development and implementation of innovative reward system to reinforce quality delivery of service.

Conclusion

The primordial purpose of this chapter was to draw attention to how to improve the practice of programme quality assurance in higher education based on system

framework which reflects dynamism. The framework makes it clear that assurance of programme quality is a function of quality of the environment, process, output, outcome and feedback and demands strong collaboration and commitment of every stakeholder including students who are often relegated. Also, QA depends on the quality of information generated and pattern of communication which is determined by the procedure and tools deployed. As a result, there is need for strong support system from within and outside the university to beef up the capacity of everyone concerned, encourage innovation and creativity as well as spur determination to be 'better by far' as the motto of the University of Ilorin in Nigeria reads.

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