
Bojuwon Yusuf Bolaji and Hairuddin Bin Mohds Ali
Institute of Education, International Islamic University Malaysia.
bojuwon2003@yahoo.com, hairuddin@iiu.edu.my

Abstract

The long-standing challenges which have emerged, especially, concerning of inadequate funding, efficiency, academic standard, equity, quality and governance, lack of teaching and learning facilities, curriculum problem, human resource and technology input. This paper is to examine the construct validity of alternative QAEM leadership characteristics of leaders (LCL) construct. Also to observe whether the hypothesized model of the study fits the data collected for the alternative QAEM for NUES. Therefore universities need to match the ideal mission; vision and objective with the existing resources are judiciously adequate, efficient and intact, hence the objective need to be revised. A questionnaire was distributed to 1600 participants of which 1600 responded, which gave a considerable satisfactory response rate of 100%. The research employs a quantitative approach to survey the evaluation parameters through the process of validation that involve both exploratory and confirmatory factor analysis. The finding indicates with evidence of confirmatory factor analysis that the alternative QAEM LCL construct of accreditation instruments revealed that the goodness – of – fit threshold on the five – factor (innovation, communication, motivation, pacifier and implementer) were adequate.

Keywords - Quality, Alternative, QAEM and SCON.

1. Introduction

Nigerian Education System is generally conceptualized not simply as the standard for cultural transmission but the main vehicle for accelerating individual, community and national development. Education in general and higher educational institutions in particular, are fundamental for the construction of a knowledge economy and society in all nations (WORLD BANK, 1999). There have been an increase in number of universities ranging from 2(1960) to 128 in 2013(NUC 2013) established in Nigerian to support the essential role of university education. Strategies adopted by university education institutions should play a fundamental role in sustained future of an institution and also to meet today’s dynamic nature of the global competitiveness.
One aspect of an ideal university objective is that, it continues to strive towards enhancing quality assurance services to prepare the country human resources needed for the economic, political and technological development. Therefore universities need to match the ideal mission; vision and objective with the existing resources are judiciously adequate, efficient and intact, hence the objective need to be revised. A questionnaire was distributed to 1600 participants of which 1600 responded, which gave a considerable satisfactory response rate of 100%. The research employs a quantitative approach to survey the evaluation parameters through the process of validation that involve both exploratory and confirmatory factor analysis. This study addressed two questions.

1. Do all indicators of the leadership characteristics of leaders (LCL) [IN, CO, MO, PA and IM] represent the role of the leadership characteristics of leaders (LCL) as indicated in the proposed QAEM?
2. Does the hypothesized model of the study fits the data and hence proved to be the model of study for the alternative QAEM LCL for NUES

The importance and the power of education is implied in an education motto “no child is left behind and all children matters” (NPE, 1977). It has a highly philosophical assumption that every Nigerian citizen should have equal opportunity to education at all levels irrespective of sex, age, race, and nationality, and physical ability, political or social status. However, the Nigeria Educational System is generally conceptualized not simply as the standard for cultural transmission but the main vehicle for accelerating individual, community and national development. The structure and content of today’s educational system in Nigeria are derived largely from the well acclaimed 1969 outcome of the curriculum conference which provided the conceptual and doctrinal framework on which to build a true great Nigeria metamorphosed to the National Policy on Education NPE of the Federal Republic of Nigeria was launched in 1977; revised 1981, 1998 and with last revision in 2004(NPE 2004; Ukeje, 1985).

Education in general and university education institution in particular, are fundamental to the construction of a knowledge economy and society in all nations (WORLD BANK 1999). Nigeria has made great efforts to promote the development of university education, including the promulgated lots of policy of mass education for the country; in particular, the seven point agenda which education had the second highest budget allocation; Girl Child Education, Vision 2015; introduction of educational trust fund (ETF) for all the federal and state universities; establishment of 9 additional federal university in order to boast access and expansion of enrolment; approval of new private universities has developed rapidly in the last decades in terms of the number of both states and privates higher educational institutions hence, the establishment of these universities have become significant part of an increasingly diversified higher educational institution system in Nigeria (Pai Obanya, 1999; Ajayi Ekundayo, 2006).

2. The Development of Nigeria Education System

The origins of Nigeria's higher education system date back to 1934 when the colonial government established Yaba Higher College. However, the college suffered from high dropout rates and in 1943 the government set up a commission for advice on the higher education needs of the region (Okebukola, Shabani, Sambo and Ramon-Yusuf,
The emergence laudable initiatives in quality assurance initiative in the Nigeria education sector have been lacking due to the ineffective model. The long-standing challenges which have emerged, especially, concerning of inadequate funding, efficiency, academic standard, equity, quality and governance, lack of teaching and learning facilities, curriculum problem, human resource and technology input. Now, these old challenges have been argued by new challenges linked to the growing role of knowledge in economic development, rapid changes in telecommunications technology, and the globalization of trade and labor markets (Salam, 2001; Ajayi and Ayodele, 2002; Ajayi and Ekundayo 2006 and 2008; Ochuba 2001; Igbina-Akenzua 2007; Njoku 1994; Oguji 1987; Soludo 2004 Oladipo & Adepoju, 2007; Soludo 2004 and Ugwu, 2003; Igbuzo; 2006 Bojuwon and Hariruddin, 2013).

Nigeria geographical sovereignty is situated on the western coast of Africa and lies between latitude 40 and 140 north and between longitudes 30 and 150 East. The surface area of Nigeria spans over about 923764 km2 with Benin to the south along the Gulf of Guinea, Niger and Chad to the North and Cameroon to the East. Nigeria is the most populous country in Africa. Eighth most populous country in the world with a population of over 150 million, therefore making it the most populous 'black' country in the world. Listed among the "Next Eleven" economies, Nigeria economy is one of the fastest growing in the world with the IMF projecting a growth of 8.3% in 2010 and blessed with a large territory; diverse natural resources and agricultural space; with cultural diversity. Ethnic groups: Hausa, Fulani, Yoruba, Ibo, Ijaw, Kanuri, Ibibio, Tiv while the religions: Muslim 50%, Christian 40%, indigenous beliefs 10% and the language is English (official), Hausa, Yoruba, Ibo, and Fulani.

The system of administration of the country is divided into three tiers of governments (Federal, State and Local) thus the geo-political area is divided into six (6) zones (North-central, North-east, North-west, South-east, South-west and South-south). These zones consist of 36 states and 774 local government areas (FME, N.U.C 2008; Okebukola, 2002, 2005, 2010, Okojie, 2008; Ojedele, Ilusanya, 2006; Mgbekem, 2004; Bojuwon and Harudin 2013). The history of university education in Nigeria started with the Elliot Commission of 1943, which moved the establishment of University College Ibadan (UCI) in 1948. UCI was an affiliate of the University of London (Nigerian universities are hybrid of British and American models). University College was Nigeria's only university until 1960 when the country gained independence (Ike, 1976; Ibukun 1997; Okebukola, 2010). In April 1959, the Federal government commissioned an inquiry (Ashby Commission) which led to the establishment of several universities in different region such as Ife (Now Obafemi Awolowo University, Ahmadu Bello University Zaria and University of Lagos (1962) by the federal government. The establishment of university can be categories in generation. The 6 universities established during this period 1960-1970 are still referred to as first generation universities.

Followed by 1975-1980, the government established 7 universities instead of the 4 proposed in the plan and also took over the 4 regional universities in 1975. They were Universities of Calabar, Ilorin, Jos, Sokoto, Maiduguri, Port Harcourt and Bayero University Kano. All, known as second-generation universities. The third generation universities were established between1980s and early 1990s. They are Federal University of Technology in Owerri, Markaudi, Yola, Akure and Bauchi. While state universities were found in Imo, Ondo, Lagos, Akwalbom, Oyo and Cross-river states.
The fourth generation universities are those ones established between 1991 to date. They include more state universities, Nigerian open universities and private universities.

Consequently the overall responsibility of the Federal Ministry of Education is to ensure quality within the system, to encourage and initiate innovations, and to ensure that the schools maintain minimum standards of acceptable educational practice. It was also the responsibility of the Federal Government to encourage any willing persons to establish universities in Nigeria, through the NUC, and promised to support the University to become a model institution that would be the pride of the indigenes. The Ministry of Education has the major responsibility for education but other Ministries such as, the National Secondary Education Commission as well as statutory bodies referred to as Commissions which are prescribed in the legislation also play a major role. However, there are Commissions established and are charged with various responsibilities for different sub-sectors of the educational system (FME, 2009; Okebukola, P.A.O. 2002; Verspoor, 1994). There are:

1) The National Primary Education Commission (NPEC),
2) The National Secondary Education Commission (NSEC),
3) The National Mass Literacy, Adult and Non-Formal Education Commission (NMEC)
4) The National Universities Commission (NUC).

The administration, management and funding of the education system is shared mainly amongst the Federal, State, Local government, communities and private organizations. In addition there are other major role players at local government level, district level and in the immediate environment where the school is located (Ajayi IA, Ekundayo, H.T, 2006; Babalola J.B, Jaiyeoba AO, Okediran A, 2007; Ocho L.O, 2006; Anyambele SC, 2004; Oyeneye OY, 2006).

The evolution of NUC, which started as a Unit in the cabinet office in 1962 and became a statutory body in 1974, with the mandate of ensuring the orderly development of a well-coordinated and productive Nigerian University System (NUS) that assured quality and relevant education for national growth and universal competitiveness. The giant strides have been made in improving access to university education in Nigeria since independence, the only university before 1960 year of independence was the university college, now recognized as university of Ibadan. Hence between 1960 to date study has revealed that there is a tremendous increase and diversity of number of university in Nigeria. Today, the NUS currently had 128 Universities comprising 40 Federal universities, 38 State universities and 50 Private universities and three Inter-University Centres (IUCs) (Okojie, 2001 & 2007). NUC is the agent of the Federal Government for coordinating, financing, accrediting programmes and the over-all development of the Universities (Okebukola, 2002; Bojuwon, 2008; 2013 Okojie 2008). Thus, the reforms in NUC were aimed at addressing the challenges of access, quality assurance and programmes focus and stressed out that the performance of any university was primarily judged by the quality of its programmes and its ability to ensure discipline in the course of its activities (Okojie, 2011; Adegbite JGO, 2007).
The benchmark minimum Academic Standards (BMAS) were developed by the NUC. The BMAS documents provide criteria for the objective evaluation of all programme and discipline. Furthermore, each criterion has a component indices with varying weightings as contained in the “Manual of Accreditation procedure for academic programmes in Nigerian Universities based on the following criteria: these include Academic content 23, Staffing 32, Physical facilities 25, Library 12, Funding 5, and Employer’ rating 3 (NUC, 2002). The Status of the Accreditation Process by the NUC will now be sketched under three following headings: Full accreditation; Interim accreditation and denied accreditation. Full accreditation shall be granted to degree or academic programmes that satisfy the provisions of the (MAS) for a period of five academic sessions. Scoring at least 70% in each of the four core areas of academic content, staffing, physical facilities and library. Interim accreditation granted to programmes that have minor deficiencies that must be rectified within a stipulated period, the academic programme must attain an aggregate overall score of not less than 60%. Programmes with a total score above 70% but less than 70% in any of the indicated 4 core areas of academic content, staffing, physical facilities and library. Thus, is awarded Interim status for a period of not more than two academic sessions. Denied accreditation applies to any academic programmes which have failed to satisfy the Minimum Academic Standards Applies to programmes with less than 60% aggregate overall score. The re-visititation of the programme is at the request of the university concerned. University ceases to admit students into such a programme with effect from the next admission exercise (Okojie, 2008).

The research is to assist in the improvement of the practice of quality development in University Educational system by highlighting essential attributes of university education quality perception of present standard of Nigeria university system. Consequently, the alternative quality assurance evaluation model (QAEM) of leadership characteristics of leader(LCL) constructs for N U C in Nigerian university educational system, by which universities can critically look at their practices with a view to develop and improve on the existing accreditation criteria from a collection of diverse stakeholders and agencies concerned. Therefore, the objective of this paper was to examine the construct validity of alternative QAEM leadership characteristics of leaders (LCL) construct and to observe whether the hypothesized model of the study fits the data collected for the alternative QAEM for NUES.

3. Literature Review

According to a scholar views suggest that there is no established definition of the concepts of management, leadership and managerial leadership (Taffinder, 1995; Yukl, 2002; Adair, 2004; Mullins, 2005). In spite of the lack of agreed definitions Drucker, (1979) identify as management, Adair (1983) identifies as leadership, and Leithwood et al. (1999) identify as managerial leadership. Drucker (1979) sees management as a role as well as the social position and power of people who discharge it. Thus, they identify with the personal needs of subordinates by demonstration consideration, integrity, and passion for the activities they carried out. Leadership is also considered as the art of influencing an individual or individuals in a precise trend which encompasses casting vision, goal setting, objective and motivating people (Spendlove 2007). Leadership a term that is multifaceted in definition. Leadership on the other hand is a complex manifold process perceived as a set of qualities, values and behaviours demonstrated by
the leader that encourage the innovation, communication, motivation, pacifier, implementers. Others see it as a term that is referring to as contribution, improvement, and commitment of followers (Spendlove 2007). For instance, study outcome revealed that the most challenges of university administrator leadership within a university sector face is that of taking responsibility for the system that provide assurance of quality teaching, research and community development service within the technological development process in the environment (Gudo, Oanda, and Olel, 2011).

Furthermore, quality assurance of the products or the leaning outcomes of any university are demonstrated by the determination of the university administrators more than the values of the student, availability of human resources, facilities and the lecturers (Ndeithu 2007). To guarantee that standards and quality of educational provisions are being maintained in the universities, it is thus advocated that university administrator and management teams should understands the new challenges and effectively restructure the education institution to achieve projected outcomes based on the mission, vision and objective of the institutions.

University effectiveness is therefore necessary for managers to guarantee provision of quality university education in line with all the facilities needed and to be judiciously managed by the university administrators. In other to developed organizational effectiveness criteria, which will be similar to the anticipations from university management four effectiveness models were recommended by Pounder, (1999) in his study which is applicable across higher educational institutions, namely: Productivity – efficiency, cohesion, information management and planning - goal setting. All this above are concerning the behaviours or ability of leaders is concerned with his staff, cooperation, relationship, quality of his work and products, information needed to the stakeholders and his ability with the management team achieved the mission, goals and objectives and methodically ways to plan for the future. There is need for restructuring of the leadership, governance and management systems of each institution (Kinyanjui 2007). Leadership has to rethinking strategies on university education and also visionary and creative leadership is critical to the transformation of higher education. University administrators have to create conducive environment for the generation of knowledge (Kabaji 2010). Armstrong (2006) stated that leader is leading the human resource function, collaborating with other functions and providing leadership to them, setting and enhancing the standards for strategic thinking cited in by Sharifah, (2012).

Northouse (2007) defined that leadership is a procedure whereby an individual stimuli a group of individuals to accomplish a common goal. Leadership styles are behavioral models used by leaders when working with others (Fertman & Liden, 1999). Leadership style is the manner and methodology of providing direction, motivating people and achieving objectives. Obiwuru, Okwu, Akpa & Nwankwere, 2011 points out that Leadership styles in an organizations one of the predictor to effectiveness and it is one of the factors that play substantial role in enhancing the interest and commitment of the individuals in the organization. Furthermore, in institutions it was found that the way people are managed has a fundamental impact on both productivity and profitability of an organization which can usher in quality services (Sharifah, 2012). Furthermore, Rodrigues, C.A., (1993) in the work of Stogdill, R.M. (1974) acknowledges the following trait profile characteristics of a successful leader based on a review.
The leader is characterized by a strong drive for responsibility and task completion, rigor, and persistence in pursuit of goals, venture sameness and originality in problem solving, drive to exercise initiative in social situation, self-confidence and sense of personal identity, willingness to accept a consequence of decision and action, readiness to absorb interpersonal stress, willingness to tolerate frustration and delay, ability to influence another persons' behavior, and capability to structure social interaction system for the purpose at hand. p.81.

The higher the amount of perceived capability associated to assignment demand, the less enthusiastic subordinates will be to accept strong trend and control. Thus the institution needs a pacifier-oriented leader. The application of the above in this research will surely give an impetus to quality enhancement of the university educational institution by the respective university administrators with the use of the above.

Alternatively, research had further shows the characteristics of successful leaders are characterized by a strong drive for responsibility and tasks achievement, attentiveness and determination in search of a vision, mission and goals; undertaking some oneness and innovation in solving challenges; oblige to excises imitative in social situation, self-confidence and sense of personal uniqueness (Stogdill, 1974). Strong leader may have impact on the continued existence of the HEI (Askling, 2001). Successively, the main activities of university are teaching, research and scholarship therefore, the application of collegial decision-making, continuous debate and communication in university, assistance and incentives to staff at all level by setting a guideline, Procedure and system in place in order to have a positive effect on the quality of the work of both academic staff and non-teaching staff.

Osseo-Asare et al., (2005) highlight, leadership is a key factor in the success of the implementation in higher educational institutions. For that reason, the research findings by Begum Sayeda, Chandrasekhar and Rajendran and Prakash Sai Lokachari, (2010) proven that management leadership in university comprised three factors: Communicating a clear statement of mission; successful implementation of core processes with the help of empowered staff. The role of leadership in HEI UNESCO (1998) declared: The ultimate goal of management should be to enhance the institutional mission by ensuring high-quality teaching, training and research, and services to the community. This objective requires governance that combines social vision, including understanding of with efficient managerial skills. Leadership in higher education is thus a major social responsibility and can be significantly strengthened through dialogue with all stakeholders, especially teachers and students, in higher education.

Literature has recognized abundant studies on the achievement factors helping to triumph over these and most broadly are: employee involvement; management commitments; open communication; training; the development of an improvement plan and follow-up (Van der Wiele et al., 1996b; Wilkes and Dale, 1998; Van der Wiele and Brown, 1999; Ritchie and Dale, 2000; Samuelsson and Nilsson, 2002; Ahmed et al., 2003; Balbastre et al., 2005; Ford and Evans, 2006; Hartley and Downe, 2007; Ferrigno, 2003; Cardno and Fitzgerald, 2005; Lashway, 2003). In other aspects, elements connected to effective development of educational institution includes the importance of: enhancement of changed practice (Fletcher, 2003); meeting both frameworks specific
and individual needs (Honold, 2003); holding high expectations of learners who are linked to rigorous outcomes (Piggot-Irvine, 2006); and a situated or work embedded learning focus (Guskey, 2002; Peterson, 2002; Woodall and Winstanley, 1998 Cited in by Eileen Piggot-Irvine, 2011). Reinecke (2006) found that the potential for quality improvement need to be emphasis to staff members and they should be made cognizant that quality is not an additional task. Thus, the primary problem of academic leadership is how to support members to abandon old ways and obsolete values; fundamentally to unlearn and accept new philosophy (Elwood and Leyden, 2000). Mizikaci, (2003), Barnett, McCormick and Conners, (2001) demonstrated that transformation towards a more flexible structure fostering decentralization in order to facilitating the institutions both internal and external operation, this can be achieved by employ participation and effective leadership is a requirement for universities on the implementation of quality assurance system.

Finally, from the above, inadequate involvement of staff and students in decision making, non-existence of effective communication with stakeholders and non-equal employment opportunities in universities have the impact on quality of teaching and learning. Application of this in the alternative quality assurance model for NUC accreditation instrument will have a great consequence on the quality of university educational institution in Nigeria.

4. Methodology

The survey was performed in April to July, 2012. Data were gathered from a 1600 participants’ the sample cover 16 selected university in North central geo-political zone of Nigeria. Of these 350 were randomly selected for this preliminary study. Hence, the population for this study conform with the principle for sample size decision as projected by (Krejcie and Morgan, 1970).The targeted participants were university managers, deans, hods, directors, academic staff non-teaching staff and students, who had sufficient acquaintance about the quality assurance accreditation and implementation of quality assurance practices in their universities. Universities were selected to guarantee a certain interest in the quality management system as well as acquaintance with issue addressed in the survey scale questionnaire (Curry and Kadasah, 2002). Hence, it is vital to guarantee that the survey scale respondents do have the knowledge essential to answer the question correctly (Agus, 2000; Taylor and Wright, 2003). The average age of the participants ranged between 20 to 60yrs old.

Sampling

The sampling process begins by defining the frame. Thus, the sampling frame used in this research included students staff and administrators in the universities. These groups of respondents provide experiential feedback because of their direct involvement in the interactions with the institution, which are having enough experience in observing and evaluating the system. Probability sampling was employed because it allowed any individual had an equal probability of being selected from the population. Non-probability sampling is adopted (Sekaran 2003). For this study the criterion used in sampling is non-probability sampling because this will give a numerical source that a population should stand for it provides a statistical basis that a sample should represent
the target population and has the ability to generalize the finding results of the entire respondent population (Fink, 1995).

**Instrumentation**

The survey instrument methods are basically associated with quantitative research which gives the opportunity for the respondents the choice to his/her views and opinions about the subject matters thus enhance in-depth research of respondent’s experience. Hence, survey questionnaire is the most extensively used instrument for obtaining information from the respondents (Gillhams, 2008). Beneficially, using the questionnaire is comparatively economical, the standardized survey instrument will ensure anonymity and thus the questions can be met for a specific purpose (McMillan & Schumacher, 1989). After weighing the suitability of various research designs, and due to the in-depth coverage of this paper it has been observed that the most appropriate technique for the study is using the structured questionnaires. The data were gathered through a survey questionnaire that will represent alternative QAEM (LCL) constructs of NUC’s accreditation instruments. The paper carried out substantial measures in fulfilling the psychometric properties of the instruments/scale such as ensuring the validity and reliability and the presence of unidimensionality properties.

### ALTERNATIVE QAEM LCL OF ACCREDITATION INSTRUMENT

<table>
<thead>
<tr>
<th>No. Instruments</th>
<th>(LCL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Innovation</td>
<td>IN</td>
</tr>
<tr>
<td>IN1 (Q97), IN2 (Q98), IN3 (Q96), IN4 (Q102), IN5 (Q127), IN6 (Q101).</td>
<td></td>
</tr>
<tr>
<td>2. Communication</td>
<td>CO</td>
</tr>
<tr>
<td>CO1 (Q105), CO2 (Q103), CO3 (Q106), CO4 (Q109), CO5 (Q108), CO6 (Q107).</td>
<td></td>
</tr>
<tr>
<td>3 Motivation</td>
<td>MO</td>
</tr>
<tr>
<td>MO1 (Q112), MO2 (Q110), MO3 (Q113), MO4 (Q111), MO5 (Q115).</td>
<td></td>
</tr>
<tr>
<td>4 Pacifier</td>
<td>PA</td>
</tr>
<tr>
<td>PA1 (Q116), PA2 (Q117), PA3 (Q124), PA4 (Q125), PA5 (Q122).</td>
<td></td>
</tr>
<tr>
<td>5. Implementor</td>
<td>IM</td>
</tr>
<tr>
<td>IM1 (Q134), IM2 (Q133), IM3 (Q131), IM4 (Q132) IM5 (Q135) IM6 (Q128), IM7 (136).</td>
<td></td>
</tr>
</tbody>
</table>

The scale is interpreted as 1= Very strongly disagree and 7= Very strongly agree (Likert, 1932). In general, the sections of the constructs for the study are exhibited in Table1 above. The items of the questionnaire were extracted from the existing set of measurement scale, with minimum adaptation to fit the Nigerian HEIs context. Experts to ensure it fulfilled the content validity (Hair, 1998; Hinkin, 1998) subjectively assessed the first draft of the questionnaire. The questionnaire was submitted to quality expert, academician, researcher and a numbers of colleagues for feedback before being administered in pilot study and full -scale survey. These experts viewed that both the existing NUC measurement scale and the newly developed QAEM accreditation
instrument are too lengthy, which coincided with the prelude response received earlier from the students. Finally a pilot test was conducted to re-define the NUC existing measurement scale before questionnaire administration, mainly in term of clarity and ambiguity in wordings.

Data Collection Method

Upon completion of sampling, potential participants were contacted to ascertain their willingness to participate in the study. Next, the respondents were given an informed consent form describing the purpose of the study, procedures, and prospective risks and benefits of participation. The consent form explained the conditions for voluntary participation, confidentiality, and contacts for questions about the research and participants’ rights were administered.

Data Analysis

This section presents the statistical techniques to be used for each research questions and to test the hypothesis set for the study. The constant comparative method of data analysis was be used in this study to generate and verify theory (Glaser and Strauss 1967). These methods were used by the researcher simultaneously to code and analyze the data in order to generate proposition (Taylor and Bogdan, 1984). Marshall and Rossman, (1995) indicate that data analysis is the process of bringing order, structure and meaning to the mass of collected data. Thus, a balanced data would be gained from the participants involved in the research study. Phases of data analysis would be employed in this study. The quantitative data collected via questionnaire survey is analyzed using the Statistical Package for Social Sciences (SPSS) Version 18.0 to compute and to examine reliability and the construct validity of the proposed measurement model of the research questions and research hypothesis consequently.

Reliability Test

The assessment of the reliability and validity of the instrument was performed. Thus, the assessment of reliability and validity demonstrates goodness of measure (Fornell and Larcker, 1981; Byrne, 2001; Hair et al., 1998). To ensure standardization and to make it operational, the instrument alternative QAEM (LCL) was subjected to tests of reliability and validity (Sureshchandar et al., 2001). Reliability is a degree of the magnitude to which a multi-survey instrument produces pleasant results if repeated measurements are made (Malhotra, 2004; Brochado, 2009). Although several methods are available, the most commonly used one for evaluating reliability uses the Cronbach’s alpha (also known as the coefficient a), which characterizes the internal consistency of a given survey instrument. Hair et al. (2005) pointed out that the generally accepted lower limit for Cronbach’s alpha is 0.60. Hair et al. (2010) define reliability as the degree to the observed variable measure the true value and is error and free. The reliability of composite score should be assessed after unidimensionality has been acceptably established. The Cronbach’s alpha of most of the constructs demonstrated in this research is. 0.70 and above (Cronbach, 1951). For this paper to test the reliability of the instrument questionnaire, there are different types of reliability which include; test reliability, equivalence and stability reliability, inter-rater reliability equivalent forms
reliability, standard error of measurement and internal consistency reliability (Springer, 2010).

All the above measure type of reliability have been judiciously tested for, therefore this paper will only report the internal consistency reliability measure which is obtained by means of calculating Cronbach’s alpha for the determination of internal consistency of alternative QAEM (LCL) construct of NUC accreditation instrument. Cronbach’s alpha (a) was used to establish of the instrument consistency. Consequently, the weighted omega reliability coefficients for all the survey instruments in this research was computed for the alternative QAEM (LCL) construct of NUC accreditation instrument. This below table explains the procedures used in to assess the reliability and validity of the measurement instrument scales in the research.

<table>
<thead>
<tr>
<th>Techniques</th>
<th>Measurement Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reliability</td>
<td>Write the item clearly</td>
</tr>
<tr>
<td></td>
<td>Pre-tests of questionnaire</td>
</tr>
<tr>
<td></td>
<td>Pilot study</td>
</tr>
<tr>
<td></td>
<td>Statistically assesses in data analysis</td>
</tr>
<tr>
<td>Validity</td>
<td>Literature review concerning the approach taken for scale development</td>
</tr>
<tr>
<td>Content or face validity</td>
<td>Feedback from experts</td>
</tr>
<tr>
<td></td>
<td>Pre-tests of questionnaire</td>
</tr>
<tr>
<td>Construct validity</td>
<td>Pilot study</td>
</tr>
<tr>
<td>Convergent validity</td>
<td>Statistically assesses in data analysis using CFA/ EFA technique through SPSS and AMOS</td>
</tr>
<tr>
<td>Discriminant validity</td>
<td>Statistically assesses in data analysis using CFA/ EFA technique through SPSS and AMOS</td>
</tr>
</tbody>
</table>

Table: 2 Procedures used in to assess the reliability and validity of the measurement instrument scales in the research

The reliability values for the five unobserved variable are demonstrated below. The result of the reliability are demonstrated in **Table above**. These indicated that the variables representing the LCL of highly reliable constructs and are highly correlated, which demonstrated that they all seem to measure the same things. The result in the below table demonstrated a satisfactory Cronbach’s Alpha above the threshold of .70 (above reliability is above the threshold of (Nunnally and Bernstein, 1994). The result of the reliability are demonstrated in below Table 3.

Furthermore, Table 3 above explained the computed reliability index for alternative Leadership Characteristics of Leader (LCL) for all the five (5) dimensional factors, which determine the CACV for the 29 instrument of QAEM, construct (IN, CO, MO, PA and IM). Thus, all the dimensional construct s computed demonstrated CACV above the recommended threshold of 0.70. The result ranged from 0.890 to 0 0.981, which is exhibited in Table 3 above. This shows that the 29 instrument of LCL, which comprised 5 factors are well consistent in their representing the unobserved construct of LCL.
Five Instruments for leadership Characteristics of leaders (LCL) Indicators

<table>
<thead>
<tr>
<th>Components</th>
<th>Re-Named</th>
<th>No. Instruments</th>
<th>29</th>
<th>Reliability Cronbach Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Innovation</td>
<td>IN</td>
<td>IN1 (Q97), IN2 (Q98), IN3 (Q96), IN4 (Q102), IN5 (Q127), IN6 (Q101).</td>
<td>6</td>
<td>0.960</td>
</tr>
<tr>
<td>2. Communication</td>
<td>CO</td>
<td>CO1 (Q105), CO2 (Q103), CO3 (Q106), CO4 (Q09), CO5Q108), CO6 (Q107).</td>
<td>6</td>
<td>0.981</td>
</tr>
<tr>
<td>3. Motivation</td>
<td>MO</td>
<td>MO1 (Q112), MO2 (Q110), MO3 (Q113), MO4 (Q111), MO5 (Q115).</td>
<td>5</td>
<td>0.940</td>
</tr>
<tr>
<td>4. Pacifier</td>
<td>PA</td>
<td>PA1 (Q116), PA2 (Q117), PA3 (Q124), PA4 (Q125), PA5 (Q122.</td>
<td>5</td>
<td>0.890</td>
</tr>
<tr>
<td>5. Implementor</td>
<td>IM</td>
<td>1M1 (Q134), IM2 (Q133), IM3 (Q131), IM4 (Q132) IM5 (Q135) IM6 (Q128), IM7 (136).</td>
<td>7</td>
<td>0.900</td>
</tr>
</tbody>
</table>

Table 3 - Tests For Internal Consistency Cronbach Alpha Coefficients Value For The Alternative Lcl Qaem Accreditation Instrument

Finally, the Table 3 above a show, each of the combined variables used in the research. Thus, all the constructs of each of the unobserved variables will be the analysis for it internal consistency of the research constructs of the Leadership Characteristics of Leaders. The goals of these parts determine the reliability index for the combined five (LCL) unobserved constructs for the alternative QAEM construct s of NUC accreditation instruments. The research estimated CACV to show the internal consistency the indicator for each of sub-construct for the alternative QAEM constructs of NUC. The CACV estimates of 0.70 or better are considered acceptable (Nunnally and Bernstein, 1984).

Validity
The comparative test of validity involves the processes of assessing the validity of the two NUC accreditation instruments scale, namely a current quality evaluation scale and the newly developed NUC’s QAEM measurement scale. There are three types of validity, content, construct and criterion validity. A set of measures process correctly free from methodical and indiscriminately errors which represents the concept of study (Kinnear and Taylor 1998). Validity measure an exact perception it claimed to measure(s) (Sekaran, 1992 2003). According to David & Geoff (2009) identify Validity of research instrument refers to the degree to which it determine what it is expect to measure. The degree to which it is free from any methodical or non- systematic random error (Hair et al., 2003; Kinnear and Taylor, 1996). Conclusion of the suitability of a measure of particular inferences or decisions that result from scores generated (McMillan and Schumacher, 2001; Firdaus, 2005; Firdaus, 2006; Fraenkel et al., 2008; Kaplan and, 1992; Sekaran, 2000) reiterated, when there is high correlation between a measure and other measures that are believed to measure the same construct, convergent validity is obtained (Sureshchandar, Rajendran and Anantharaman, 2002).

**Exploratory Factor Analysis**

Exploratory Factor Analysis (EFA) using SPSS 20.0 was used to test the structure of the alternative QAEM (LCL) items. This included reliability analysis of each of the QAEM construct of NUC accreditation scales using Cronbach’s alpha coefficient in order to define the internal consistency of the instruments. The EFA was conducted using principal components factor analysis (PCFA) with varimax rotation. The drive of using principal component factor (PCA) analysis was basically to provide items that loaded according to their dimensional factors which thus represent the LCL construct of the study. The varimax method of rotation is recommended where items are assumed to be correlated with each other. The aim of using it is to simply and clarify the data structure and the rotation. In the paper specified the evidence of positive and moderate inter- correlations demonstrated between the alternative QAEM (LCL) unobserved variables which comprised five dimensional factors with 30 indicators scales. Therefore, this paper use varimax rotation which is an orthogonal rotation and this because, orthogonal produce factors that are uncorrelated; as compared to oblique techniques which allow the factors to be correlated and therefore, the paper use the orthogonal rotation since it produces more easily interpretable results (Costello and Osbome, 2005). A varimax rotation was deemed fit for the analysis of this paper and a combination of the screen test and to retain all factors with eigenvalue >1 (1.0) rule were used for determining the appropriate number of factors to be extracted.

Therefore for this paper, the researcher based the factor loadings of 0.50 and above were carefully chosen for interpretations. The aimed of chosen high factor loading is to get better fit of the instruments. Results from the reliability analysis of the scale of this paper were within the internal consistency of the CACV. Results of the PCA with varimax rotation technique of the first 29 items created a very established and fundamentally, five factor solutions which accounted for 76% of the variance. The two measures for intercorrelation between variable allowed the use of PCA. Bartlet’s Test of Sphericity was statistically important () while the Kaiser – Meyer – Olkin (KMO) measure of the sampling adequacy (MAS) was .879 demonstrating that the inter correlation were sufficient for PCA. The PCA with varimax rotation was performed and the result shows that five latent factors were extracted with eigenvalue greater than one, which explained
79% of total variance. Therefore, the outcomes debits that factor loading are between .578 to 958.

Other items with factorial complexity such as cross loading or below the threshold were removing from the analysis and further re-run again. The re-run items were all satisfactory. The operationalization of the model is based on the two application of the structure of the alternative model of NUC. This entails the application of two types of models mainly measurement model and structure model. After a satisfactory preliminary test to ensure there is no violation of Multivariate assumption, a CFA was run to assess the reliability and validity of the research instrument scales, the measurement model. Hence CFA was run to authenticate the validity of the measurement model, see table 4 demonstrated the measurement model, specifying the constructs and the manifest variables/indicators items used in measuring each of the dimensional construct. Thus the indicators/items used to measure the LCL. These results demonstrated an extensive internal consistency between individual items; in consequence the items have heartening covariance in the interim the alpha is very close to 1. The results established a high loading above the recommended value of all the indicators’/items measuring scale in the research. Therefore, instruments items; each item was predicted to load only on its relevant dimension. (Lu & Zhu, 2010). This following the guideline provided by scholars (Byrne, 2010; Hair et al., 2010; Kline 2011), all the five factors were named as innovation, communication, motivation, pacifier and implementer. The internal consistency of all the factor were obtained see table 4. The five factors are [(IN, 7 items); COM,] were expected to load on the second-order factor, the leadership contribution of leaders. See Table 4.

Structural equation modeling was applied and guided to response to each research questions and also to evaluate the model. This is a statistical technique that combines both characteristics of factor analysis, which enable the researcher in evaluating comprehensive interrelated dependent interaction and the effects of measurement errors in the structural coefficients simultaneously (Silván, 1999, and Hair, Anderson, Tatham and Black, 2006). Hypotheses’ testing of the research, the data analysis was performed in a three stage structural equation modeling, using the AMOS (analysis movement structure) version 18.0 model-fitting programme.
<table>
<thead>
<tr>
<th>Component</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>IN97</td>
<td>.898</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IN98</td>
<td>.930</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IN96</td>
<td>.900</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IN102</td>
<td>.698</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IM127</td>
<td>.890</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PA122</td>
<td>.876</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO101</td>
<td>.827</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CO105</td>
<td></td>
<td>.730</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CO103</td>
<td></td>
<td>.822</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CO106</td>
<td></td>
<td>.624</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CO109</td>
<td></td>
<td></td>
<td>.920</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CO108</td>
<td></td>
<td>.653</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CO107</td>
<td></td>
<td></td>
<td></td>
<td>.813</td>
<td></td>
</tr>
<tr>
<td>IM134</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.736</td>
</tr>
<tr>
<td>IM133</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.696</td>
</tr>
<tr>
<td>IM131</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.578</td>
</tr>
<tr>
<td>IM132</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.842</td>
</tr>
<tr>
<td>IM135</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.958</td>
</tr>
<tr>
<td>IM128</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.719</td>
</tr>
<tr>
<td>IM136</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.839</td>
</tr>
<tr>
<td>PA116</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.841</td>
</tr>
<tr>
<td>PA117</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.665</td>
</tr>
<tr>
<td>PA124</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.880</td>
</tr>
<tr>
<td>PA125</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.900</td>
</tr>
<tr>
<td>MO112</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MO110</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MO13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MO111</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MO115</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Extraction Method: Principal Component Analysis.*
*Rotation Method: Varimax with Kaiser Normalization.*
*Rotation Converged in 5 iterations*

Table 4- Rotated Component Matrix For The Alternative Qaem: Leadership Characteristics Of Leaders (Lcl) Qaem Constructs.
Consequently, using SEM, Hoe, (2008) points out that SEM is very significant in inferential data analysis and in testing hypothesis once the inter–relationships between the research are indicated before and supported in a well-established concept (theory). Furthermore, it is the belief of scholar that SEM has been found to be more flexible to the model relationship between multiple predictors and criterion variables. Thus SEM has become one of the techniques used in data analysis procedure by many researchers in recent year across various discipline First, based on using confirmatory analysis (CFA) empirical validation model of use the QAEM practice for NUC accreditation instruments in Nigerian universities. Next step, the research examined SEM via AMOS 18.0 to gauge good-fit of the alternative QAEM (LCL) applications on the NUC accreditation and performance of universities.

In this paper both the measurement model or the CFA and structural equation modeling (SEM) were applied in caring out the simultaneous statistical test. The primary aims of using CFA is to determine the ability of predetermined factor model to fit the data collected i.e. the observed set of data and the functions it performed when analysis is been carried out. it thus advocates for the establishment of validity of a dimensional (single) factor model, it also test for a set of factor whether there are correlated or uncorrelated thus examined the convergent validity and discriminant validity of a set of measures and it test the relationship between two or more dimensional factor loading (DeCoster, 1998).

The measurement model known as Confirmatory Factor Analysis (CFA) must indicates the interrelation of both the observed variables (indicators and unobserved variable (latent constructs) as demonstrated by Tabachnick and Fidell (2007) and Hair et al. (2006), which advocated that there was an essential causal relationship with the measure of the latent variable which can be called unobserved constructs and the observed variable known as indicators for each constructs (Hair, Anderson, Tatham and Black, 1998). The part in the research analysis demonstrated the structural equation modeling (SEM). The guideline for SEM procedure were judiciously apply as established by (Tabachnick and Fidell 2007 and Hair et al. 2006, Tabachnick and Fidell, 2001, Hair, Anderson, Tatham and Black, 1998). Their procedures are based on the following steps. In this paper QAEM (LCL) postulated that there must be a relationship between the measurement models of the LCL which comprised five indicators represent LCL model.

In order to perform a comparative patterned of unidimensionality of the alternative QAEM (LCL) construct of NUC accreditation instrument of five dimensional structure, a measurement model specified for each survey instrument for alternative QAEM (LCL) accreditation instruments. The confirmatory factor's analysis (CFA) is run and accomplished for all constructs by mean of structural equation modeling via Analysis of Moment Structures AMOS 18.0. To be explicitly, the fundamental factor schedules of QAEM (LCL) are examined to see how closely they described the acknowledged alternative QAEM (LCL). In contrast to exploratory factor analysis, where loading are free to vary, CFA allowed us to test the hypothesized model arrangement and force explicit QAEM construct of NUC accreditation instruments to load on a single factor were demonstrated in the paper earlier. The measurement CFA model of leadership characteristics of leaders consists of the essential factor of LCL as indicated by ellipse labeled as [IN, CO, MO, PA and IM]. The five factors, which were intercorrelated are indicated in by double headed arrow. Subsequently there were total of 29 measured of
observed variables (indicators), which are indicated by five rectangles after the summated score were carried out. Hence, it was postulated that the fundamental factors of LCL was the unidimensionality of five (5) factors model structure, which comprised of the indicators of IN, CO, MO, PA and IM. Second, indicators instrument that comprised (LCL) five first factor-order and one second-order factors. Therefore, each of these first-order factors was measured by various observed variable. The measurement CFA 5-Indicators model of LCL is represented in details. For this reason, only second-order factors were included in the confirmatory factor analysis will be used for the model fit analysis which constitute the five variables of LCL.

The dimensionality of the construct validity of alternative QAEM (LCL) construct of NUC accreditation instruments was based on the data collected from 1600 participants from the sixteen universities in North central Geo – political Zone of the Nigeria. The dimensionality of the LCL construct was sought through the principal component analysis (PCA). This was follow by applying a confirmatory factor analysis to conform the dimensionality of the LCL construct which comprised five latent variables with 29 indicators derived from the result of PCA.

The results of the construct validities of the alternative QAEM (LCL) of the five unobserved variables in the paper are determine by using CFA approach to examine the hypothesis set for this paper as follows.

1. Do all indicators of the leadership characteristics of leaders (LCL) [IN, CO, MO, PA and IM] represent the role of the leadership characteristics of leaders (LCL) as indicated in the proposed QAEM?
2. Does the hypothesized model of the study fits the data and hence proved to be the model of study for the alternative QAEM LCL for NUES

A confirmatory factor analysis was carried out to examine the adequacy of the measurement model of the alternative QAEM (LCL) construct. It was advocated by many scholar that measurement models should be verified for the reliability of the instruments when summated scales are used as predictors in analyzing via the structural model (Hair et al., 2010). The study has earlier conducted the CFA on each of the dimensional constructs of alternative LCL which comprised five dimensional latent variables (Innovation). The result shows that the entire measurement model tested through the structural model via AMOS version 18.0 (Arbuckle, 2008) were within the recommended threshold. The analysis of the measurement model of the data collected from 1600 participants from the sixteen universities in North central Geo – political Zone of the Nigeria used structural equation modeling to find the fitness of the alternative QAEM construct of NUC accreditation instrument. Based on the earlier result of PCA application on the LCL construct, the results show that alternative QAEM (LCL) constructs factor were extracted which were based on the PCA as initial hypothesized in the study. The five latent factors are as follows with their indicators.

1. The first unobserved variable on the LCL constructs is innovation (IN), comprised five items.
2. The second unobserved variable is communication (CO), which is determined by five items
3. The third unobserved variable is motivation (MO), which is indicated by five items
4. The fourth unobserved variable is pacifier (PA), which is predicted by five items
5. The final unobserved variable is implementer (IM), and is represented by five indicators

Thus EFA and CFA were employed to examine the measurement instruments which followed by the structure model of SEM.

Therefore, this paper intended to use some fit indices for the data collected for the alternative QAEM (LCL) construct of NUC accreditation instrument. Several indicators of goodness-of-fit are available for use, but this research will apply ten model fit will be used. In line with the use of model fit author in SEM advocated for more than one when evaluating the model fit to the data (Hair, et al., 1998; Bentler and Wu, 2002). The Chi-square likelihood ratio test statistic, which evaluates overall model fit by testing whether the model imitate the array of covariations between the observed variables, is described. A low and non-significant Chi-square value specifies a good fit of the model to the data. Supplementary indices that are stated include root mean square error of approximation (RMSEA), goodness of fit index (GFI), and adjusted goodness of fit index (AGFI) (Browne and Cudeck, 1993; Byrne, 2001). Mostly, a RMSEA values less than 0.10 is considered an acceptable fit. Similarly, values close to or above 0.90 on GFI is considered acceptable.

For this research, the results of the alternative QAEM (LCL) accreditation instruments revealed that the two sets of indices that are essential to report on, the fit indices and the parameter estimates which demonstrated the following output.

The test for fairness of covariance’s and means of fit indices used shows that Chi-square yields a significant to the data. The indices is \( X^2(2) = 68.406, P = 0.000 \). The GFI is an indicator of the extent of variance and covariances accounted for by the model and in overall it is considered a reliable degree of model fit. RMSEA, on the other hand, measures the inconsistency for each degree of freedom (how well would the model fit the population covariance matrix). Furthermore, the overall confirmatory factor analysis for alternative QAEM constructs accreditation instruments with LCL unobserved (latent) constructs that resulted in CFI .977, NFI.925, AGFI .924, GFI. 925, TLI .954, IFI .977 and RMSEA .107 which characterizes an inadequate fit of the model to the data because of the chi-square value, CMIN/DF(13.681) and the RMSEA (.107). Hence we reject the hypothesis. Likewise, the model fit statistics acquired in this research become more meaningful when compared to the measures obtained for alternative QAEM constructs of LCL.

Furthermore, standardized solution’s factor loadings meaningfully exceeded 0.50 and all factor Loadings were vastly substantial. It thus ranges from .68 to .84 and no standard error was out of range they are above the recommended value of .3. The square multiple correlation (SMC) which signifies the reliability index of the LCL constructs demonstrated good fit. It thus advocated that the SMC of construct should be above .3. The value range from .47 to .71. Finally, for the LCL QAEM construct the model failed to fit the data which mean it is not statistically significant, practically important and logically.
directed. The model needed to be re-modified to get better model to fit the data. Below demonstrated the details in Figure 1. Therefore, the model needs to be revised to get better fit

Chi-Square 68.406  
Df 5  
P .000  
CMIN/DF 13.681  
CFI .977  
NFI .975  
AGFI .924  
GFI .975  
TLI .954  
IFI .977  
RMSEA .107

Figure 1: The Results Of The Conceptualized Five (5) Factors Model For The Alternative Qaem (Lcl)

Furthermore, the outcome of modification of alternative Q AEM (LCL) accreditation demonstrated a good fit model to the data. The fit indices used shows that Chi-square yields a significant to the data. As illustrated in the Table. The indices is $X^2 (2) = 68.406$, $P =000$, CFI .977, NFI.925, AGFI .924, GFI. 925, TLI .954, IFI.977 and RMSEA was .107 and evidence of fit and demonstrated a reasonably close approximation in the research population as indicated in Figure 1 above.

Additionally, the outcome of re-modification of alternative Q AEM (LCL) accreditation demonstrated a good fit model to the data. The application of the overall confirmatory factor analysis after the summated score for alternative QAEM leadership characteristic of leader (LCL) constructs accreditation instruments with LCL unobserved (latent) constructs that resulted in $X^2 (2) = 19.28$, $P =000$, CFI .994, NFI.993, GFI .993, AGFI .974, TLI .986, IFI .994, the RMSEA .058 which characterizes an adequate fit of the model to the data. Hence we accept the hypothesis Hpo2 of the research. Hence, the factor loadings meaningfully exceeded 0.50 and all factor Loadings were vastly substantial, it thus ranges from .65 to .85 and no standard error was out of range they are above the recommended value of .3. The value of SMC range from .42 to .72. Finally, for the QAEM construct the model failed to fit the data which mean it is not statistically significant, practically important and logically directed. The model needed to be re-modified to get better model to fit the data. The figure below shows the result of the LCL.

The outcome of re-modification of Q AEM (LCL) accreditation demonstrated a good fit model to the data. Both Table and Figure resulted in $X^2 (4) = 19.128$, $P =001$, CFI .994, NFI.993, GFI .993, AGFI .974, TLI .986, IFI .977, IFI .994 and RMSEA. 0.058 depicts evidence of fit of the model to the data which signifying a reasonably close approximation in the research population. The parameter loading and the square multiple correlation shows adequate model fit to the data. Therefore, in this paper the
hypothesis is accepted based on the model fit indices we used which are within the cutoff point.

![Figure 2 - The Results Of The Re-Specification Of Conceptualized Five (5) Factors Model For Alternative Qaem (Lcl)](image)

The below table 5 shows brief description of the results

<table>
<thead>
<tr>
<th>FIT INDICES</th>
<th>MODIFICATION</th>
<th>RE-MODIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-Square (X²)</td>
<td>75.607</td>
<td>9.499</td>
</tr>
<tr>
<td>Degree of Freedom (df)</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>P. Value</td>
<td>.001</td>
<td>.002</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>.946</td>
<td>.994</td>
</tr>
<tr>
<td>Normed Fit Index (NFI)</td>
<td>.946</td>
<td>.993</td>
</tr>
<tr>
<td>Adjusted Goodness-of-Fit Index (AGFI)</td>
<td>.834</td>
<td>.957</td>
</tr>
<tr>
<td>Goodness-of-Fit Index (GFI)</td>
<td>.967</td>
<td>.996</td>
</tr>
<tr>
<td>Tucker-Lewis Index (TLI)</td>
<td>.842</td>
<td>.964</td>
</tr>
<tr>
<td>Incremental Fit Index (IFI)</td>
<td>.948</td>
<td>.994</td>
</tr>
<tr>
<td>Root Means Square Error of Approximation (RMSEA)</td>
<td>.182</td>
<td>.088</td>
</tr>
</tbody>
</table>

*Table: Test of Unidimensionality For The Alternativeqaem: Lcl Accreditation Instruments*
Chi-Square ($X_2$), Degree of Freedom (df), P. Value, Comparative Fit Index (CFI), Normed Fit Index (NFI), Adjusted Goodness-of-Fit Index (AGFI), Goodness-of-Fit Index (GFI), Tucker-Lewis Index (TLI), Incremental Fit Index (IFI), Root Means Square Error of Approximation (RMSEA)

5. **Summary and Conclusion**

The empirical analysis demonstrated that the modified five-factor structure with 29 survey instruments resulted in more valid, reliable estimates, greater construct validity, greater explain variance, greater loading, and subsequently a better fit of the model to the research data (Table). Consequently, beside the above outcomes, the modified alternative QAEM accreditation instruments also had the advantage of being more specific in the area that are fundamental in evaluating quality assurance of programmes within university educational institutions. Therefore, From the result of the reliability, the EFA and the PCA shows that all indicators of the leadership characteristics of leaders (LCL) [IN, CO, MO, PA and IM] represent the role of the leadership characteristics of leaders (LCL) as indicated in the alternative QAEM constructs of NUC accreditation instruments. It can be advocated that the quality assurance service in university educational institutions can be regarded as five –factors structure with 29 survey instruments with a conceptually clear and distinct dimensions namely (innovation, communication, motivation, pacifier and implementer). This research demonstrated that alternative QAEM (LCL) performed credibly.

**Recommendation**

The new basis of empirical confirmation from this analysis data offers some substantial implications. The research contributes to the body of knowledge in various capacities methodological, theoretical and managerial features–as discussed below. In this research there are some major important theoretical contributions of which reflected according to the outcomes of the research methodologies and the employment of quantitative strategy. The result of the finding buttressed the correlation for the alternative constructs of NUC accreditation Instruments demonstrated by the outcomes of the research. The main improvement of the models summarized in established precisely for university educational institution is their acknowledgement of the importance of the research, teaching and learning experience in quality assurance administration resourcefulness. They are some model developed specifically for Higher education which university educational institution is one of them; it is advocated that they are compatible with the foremost character of education than the industry models. Thus from the result, for instance, Owlia and Aspinwall (1996) develop quality characteristics. The results of this research have vital implications to university managers, proprietors of university, students’ academic and non-teaching staff. In line with this, the quality assurance-assessment constructs of NUC accreditation instruments would help university administrators and other management teams to improve the administration of the quality assurance service through a laydown standards criteria measurement list of strengths and capacities for enhancement, instituting and execution of and development strategy carried out by the educational institution.

This research further, suggests that university must successfully put into practice all the QAEM practices in order to accomplish overall utmost benefit from the proposed
QAEM realization in university through support of the National University Commission who are mandated to oversee the development of university in Nigeria.

Consequently, it will assist enhancing the service provided by the university in general. It could be used as an effective instrument to encourage stakeholders at the university institution of learning to participate in effective and resourceful activities that will bring development into the sectors. Hence, the findings provide psychometric validity and reliability of the instruments pertaining to quality improvement in the context of Nigeria university educational sector.

Consequently, in other to successfully accomplish the assistances of alternative QAEM construct of NUC accreditation instruments; it is very vital for university educational institutions to understand the dimensionality features of quality assurance service benefits, to specify different benefits, and to invest resources for improving university on a long-term basis. Universities that do not comprehend the diverse components of quality assurance are likely to often complain about the effectiveness of alternative QAEM constructs of NUC accreditation instrument’s application or to basically sustain the NUC accreditation without full accreditation of programmes. Consequently, university may need to distinguish the underlying interactions between the benefits for the alternative QAEM constructs of NUC accreditation instruments and provide enough resources in the development of quality of university educational institutions.

From the results of this research, further investigation can be advanced on the following suggestions. The overall outcomes of the research have several implications and contribution for quality assurance of in the university policy objectives. Hence some of this implication and contribution to alternative QAEM in the area of designing the curriculum, funding, facilities, human resources, activities of university administrators, management commitment, communication, innovation, motivation of staff, implementation of the mission and vision of the university. With this research, the issue of quality assurance evaluation of the university education in Nigeria has been addressed in order to describe the contributing factor and their respective weight in the overall quality assurance evaluation of the university from a prospective management staff including vice-chancellor, NUC staff, academic staff, non-teaching staff, director/deans/HODs and students in the North Central Geo-Political Zone of Nigerian.

The research also provides recommendations on quality improvement of the university institutions based on its judgments. Applying psychometric analyses and the other measurement model used in this research (EFA, FA/PCA, CFA through SEM) techniques to test the psychometric properties that have demonstrated to be the utmost applicable when exploratory surveys of this kind of research need justification for a great amount of university educational institutions and objectivity. Hence, it thus provides evidence of validity and reliability of IP QAEM constructs of NUC accreditation instruments. The research tried to fill in the gap noticed in the literature on the subject of quality assurance evaluation constructs of NUC accreditations instruments at the university educational institutions sector as most researches do not look at quality assurance evaluation contributing factor independently.

This paper is subject to several limitations. First, the data of this study were obtained through survey and relied on the perceptions of the participants. Second, it
should be well-known that the literature has established that the relations among various quality assurance evaluation practices are more complex when they are assess as individual university practices. The results of this research have vital implications to university managers, proprietors of university, students’ academic and non-teaching staff. This research demonstrated that the QAEM (LCL) practices are crucial for quality assurance enhancement, and the five LCL dimensional construct practices maintain the relevance of the quality assurance practices. Consequently, as the university managers widen and maintain their universities QAEM system, practices in order to achieve the efficiency of the whole QAEM system university educational institution in Nigeria.

It was recommended that universities administrators of these universities should purposefully take short term leadership courses to enhancement their managerial skills as a substantial step towards delivery of quality education. The skills acquired should be sufficient to respond to the challenges of quality education bedeviling the universities. More quality assurance procedures in university institutions will usher in a rigorous transparent and quality enhancement initiatives by the university administrators leadership should be confidently entrenched into quality management and it services provided in order to upkeep constant efforts to enhance the quality of provision (Becket & Brookes 2006). The university administrators should ensure that administrative and management structures of the universities they govern should be examined and restructured to create efficient, effective use of facilities to avoid wastage of resources, duplicated responsibilities and overlapping mandates. Power to make decisions should be based on (faculties, institutes and departments) and other management teams. Universities administrator should have the capacity for leadership and be above board, bearing in mind the fact that the university system is an all-encompassing institution that thrives on merit. Their activities should be strengthened to enable them to discharge their functions effectively. The recruitment and appointment of deans, Hod and others should be done competitively at all levels and the government should appoint only men and women of integrity and proven antecedents as Vice-Chancellors university administrators have to create conducive environment for the generation of knowledge.

Reference


Kaiser-meyer-olkin. (2010). Example of factor analysis method section reporting (pp. 1–4)


JMR, Journal of Marketing Research, 16(1), 64–73.


students in New Zealand and the USA. The Journal of Services Marketing, 13(2), 171 - 186.


Ukeje, B. O. (1985) http://www.stan.org.ng/pages/curriculum.htm 20/05/08


ISSN: 2289-4519


Verspoor MA (1994). Introduction, improvement and innovation in higher education.


Nigeria is the most populous country in Africa


