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**RELATIONSHIP BETWEEN DISTRIBUTED LEADERSHIP,
QUALITY ADMINISTRATIVE AND ACADEMIC PROCESSES
AND INSTITUTIONAL EFFECTIVENESS IN PUBLIC
UNIVERSITIES IN NIGERIA**

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**DOCTOR OF PHILOSOPHY
UNIVERSITI UTARA MALAYSIA
2016**



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Abstrak

Kajian terdahulu menunjukkan bahawa kepemimpinan teragih adalah berkesan dalam penambahbaikan sistem universiti dan mencadangkan sebagai pembolehubah pengantara dalam kajian masa depan. Walau bagaimanapun kajian tersebut terhad kepada kepimpinan teragih yang melibatkan sistem pengurusan universiti awam di Nigeria. Oleh itu, kajian ini mengkaji peranan pengantara bagi kualiti pentadbiran dan proses akademik dalam hubungan antara kepemimpinan teragih dan keberkesanan institusi. Kajian ini juga meneroka isu yang menghalang keberkesanan universiti awam di Nigeria. Pendekatan kaedah campuran telah digunakan dalam kajian ini. Data kuantitatif dikumpulkan daripada 346 pensyarah yang dipilih melalui persampelan multi-tahap dengan menggunakan instrumen, manakala lapan responden termasuk pentadbir universiti dan pensyarah dari 10 universiti awam di lima zon geo-politik di Nigeria dipilih secara sampel bertujuan untuk ditemu bual dengan menggunakan soalan separa berstruktur. Dapatan kajian ini menunjukkan tahap sederhana dalam amalan kepemimpinan teragih, pelaksanaan proses pentadbiran dan akademik yang berkualiti, dan keberkesanan institusi. Keputusan juga menunjukkan hubungan positif yang signifikan antara kepimpinan teragih, kualiti pentadbiran dan proses akademik dan keberkesanan institusi kecuali kepimpinan teragih yang tidak berkaitan dengan keberkesanan institusi yang mencadangkan keperluan untuk pemboleh ubah perantara. Kajian ini mendapati bahawa proses pentadbiran dan akademik yang berkualiti menjadi pengantara signifikan antara hubungan kepemimpinan teragih dan keberkesanan institusi. Hasil kajian kualitatif mendedahkan bahawa pembiayaan, rasuah, sistem mentor dan penyeliaan yang lemah, dan sistem berpolitik di universiti telah menghalang keberkesanan universiti awam. Kajian ini menyimpulkan bahawa keberkesanan universiti boleh diperbaiki melalui kepimpinan teragih dan proses pentadbiran dan akademik yang berkualiti. Kajian ini menyumbang kepada bidang kepimpinan teragih dalam konteks pengurusan yang berkualiti di institusi pendidikan. Kajian juga memberikan implikasi kepada perlunya pengamal dan pembuat dasar menyusun semula kurikulum selaras dengan keperluan industri dan global dalam melaksanakan program pembangunan kepemimpinan untuk pentadbir universiti di Nigeria.

Kata kunci: Kepemimpinan teragih, Keberkesanan institusi, Kualiti pentadbiran, Proses akademik, kualiti pengurusan

Abstract

Previous studies have shown that distributed leadership enhances the effectiveness of the university system and suggested mediating variables in future studies. However, there are limited studies about distributed leadership been carried out in Nigeria public university system. Therefore, this study examined the mediating role of quality administrative and academic processes on the relationship between distributed leadership and institutional effectiveness. The issues impeding the effectiveness of public universities in Nigeria were also explored. This study utilized a mixed method approach. The quantitative data were collected from 346 lecturers selected through a multi-stage sampling technique using a survey instrument, while eight respondents including the university's administrators and lecturers were purposively selected for interviews using semi-structured questions from the 10 sampled public universities in five geo-political zones in Nigeria. The results showed a moderate level of distributed leadership practices, quality administrative and academic processes implementation and institutional effectiveness. The results also show that there are positive significant relationship between distributed leadership, quality administrative and academic processes and institutional effectiveness except distributed leadership which was not related to institutional effectiveness, which suggest the need for mediating variable. It was found that quality administrative and academic processes significantly mediated the relationship between distributed leadership and institutional effectiveness. The qualitative findings revealed that funding, corruption, poor mentoring and supervision, and politicization of the university system were hindering the effectiveness of public universities. It was concluded that university effectiveness can be improved through distributed leadership, quality administrative and academic processes. The study contributes to the field of distributed leadership within the context of management quality in educational institutions. The study also implies that there is a need for both practitioners and policy makers to restructure the curriculum to align with the industries and global requirement as well as implement leadership development program for university administrators in Nigeria.

Keywords: Distributed leadership, Institutional effectiveness, Administrative quality, Academic process, Management quality

Dedication

To my loving wife, Dr. Mrs. Gladys Kayode for your love, support, encouragement
and sacrifice to be alone even few months after our wedding

To my son, Donatus Kayode whom because of this programme, I was not opportune
to be with him in his early months of birth

To my grandmother, Madam Felicia Ibitolu from whom I learnt that all things are
possible through faith in God and perseverance

And in loving memory of Iyanuoluwa Ibitolu (1997-2015) and Tunrayo Ibitolu
(1994-2015) whose untimely death will forever remain in my heart. May their gentle
souls rest in peace!

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I sincerely appreciate the thoughtful comment and unstinting advice of the members of the Thesis Examination Board, Prof. Dr. Zulikha Jamaludin (Chairman), Prof. Dr. Shahril @ Charil Hj Marzuki (External Examiner), Assoc. Prof. Dr. Mohd Hasani Dali (Internal Examiner), the Dean's representative and Mr. Azri (the secretary to the panel). My appreciation also goes to the panel for my proposal defence. I wish to acknowledge Dr. Muhamad Dzahir Kasa, Dr. Ismail Hussein Amzat, Madam Norshamshiza mat Isa and all other members of staff of School of Education and Modern Languages for their support throughout my study period.

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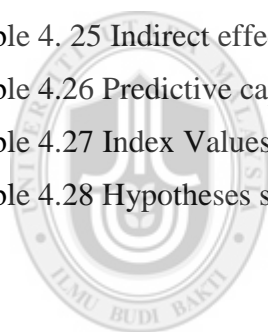
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List of Abbreviations

AVE	Average Variance Extracted
CB-SEM	Covariance-based Structural Equation Modeling
CLT	Cooperation within the Leadership Team
CR	Composite Reliability
CR	Composite Reliability
DA	Deming Award
DL	Distributed Leadership
DLI	Distributed Leadership Inventory
EFQM	European Foundation for Quality Management
EQA	European Quality Award
FRN	Federal Republic of Nigeria
HOC	Higher Order Construct
HOD	Head of Department
HRM	Human Resource Management
ICT	Information and Communication Technology
IE	Institutional Effectiveness
IPMA	Importance Performance Matrix Analysis
JAMB	Joint Admission and matriculation Board
LF	leadership Function
LV	Latent variable
MBNQA	Malcolm Baldrige National Quality Award
NPE	National Policy on Education
NUC	National Universities Commission
OP	Organizational Performance
PDM	Participative Decision Making
PLS	Partial Least Square
PS	Policy and Strategy
QACP	Quality Academic Process
QADP	Quality Administrative Process

RBV	Resource Base View
RD	Research and Development
SEF	Supportive Environment/Facilities
SEM	Structural Equation Modeling
SFRP	Staff Recruitment Process
SPSS	Statistical Package for Social Science
STAD	Student Admission Process
STD	Student Development
TQM	Total Quality Management



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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The ultimate business of any organization including educational institutions is customer's satisfaction in terms of quality. The issue of quality process and output has been on the priority list of many nations' universities in the world including Nigeria. Despite the fact that the denotations and importance ascribed to quality are numerous; it has been a difficult and vague term to describe (Magutu et al., 2010; Oduwaiye, Sofoluwe & Kayode, 2012; Pieffer & Coote, 1991). There is no general agreement about its meaning but all meanings are tailored towards the final product or the processes in which such products or the services being rendered are produced. As the customers or end-users' perceptions of the product or service-based meaning is essential, the opinion of the institutions rendering such services on the process-side will be most helpful (Magutu et al., 2010; Sahney, 2011a, 2011b; Sahney, Banwet, & Karunes, 2010).

The history of university education in Nigeria can be traced back to 1948 when the university college, Ibadan; the first premier university was established. This was closely followed by the establishment of four other universities between 1960 and 1962. The latter are usually referred to as, the first generation universities. In their efforts at addressing the needs and aspirations of the common man in finding solutions to the economic, political, educational and socio-cultural problems; these institution of higher learning began to struggle for quality improvement. Due to the increasing population of the Nigeria nation and consequently increase in the demand for university education, the government and private individuals/groups began to rapidly establish additional

universities. In Nigeria, at present, there are 129 active universities and these are comprised of 40 federal universities, 38 state owned universities as well as 51 privately owned universities (NUC, 2014).

Towards the improvement of quality in university education, the federal government in 1962 established the National Universities Commission (NUC) as a managerial and supervisory unit under the cabinet bureau. By the Act No. 1 enacted in 1974, the NUC turned out to be a constitutional body in charge of coordinating the university system in Nigeria (Alani & Ilusanya, 2008). By and large, the mission of the National University Commission as stipulated by the decree governing the establishment of this regulatory agency of the Federal Ministry of Education (FME) became safeguarding the logical growth and improvement of a sound, synchronized and dynamic university structure that would assure quality of education towards universal competitiveness and the development of the country. The National University Commission accomplishes this goal through the approach of the following obligation: endorsement of programmes and courses in the universities; deciding and safeguarding the minimum university benchmark for both curriculum, admissions and graduation; universities' supervision; authorization and accreditation of universities' programmes. The NUC also establishes parameters for and processes of setting up of private-owned universities.

However, in response to recent increase in competition in different sectors of the economy including university education world-wide and most especially in universities in Nigeria, there is the need to deliver high quality products (graduates) at a minimal cost. This undoubtedly requires strong political and institutional leadership. Leadership is the most influential factor to influence the success of quality in educational sector (Kanji, 2008). Leadership and quality administrative and academic processes in the

university system cannot be separated; as leadership is a good determinant of quality administrative and academic processes.

While drawing attention to the significance of vocational and administrative aspect of quality; Juran (1986) recognized crucial roles in the procedures of quality supervision. This involved forecasting, control and harmonization as the phases for quality enhancement. It has been pointed out by Juran and Gryna (1993) that, the intention of any managers include moderating the causes of errors and attaining a position where the overall expense to sustain quality is minimized. As stressed by Ishikawa (1985); Walker, Henderson, Cooke, and Creedy (2011), the essence of training, quality circles and the use of cause-consequence illustration is for problem solving and realization of constant development in the system.

Indeed, Deming (2003) suggested a framework that can bring improvement in the educational system which include team-teaching, supportive learning, site-based management, and result-based education. It is an approach of integrating all actions, functions and procedures in the universities so as to accomplish a constant improvement of quality roles with the stakeholders' satisfaction of product and services rendered to them. It can also be regarded as the usage of the excellence notion towards the entire process of all the management tasks in order to guarantee total satisfaction of the customer.

Since 1945, emphasis on research has swung from an exploration for behavioural peculiarity towards a quest for actions or activities that brings about improvement in the subordinates' satisfaction and accomplishment (D. G. Bowers & Seashore, 2011). Therefore, universities and their academic leaders are confronted with the obligation of

providing learners with the contemporary mastery competency expected of them after their graduation from the university system (Trilling & Fadel, 2009).

In a study on electronic learning in Nigerian universities conducted by E. C. Madu and Pam (2011), it was discovered that, there is inadequate e-learning facilities and negligible students access in Nigerian universities. This notwithstanding, in all countries of the world, there is a broad conformity that university teaching and learning can and should be greatly improved. These improvements first and foremost are expected to come from university lecturers in terms of effective means of tutoring, effective use of modern technologies, clearer course objectives, and students' assessment relating to course objectives (Alnassar & Dow, 2013). However, these may be very difficult to achieve without the support and supervision of an immediate or the overall leaders because they need to be led in becoming an active participant in their own learning by being explicitly taught learning skills in terms of learning through doing and practicing skills and procedures, discovering information and connecting their learning by setting it in context. According to Alnassar and Dow (2013), individual lecturers are required to become more effective in their classrooms and students need to develop a greater intimacy in the mastery of learning both in the classrooms and during their individual study time. As learning is dominant to the goals of university education; the fundamental task of university leaders therefore is to enrich students' learning outcomes in their various universities (Rhodes & Brundrett, 2010).

According to Cruz (2011), there is mount up evidence of obstacles to institutional effectiveness which include lack of supportable attention by the leaders of various institutions, inadequacy of the assessment techniques, poorly planned systems to make use of assessment results as well as low commitment of lecturers. Institutional

effectiveness therefore, is the degree to which an institution is meeting its stated goals, mission and objectives (Welsh & Metcalf, 2003). It is based on an impact-oriented philosophy of universities continuous improvement. Consequently, the effectiveness of the university system is not operating in what is taught and how it is taught, but what students have been able to learn. What is not also captured is how much time and money is spent in doing research, but to what extent is new knowledge generated through research. It is not captured in the number of hours used up in community outreach, but rather the impact of those functions on the society. That is, institutional effectiveness is not the means to an end, but the end itself.

The university therefore should discover its effectiveness by evaluating those outcomes. According to Serban (2007), institutional effectiveness is the competency of the university system to match its performance to established purposes as stated in its mission. The basis of institutional effectiveness is an effective evaluation program that determines outcomes and informs the public of the ways in which institutional programs and services positively affect students, the community, and the society (Banta, Lund, Black, & Oblander, 1996). However, stakeholders' desires are ways of transforming or enhancing the standards of the university system (Bush, 2010).

The goals of university education in Nigeria as contained in Section B, sub-section 59 of the National Policy on Education include the contribution to the development of the nation by means of pertinent work force training; improving and instilling correct standards towards individual and community continued existence. Others include: enlarging the conception of the learners to know and be pleased about their native and external surroundings; obtaining both substantial as well as logical expertise that will make all learners to be self-directed and helpful community members as well as

upholding global and domestic understanding (FRN, 2004). The policy highlighted how such aspiration could be attained and this include teaching; employee advancement programmes; research and series of service learning programmes. As laudable as these objectives are, very little progress has been made in actualizing them because the potential of university education to produce high quality graduates in Nigeria is compromised (Olasehinde-Williams, 2012).

In a study conducted by Agabi, Obasi, and Ohia (2012), there is substantial evidence that prospective employers of skilled labour considered university graduate practical skills, professional ethics, management ability and entrepreneurial skills as largely inadequate and that these graduates are only good in theoretical knowledge. The accreditation Processes of the NUC shows that universities in Nigeria are improving drastically (NUC, 2012b) but at the same time, the society is complaining bitterly that the educational standard of the institutions of higher learning in the country is drastically falling. In a recent survey of universities carried out across the globe, no university in Nigeria was ranked among the top 400 universities in the world. According to Darma (2013), it is even more discouraging to realize that no universities in Nigeria met any of the criteria or indices used in the assessment of the global universities ranking.

Despite the huge turn-out of graduates annually, Nigeria is still not able to meet the essential needs and aspirations of the generality of the population. Employers of labour worry that numerous graduates today are generally unemployable except they are first put through a crash remedial programme (Okojie, 2013) while universities abroad have been hesitant to recognize many Nigerian university certificates without subjecting the graduates of such institutions to other rounds of qualifying examinations (NUC, 2004;

Oyebade, Oladipo, & Adetoro, 2008). The pressures encountered by universities in their drive to be more competitive, efficient and better adapted to the needs of their stakeholders, have all led to a growing and unprecedented level of interest in organizational performance evaluation of institutions of higher learning and in particular, university education in Nigeria (Morrison, 2010).

Consequently upon the preceding situations, there is the need to assess the core process of university education in Nigeria in terms of administrative and academic process; while institutions are expected to make a valuable and transformative decision in regards to institutional leadership disposition. According to Arrington (2010), there is a need for contemporary thinking that will bring about a spanking leadership practice which would enhance the accomplishment of university goals and thereby remove the obstacles blocking their effectiveness. For that fact, this study tends to identify the relationship between distributed leadership, quality administrative and academic processes and institutional effectiveness in Public universities in Nigeria.

1.2 Evolution of university education in Nigeria

The first tertiary institution established in Nigeria was the Yaba Higher College which was founded in 1934. There was a high dropout rate that made the Nigerian nationalists to criticize its existence as a sub-standard level of education (Erinosho, 2007) and these made the then British colonial government to constitute the Ashby Commission in 1959 to examine the feasibility of establishing university education in the country (David, 2013; Jubril, 2003). The commission's recommendation was subsequently adopted and the first university called University College, Ibadan was established in Nigeria in 1948 which began as a university college of London.

However, in early April 1959, the federal government set up the Ashby Commission in order to make some recommendations for the country's desires towards higher education in its initial twenty years. Before the submission of its report, the eastern regional government established its own university at Nsukka (University of Nigeria in 1962). The execution of Ashby report brings about the founding of the University of Ife in 1962 currently known as Obafemi Awolowo University situated at the western region. Following this was the establishment of Ahmadu Bello University in Zaria in 1962 by the Northern Regional government and University of Lagos by the Federal government. Six other universities were established between 1960 and 1970; and by 1974, there were a total of seven federal universities in Nigeria. These existing universities conducted their individual concessional examinations and also admitted their own students. Unfortunately, this method of admission uncovered serious limitations as well as wastes of resources in the course of conducting the concessional examination, most especially on the part of the applicants (Busayo, 2010).

Moreover, realizing the role of university education as the spark plug for development, Nigeria embraced programmes and policies that predisposed the social demand approach to the supply of education. This led to the inclusion of university education in the concurrent list in the Nigerian constitution in 1979 (Idumange & Chukwuemeka, 2009). The urgent needs for vocational and technical skills in Nigeria paved the way for the establishment of the third generation universities between 1980 and 1990. These included the Federal Universities of Technology at Yola, Oweri, Akure, Markurdi and Bauchi. At about the same time, six state universities in Ogun, Imo, Akwa-Ibom, Ondo, Lagos, and Cross-River were established. Due to the increase in the university enrolment as shown in Table 1.1, the federal government continued to encourage individuals and corporate bodies/organizations to partner with the government in the

establishment of more universities so as to reduce the problem of access to university education.

The fourth generation of universities were founded amid 1991 and up to the present time of this study. These institutions include federal, state and private universities. A total number of universities in Nigeria as at present is one hundred and twenty nine (129) comprising 40 federal, 39 state and 50 privately-owned universities.

Table 1.1

University education demand and supply in Nigeria between 1980 to 2012

Year	No. of Universities	Application	Admission	% Admitted	Unplaced	% Unplaced
1980/1981	30	145,567	24,191	16.6	121,376	83.4
1981/1982	30	180,728	22,408	12.4	158,320	87.6
1982/1983	30	205,112	29,800	14.8	175,312	85.2
1983/1984	30	191,583	27,378	14.3	164,205	85.7
1984/1985	30	201,234	27,482	13.7	173,752	86.3
1985/1986	30	212,114	30,996	14.6	181,118	85.4
1986/1987	30	193,774	39,915	20.6	153,859	79.4
1987/1988	30	210,525	36,356	17.3	174,169	82.7
1988/1989	30	190,135	41,700	21.9	148,435	78.1
1989/1990	30	255,638	38,431	15	217,207	85
1990/1991	34	287,572	48,504	16.9	239,068	83.1
1991/1992	34	398,270	61,479	15.4	336,791	84.6
1992/1993	34	357,950	57,685	16.1	300,265	83.9
1993/1994	34	420,681	59,378	14.1	361,303	85.9
1995/1996	34	512,797	37,498	7.3	475,299	92.7
1996/1997	36	376,827	56,055	14.9	320,772	85.1
1997/1998	-	419,807	72,791	17.3	347,016	82.7
1998/1999	-	321,268	78,550	24.4	242,718	75.6
1999/2000	-	418,928	78,550	18.8	340,378	81.2
2000/2001	-	467,490	50,277	10.7	417,213	89.3
2001/2002	39	749,417	90,769	12.1	658,648	87.9
2002/2003	53	994,381	51,843	5.2	942,335	94.8
2003/2004	54	1,046,950	105,157	10	941,793	90

Table 1.1 Contd.

2004/2005	56	841,878	122,492	14.5	719,386	85.5
2005/2006	75	916,371	76,984	8.4	839,387	91.6
2006/2007	80	806,089	123,626	15.3	679,846	84.7
2007/2008	89	911, 653	107,370	11.8	804,284	88.2
2008/2009	113	1,054,060	128, 595	12.2	925,465	87.8
2009/2010	114	1,369, 491	188, 442	13.8	1,181,049	86.2
2010/2011	117	1,493,604	356, 981	23.9	1,136,623	76.1
2011/2012	129	1,503,931	500, 000	33.25	1,003,931	66.75

Sources: Ajayi and Ekundayo (2008); Alani and Ilusanya (2008); Aluede, Idogho, and Imonikhe (2012); Sofoluwe, Akinsolu and Kayode (2013).

Note: There was no admission in 1994/1995 session due to the prolong strike by the Academic Staff Union of Nigeria Universities (ASUU).

1.3 Background to the Problem Statement

University education in Nigeria are faced with the mirage of problems and challenges among which are those that are related to institutional leadership (NUC, 2013; Oladipo, Adeosun & Oni, 2009; Sofoluwe, Akinsolu & Kayode, 2012), poor funding (S. Akinyemi, 2013; Ekundayo & Ajayi, 2009; Oguntoye, 2000), access problems due to students' population explosion (Aluede et al., 2012; Chukwurah, 2011), poor quality of teaching and learning outcomes due to inadequacy of modern instructional facilities (Adedeji & Olaniyan, 2011; Alade, 2011), planning and implementation problems (Adegbesan, 2011; Agabi et al., 2012; Ali, Sidow, & Guleid, 2013; Arong & Ogbadu, 2010; Bello, 2011; Ehigie & Akpan, 2004; Ekong, 2013; Ekundayo & Ajayi, 2009; Lawal & Oloyede, 2013; Olanrewaju, 2009; Onuka, 2012) as well as poor quality of graduates produced (Obadara, 2013a; Okojie, 2013) .

Other problems include examination malpractice resulting from unwillingness on the part of the students to study hard, resistance to change on the part of employees, poor knowledge management, lack or inadequate coaching and mentoring, inadequate

incentives for performance and development of lecturers; lack of adequate research knowledge growth (Adedeji & Olaniyan, 2011; Alechenu, 2012; Okebukola, 2006), negative influence of a corruptive and valueless political system, and questionable service to the community (Akindele, Oginni, & Omoyele, 2012; G. M. Akinyemi & Abiddin, 2013; Anka & Khaskhelli, 2011; Bello, 2011; Ekong, 2013; A. T. Johnson, 2009; Oladipo, Adeosun, & Oni, 2012; Oyedeji, 2012; Sofowora, 2011).

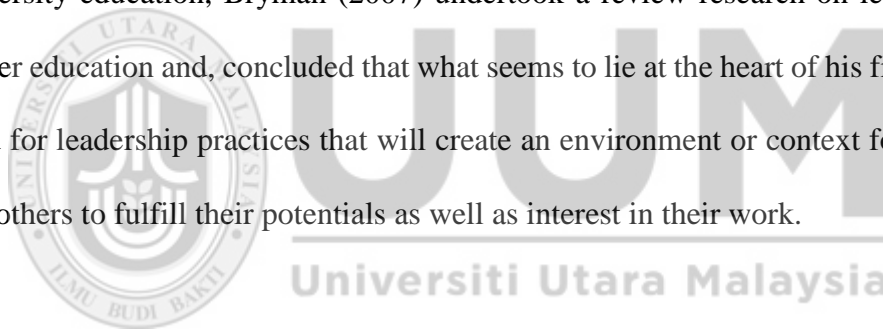
An analysis of employer surveys and labour statistics in Nigeria by Dabalen, Oni, and Adekola (2001) shows that the rate of unemployment of university graduates in Nigeria is 22 percent and this has reduced to 9.9% at the end of 2015. Moreover, the study according to Dabalen et al (2001) reveals that Nigerian university graduates are not properly trained and this makes them to be unproductive in their job. Besides, graduate skills are gradually deteriorating since the last 10 years and, low competency most especially in written, as well as oral communication are the prevailing situations. Inadequate practical and technological competencies of our graduates constitute a huge knowledge gap. This was reported by NUC (2004) in their study on the evaluation of the expectations of university graduates by employers of labour. The results of that study showed that many unemployed graduates are roaming the streets and more embarrassingly, those who were fortunate to get employment had to go through remedial training with the intention of bridging the huge knowledge and skills gaps left over from university education.

As noted by Soludo (2012), the employment problem in Nigeria is not that there is no job but rather that there are no competent individuals to do the jobs. According to him, university education occupies a superlative position as drivers of change and improvement in any given economy, most especially considering its major themes of

focus which include teaching, research and community service. Unfortunately however, the university system in the country has some lapses especially in the content area in terms of administrative and academic processes which according to Olasehinde-Williams (2012), has been compromised by university leaders, lecturers, administrative staffs, students and even the government. Soludo (2012) further decried this status quo and the consequence of producing graduates who are not only unsuitable for crucial employment, but who likewise lack the mindfulness to drive rivalry and development that are necessary for today's world economy. This was to illustrate the quality of graduates produced in Nigerian universities. Although, there has been major issues of what quality is all about in the university system as there is no one major definition of the term and therefore the concept of quality has been perceived diversely by separate individuals in distinct ways. In order to find a lasting solution to the decline in the quality of education in Nigerian universities, factors that led to poor quality of graduate products that were earlier highlighted need to be addressed.

S. Akinyemi (2013); Nok (2006); Oguntoye (2000) studied the impact of funding on quality assurance in the Nigerian education system especially in the areas of administrative and academic processes. Other studies have also been conducted on the role of ICT in quality management implementation and its impact on school effectiveness (Akuegwu, Ntukidem, Ntukidem, & Jaja, 2011; Kouame, 2011; Lawal & Oloyede, 2013). Chukwurah (2011); Egbokhare (2013); Sofoluwe, Sule, Medupin, and Olatokunbo (2012) have also examined the influence of students' access on the quality of education. According to them, the result of their findings revealed that, if input with respect to students is weak in terms of quality of students admitted, then the output of the graduate produced may be of poor quality.

To ensure quality in university education, leadership is perhaps an essential actor that bestows vision to the individual institution and for maintainable provision of needed work force (Chen, Kirkman, Kanfer, Allen, & Rosen, 2007; Pandi & Rao, 2007; Prasad & Bhar, 2009; Sahney et al., 2010). This was supported by Sakthivel (2007) who considered leadership as the greatest momentum in the institution of academic service conveyance device which enhance quality assurance procedures and as such, the other factors of the educational system rely on the ability and capability of the leaders. The lecturers may be ready to do their work but if the facilities to effectively perform those jobs are not provided, or if the institutional leadership does not carry them along, it will definitely be difficult for such institution to achieve its stated goals. With regards to university education, Bryman (2007) undertook a review research on leadership and higher education and, concluded that what seems to lie at the heart of his findings is the need for leadership practices that will create an environment or context for academics and others to fulfill their potentials as well as interest in their work.



1.4 Statement of the Problem

University education in Nigeria has been appropriately recognized in its role towards the provision of pertinent workforce for the benefit of both learners and the country at large (Agabi et al., 2012; FRN, 2004). For universities to achieve these goals, there is the need for institutional leaders who are up to the task of transforming their institutions through a quality route in terms of focused and efficient administrative and academic processes.

Currently, school systems around the world are focusing on student achievement, empowering school leaders along with the curriculum and accountability frameworks (Gamage, Adams, & McCormack, 2009) and because of enormous pressure on the

schools to become accountable and respond to stakeholders' needs, it became pertinent for university institutions to become more effective, efficient and customer centric in their activities (Sahney, 2011b; Sahney, Banwet, & Karunes, 2008). In the view of Sahney et al. (2008), quality of education is fast becoming visible as a subject of talk that is spreading within the university system. Such views have been from the quest of external customers' perspective which include, the student, parents, employers and even the government. Intensifying calls for accountability among university education in the world and Nigeria in particular have not been very successful due to unavailability of individuals who have sufficient expertise and training to direct accountability efforts (Preszler, 2011).

The way and manner some Nigerian universities are being managed by the university administrators also have a consequential effect on quality administrative and academic processes which also affect institutional effectiveness. This unfortunate development significantly negates the role of a university, predominantly in a developing country like Nigeria (Oladipo, Adeosun, & Oni, 2009). In this twenty-first century, it is very exceptional to find vice chancellors in the lecture rooms, researching and otherwise engaging in scholarly activities. A large number of vice chancellors of today perceive the university as a business venture and therefore, see their own position as an avenue for accumulation of wealth (Ekundayo & Ajayi, 2009). In August 31, 2013, one of the Vice-Chancellors in a state university in the north-central geopolitical zone was disengaged from his post because of misappropriation of university resources. That particular case showed that leadership was not properly distributed because, he was the only one affected, which means that he rarely carried others along in his undertakings (Egwu, 2013).

However, the role of University education in stimulating national economic growth and transformation exacerbates the need to ensure quality within the Universities system (Ebuara, 2012; Kim, 2009; Ndiyo, 2007; Ololube, Amaele, Kpolovie, Onyekwere, & Elechi, 2012). Therefore, the quality assurance procedures should be meticulous, transparent and the resourcefulness of excellence improvement should be steadfastly embedded in any quality management programme (Beattie, 2009; Becket & Brookes, 2008). According to Grewal (2012), excellent results in terms of outcomes with stakeholders, employee and society contentment are realized via leadership dynamic tactics and policy, staff collaborations and resourcefulness as well as qualitative processes. This was further buttressed by Argia and Ismail (2013), that the low level of performance experienced in our institutions is the inability of the leader to provide faculty specialist, effective institutional infrastructure and essential facilities to carry out excellent programs and academic undertakings. Therefore, the roles of leadership for quality improvement in any organization cannot be undermined.

As stated by Okojie (2013), the quality and focus of the training offered by the Nigerian universities are not in tune with the needs of the society and this has led to high unemployment. According to the executive secretary of National University Commission (NUC), large numbers of the Nigerian university graduates are perceived to lack appropriate skills needed by the employers of labour. In a study conducted by National Youth Service Corps (NYSC), it was revealed that large portion of the youth corps needs to enhance their writing and communication skills (Kawu, 2013). This has abrogated the assumption of university education that is important and basically an industry instituted to produce a quality workforce for national development (Arong & Ogbadu, 2010; Nkang, 2012; Puffer, 2005).

According to Middlehurst (2012), in an increasingly multi-cultural national contexts and in relation to universities that are increasingly international in their staffing and operations, there is need to explore the impact of leadership on the core functions of universities that are changing in terms of teaching, research and enterprise. furthermore, Hrivnak (2009) investigated leader-member exchange development, he found that, one of the limitations of the study was deficiency of clear examination of related elements inspiring environmental factors and leader-follower dichotomy in which the subordinates and the leaders must act on such as resources availability, attribute of the leaders and the lead as well as the job or task. S. Anderson, Moore, and Sun (2009), examined how leadership is distributed in five state schools in the USA towards school improvement and suggested that, it will be productive “to explore how leadership distribution interacts with other variables that could be shown to bear a more direct relationship to student learning” (p. 132).

Despite the fact that leadership has been considered as an area where broad research has been carried out, there is little understanding of the actual phenomena surrounding organizational behavior (Hrivnak, 2009). Like other sectors of education, the mainstream of research conducted on leadership in university education resolve that there is a broad distribution of leadership or leadership should be distributed across the universities (Bolden, Petrov, & Gosling, 2008, 2009; Eddy & VanDerLinden, 2006; Gosling, Bolden, & Petrov, 2009; Knight & Trowler, 2001; Lumby, 2013; van Ameijde, Nelson, Billsberry, & Van Meurs, 2009). Despite these numerous studies on leadership, the real procedures and methods of leadership distribution within the universities coupled with the consequences of techniques and change adopted by university leaders had not being given much consideration (Bolden et al., 2009; Gosling et al., 2009).

Furthermore, for the fact that distributed leadership is still coming to light, countries such as Hong Kong, United Kingdom, Australia, New Zealand, United State of America and parts of Europe have adopted it as part of educational reforms (A. Harris, 2010). Nigeria as a country has also been practicing it but more research has not been conducted on its implementation. Therefore, the relationship between learning and leadership is gaining more acceptance as being one of the most essential issues in enhancing the effectiveness of university education and the key drivers of change in many countries.

Abdullah (2006) recommends that a concrete hypothetical model that will help university leaders towards excellence university education is very necessary and leadership has been considered an essential factors because of its contribution towards the effectiveness of the system which are anticipated or confirmed (D. G. Bowers & Seashore, 2011). The latter examined the role of leadership on organizational effectiveness among 40 agencies of a leading life insurance company. They concluded from their results that leadership alone may not predict effectiveness and therefore, intervening constructs must be included to improve prediction. This was supported by Bruggencate, Luyten, Scheerens, and Slegers (2012) in their study on the effects of leadership behaviour on students' achievement among 97 secondary schools in Netherlands. They found that there was no indication of direct positive effects of school leaders' activities on students' achievement.

Furthermore, in a study conducted by Hulpia, Devos, and Van Keer (2011) on the relationship between distributed leadership and teachers commitment in 46 secondary schools in Belgium, it was found that teachers' commitment was as a result of cooperation among the leadership team, supportive leadership as well as participative

decision making in the schools. The authors recommended that further study should be conducted to focus on the impact of distributed leadership on teachers' performance and/or their students' outcomes.

In a study conducted by Krishnan (2013) on effectiveness as an outcome of quality initiatives, it was revealed that an unplanned change in technological integrations and innovations among organizations resulted in obsolete services to stakeholders and end users. The author claimed that there was the need for a turnaround in processes by the introduction of quality practices. The author therefore suggested that further empirical studies should be carried out to examine the role of quality initiatives in their process towards the organizational effectiveness. Moreover in their study on the effects of collective leadership on student achievement, Leithwood and Mascal (2008) revealed that significant proportion of variation in the achievement of students is explained by collective leadership. However, according to them, few studies have reported direct significant effects of leadership on students' achievement while a large number of indirect effects abound. Consequently, the authors recommended that future research should be carried out to select a mediating variable that is influenced by the leaders and that also has a significant effect on the achievement of the students.

This present study is being conducted to examine the relationship between distributed leadership and institutional effectiveness through the mediating role of quality administrative and academic processes in public universities in Nigeria. According to Maguad (1999), quality is related to products, people, services, process and environment; and it is an unstable state that what is thought to be quality today might possibly not be sufficient to be regarded as quality tomorrow; hence, the need for a leader that will manage the university system in alliance with change. Therefore, this

study identified distributed leadership, quality administrative and academic processes as the key determinants in enhancing the effectiveness of public universities and formed the research questions that were answered in this study.

1.5 Research Objectives

The current globalizing economy linked to students' population explosion, competitive market and high anticipation from the stakeholders has changed the university system to become more complicated to manage. There is consequently a serious question in relation to the structural mode and models of universities in relation to quality administrative and academic processes and the roles a leader must play in alleviating pressures confronted by the institution for the achievement of the university goals. The main focus of this study is to examine the various leadership roles in the management of university's administrative and academic processes for institutional effectiveness in Nigeria.

Therefore, this study examine the relationship between distributed leadership, quality administrative and academic processes, and institutional effectiveness in public universities in Nigeria. Specifically, the study:

- i. Identified the perceptions of the lecturers on the level of leadership distribution, quality administrative and academic processes and effectiveness of public universities in Nigeria
- ii. Determined the relationship between distributed leadership, quality administrative and academic process and institutional effectiveness in public universities in Nigeria.

- iii. Determined the mediating role of quality administrative and academic processes on the relationship between distributed leadership and institutional effectiveness in public universities in Nigeria
- iv. Investigated the issues impeding the effectiveness of public universities in Nigeria

1.6 Research Questions

To guide this study, the following research questions have been introduced and to also establish the principle upon which data was gathered, managed and analyzed:

- i. What is the level of distributed leadership, quality administrative and academic processes; and institutional effectiveness in public universities in Nigeria?
- ii. Is there a significant positive relationship between distributed leadership, quality administrative process, quality academic process and institutional effectiveness in public universities in Nigeria?
- iii. Does quality administrative and academic process mediate the relationship between distributed leadership and effectiveness of public universities in Nigeria?
- iv. What are the issues impeding the effectiveness of public universities in Nigeria?

1.7 Research Hypotheses

In order to answer the research questions (ii) and (iii) raised in this study, based on the past empirical studies reviewed for this study, the following alternative hypotheses were articulated:

- H_{A1}: There is a significant positive relationship between distributed leadership and institutional effectiveness of public universities in Nigeria
- H_{A2}: There is a significant positive relationship between distributed leadership and quality administrative process in public universities in Nigeria
- H_{A3}: Distributed leadership has a significant positive relationship with quality academic process in public universities in Nigeria is positive
- H_{A4}: Quality administrative process has a significant positive impact on the institutional effectiveness of Public universities in Nigeria.
- H_{A5}: Quality academic process has a significant positive impact on the institutional effectiveness of Public universities in Nigeria.
- H_{A6}: Quality administrative process significantly mediate the relationship between distributed leadership and institutional effectiveness in Public universities in Nigeria
- H_{A7}: Quality academic process significantly mediate the relationship between distributed leadership and institutional effectiveness in Public universities in Nigeria.

1.8 Operational Definitions

In the course of this study, the following terms have been operationally defined:

Assessment

Assessment is the method or methods used to determine the level of students' understanding about the course content they are exposed to. Assessment can be used for multiple purposes, including sorting students by level of mastery, motivating further efforts, or providing feedback to guide students toward effective efforts (Kohn, 2004). Regardless of the purpose, the method used is considered to be a form of assessment. In the current study, assessment is an avenue of testing student knowledge to determine what they have learned, what they have not understood and how the lecturers are effective in their various courses being taught (Ramsden, 1991).

Curriculum

Curriculum is the entire instructional programmes that guide the students in achieving their goals and aspirations in life. Curriculum is seen in this study as the learning outcomes or standards that are considered essential for the program of study. In other words, students who complete a course are expected to master a series of learning objectives. These objectives are the curriculum for the course and it entails the programme of study and its implementation by the lecturers (Jenkins, 2012).

Distributed leadership

Distributed leadership is an institutionalized interactions practice that identifies the leadership capacity of individuals in both formal and informal roles within the universities. That is, a practice where leadership involves many individuals in the

university. It is an outlook that focuses on how informal and formal tasks interact to result in organizational effectiveness and it is assessed through leadership functions, participative decision making and cooperation within the leadership team (Hulpia, Devos, & Rosseel, 2009).

Institutional effectiveness

Institutional effectiveness assesses, to what magnitude a university has been effective in delivering expected results with a diverse collection of stakeholders in the societies in which it render services to. In this study, it measures how the university system is able to achieve its pre-determined goals in meeting the needs of its various stakeholders (FRN, 2004; Pihie & Mahyuddin, 2008). It was measured in this study through student and societal development using the goals and strategic constituent approach (Cameron, 2013).

Instruction

Instruction is defined as the method or methods used by individuals in a teaching role to help students to learn the content of interest. In order for instruction to be effective, teachers must be knowledgeable in the content area of interest and motivated to help students learn and know about how people learn; that is, how the brain integrates new information (Ramsden, 1991).

Public universities in Nigeria

Public universities in Nigeria refers to 79 universities that are fully funded by either the state or the federal government under the monitoring of the National Universities Commission (NUC).

Service Learning

Service Learning is a curriculum-centred community service that is done through the school and which incorporates classroom instruction with community service undertakings. Such services include: teaching practice, SIWES, IT and practicum (Steinberg, Bringle & Williams, 2010).

Supportive Environment/Facilities

Supportive Environment/Facilities referred to as the environment or the climatic condition in which teaching and learning process take place. These are categorized into physical facilities, human environment and university climate (Akporehe, 2011).

Quality Administrative Processes

This refers to the strategies by which the leaders manage the supporting tools of the university systems towards the accomplishment of the university goals. These strategies include the categories of students admitted into the institutions, the quality of lecturers recruited, the supportive environment/facilities provided by the school leaders as well as, the policy and strategy which guide the operation and day to day running of the school (Calvo-Mora et al, 2006).

Quality Academic Processes

This encompasses the core university process through which educational activities of universities are undertaken to influence students' learning. Educational activities can either be classrooms context, school context or outside the school context. The dimensions for quality academic process in this study are: curriculum, instruction, service learning, assessment as well as research and development (Chua, 2004).

1.9 Significance of the Study

The significance of this study has been explained in terms of the practical contribution, theoretical contribution and methodological contribution.

1.9.1 Theoretical Contribution

In order to tackle the challenges facing them and to become accountable for their continued existence towards the development of the nations; it is necessary for universities to discover superlative practices which will enhance the administrative and academic process of the university (Frackmann, 2000). The present study is carried out to fill that gap in Nigerian literature. This study is also significant since a study of this type has not been attempted in Nigeria. From its findings, it is expected that distributed leadership are likely to enhance the effectiveness of public universities in Nigeria through quality administrative and academic processes.

Despite the fact that some studies have been carried out on each variable in this study, the four variables have not been linked together in any previous studies especially in Nigeria's university system.

1.9.2 Practical Contribution

According to Maguad (1999), quality is related to products, people, services, process and environment. It is an unstable state that what is thought to be quality today might possibly not be sufficient to be regarded as quality tomorrow and therefore there is need for a leader that will manage the university system in alliance with change. Findings from this study could help the university management to understand the effect of

distributed leadership on the university continuous quality improvement there by focusing not only on products but also the processes.

Results of this study may be used in Nigerian universities by adopting good leadership tactics and quality management practices in both academic and administrative functions. Such uses could ensure continual improvement of stakeholders' services and help reinforce a quality culture in administrative and support services.

A study about the factors impeding quality education delivery in a developing nation such as Nigeria is vital in distinguishing a number of the conditions essential for production management. This study is explicitly carried out to inspire Nigerian universities to adopt total quality initiatives that would help reinforce the effectiveness of their academic system. Such a reinforcement could enhance the retention as well as the recruitment process of staffs and students to attain excellence in the outcome of student learning. Besides, it may uphold a culture of constant improvement in terms of quality. Therefore, this study could be used as an avenue to provide relevant empirical data that would promote the awareness of quality practices and their benefits in higher education in Nigeria.

The findings of this study may assist stakeholders in education to better understand the need for quality management in university education in relation to the conformity of the National University Commission and other government policies on higher education. It may also reveal to university managements specific actions that need to be taken toward positive changes in the university system.

The staff capacity development center available in every universities could also find the findings of this study beneficial as these would enable them to plan their training

package to incorporate relevant variables of the study such as: indicators of quality academic processes which enhance better performance of lecturers.

The registry departments in the universities could also benefit from the study because the findings may enable them to evolve an appropriate technique to be used for recruitment. This will help to assess and determine employee's attributes that will favour the achievement of quality service delivery. The present study is anticipated to bridge the gap in literature and contribute to empirical research in the area of institutional effectiveness and service quality. In addition, this study is very paramount as a result of its effort to close the gap of enhancing the competence of human and physical resources within the university system to facilitate the university roles towards the development of the society. Additionally, the study will enhance better understanding of the vice chancellor's role towards institutional effectiveness by offering helpful guidance in the reaffirmation of accreditation.

1.9.3 Methodological Contribution

This study is significant as it examines what makes universities in Nigeria to be effective and what is an effective university which is very paramount in this present era of globalization and at a time nations are looking up to university systems for national transformations, the focus of this study is timely. By using the goal and constituency approach, this study has presented certain indicators for measuring the effectiveness of the university. This is also in line with the goals of university education in Nigeria.

This study has further examined the concept of quality academic processes using five dimensions which include instruction, curriculum, assessment, service learning and research processes. These variables have not been combined in the previous studies as

a single construct. Also, the quality administrative process viz-a-viz staff recruitment, student admission, supportive environment/facilities and policy and strategy is used as a cumulative construct. The study assess the effectiveness of institution of higher learning through student development and societal development by means of reflective –reflective measurement using goal and multiple constituencies approach. This is different from what prior studies focused on.

1.10 Scope of the study

This study adopted a mixed method research technique. University lecturers is the unit of analysis in this study. This study is limited to lecturer administrators and lecturers in selected public universities in Nigeria. Only public universities that have been established for over six years as at February 2014 was involved to be used as the target universities as those universities must have produce some numbers of graduate which are part of the indicators for measuring institutional effectiveness in this study. The public universities in the North-East geopolitical zone of the country was exempted in this study due to the prevailing crises, insecurity and terrorist activities (Boko Haram) currently experienced in that area.

In this study, the focus is on four variables: distributed leadership, quality administrative process, quality academic processes and institutional effectiveness. Distributed leadership is the independent variable which was measured through supportive and supervisory functions of the leaders; participative decision making as well as the cooperation at the level of the leadership team.

Institutional effectiveness in this study is the dependent variable. It was measured with student development and societal development that are in tune with the goals of

university training in Nigeria. The items for institutional effectiveness have been adapted from Pihie and Mahyuddin (2008) Generic skills scale and the objectives of university education as contained in the policy of education in Nigeria.

Quality administrative and academic processes are the mediating variables in this study. According to Awang (2013), a mediating variable has a double role. It acts as the dependent variable in the first equation, and acts as an independent variable in the second equation. In other words, it is a variable that mediates the relationship between the dependent variable and the independent variable. It thus an informal or unplanned sequence that presupposes that the influence of one or more experimental (independent) variables through a third variable to one or more dependent variables (Pardo & Román, 2013). In this study the quality administrative processes are second order construct which were measured viz-a-viz staff recruitment process, student admission process, supportive environment/facilities and, policy and strategy. Quality academic process on the other hand is also a second order construct which was measured through curriculum, instruction, service learning and assessment and, research and development.

This study employed cross-sectional design for data collections as data for this study were collected at a specific point in time, even though the population characteristics may constantly change over time, the current research variable may not likely change within a year and therefore, cross sectional design can still be considered suitable for this study.

The study only involved lecturers in public universities who has more than three years of teaching experience. It did not include lecturers from private universities or public

universities that were established less than six years. This was to obtain a homogenous sample. Therefore, the outcome of this study may not be generalized.

1.11 Summary of Chapter One

This chapter has discussed the introductory aspect of the study, starting with the background to the study in terms of quality and expectations of the society and stakeholders from universities worldwide and specifically in the Nigerian education system. A brief narration presented as regards the evolution of university education in Nigeria. This narration now leads to the problem statement about the current situation of university education in the world and was narrowed down to Nigerian settings. The problems identified in this study were related to bad leadership, decline in the quality of graduates produced in Nigerian universities, as well as quality administrative and academic processes that need urgent attention as recommended by scholars. The problem statements were addressed in terms of the practical problem as well as the theoretical gap identified in the literature.

In order to address the problems identified in this study, research questions and hypothesis were raised. The objectives of the study were developed in relation to the research questions and hypotheses were raised and formulated respectively. The necessity and rationale of undertaking this study were also highlighted. Variables for the study, which were measured with various constructs were also discussed with their limitations. The essential terms that were used in the study were also defined.

For the study to be well justified, variables identified in this study need to be appropriately reviewed for better clarification and understanding. Consequently, the literature review aspect has been considered in chapter two.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This segment presents an appraisal of related works on past studies on distributed leadership, quality administrative and academic processes and institutional effectiveness.

2.2 Theoretical Consideration and Conceptual Framework

This study examines the mediating role of quality administrative and academic processes on the relationship between distributed leadership and institutional effectiveness in public universities in Nigeria. In order to provide a conceptual framework for analyzing the research problem posed, theoretical perception was based on Distributed leadership theory, resource base view and the excellence model of the European Foundation for Quality Management (EFQM).

The leadership theory has been described with a series of diverse meanings in a separate field of expertise; liable for the content and their approach or procedure. A theory is said to be a declaration of relations that exist amongst notions in an array of the borderline of postulations or restrictions (Bacharach, 1989). According to Zikmund, Babin, Carr, and Griffin (2010), theory gives depiction of a coherent relationship that existed among various constructs or variables which gives a better understanding of the connections or associations among and the way they affect one another.

The function of theory was further explained by Hall and Lindzey (1978) as preventing the spectators or viewers from being confused of the complication of natural or actual

happenings. However, the essence of theoretical declaration has been seen in two angles: to establish sparingly then, to transmit or converse clearly (Bacharach, 1989). Hawking (1988) insisted that a theory can be referred to be a good theory if it fulfills requirement such as a collection of hypotheses that are realistically bound together to create an overview of observations and consist of an interconnected, logical set of ideas and models.

2.2.1 Distributed Leadership Theory

The distributed leadership theory has been used to assess the leadership behavior. According to Hudson, English, Dawes, and Macri (2012), distributed leadership is all about a separate method of puzzling over leadership and fascinating experience where it exists in the university system instead of solely searching through official functions or responsibility but goes on to note the difficulties in managing change unless the formal leadership is good at building relationships. In contemporary parlance, theorizing distributed leadership can be traced to the work of scholars such as: Gronn (2002); A. Harris (2009); Mayrowetz (2008); and Spillane (2006). Distributed leadership was examine through Spillane theory of distributed leadership, Groon distributed leadership theory and Elmore distributed leadership theory.

2.2.1.1 Spillane distributed leadership theory

Leadership is examined by Spillane as a viewfinder that extends outside the roles of personal skills, ability, cognition as well as charisma (Spillane, 2001). This theory of leadership sees leadership as a practice involving many individuals instead of studying leadership in terms of traits, ability, roles and cognition of an individual occupying a position. It is a leadership theory that recognizes the involvement of multiple

individuals either formally or informally involved in the leadership of the school. Spillane's theory of distributed leadership portrays three elements: the daily task and experiences that are being carried out by the personnel (situation), interactions of school personnel and the way lecturers make use of the instructional tools (tangible artifacts) such as the assessment data, curriculum guide or observation forms. It also involve intangible cultural practices that include the goals, visions and expectations of the university which are referred to as artifacts are all integrated into the Spillane distributed leadership theory (DL and SP).

2.2.1.2 Gronn Distributed leadership theory

Gronn leadership theory is another theory that is widely accepted. According to Gronn (2002), stand alone or solo leaders are inconsistent with the actual proceeding in the university system. Much like the Spillane's theory, this theory believes in multiple leadership techniques that spread across many individuals in the organization. Gronn's leadership theory calls for the division of work towards the completion of tasks. It uses technological capability as complimenting personal knowledge in order to accomplish a proposed task which is similar to artifacts used by Spillane. These technological capabilities are in two sections: tangible and intangible. Gronn introduced the "concertive action theory" to the ideas of Spillane which were in the form of : spontaneous collaboration where there are unplanned interactions among individuals to solve a problem using their expertise; institutionalized practices which are in tune with the structures of the university in terms of role assignments or schedules; and, instinctive working relations where members of the school system depends on one another to realized what is required in completing a task without the task being uttered (Gronn, 2002). Nonetheless, in order to successfully carry out this concertive action, a

seasoned staff with multitude knowledge and expertise is required. The argument of Gronn supporting leadership distribution is grounded in activity theory. Distributed leadership theory can therefore be seen as an evaluation of activities.

2.2.1.3 Elmore distributed leadership theory

Elmore (2000)'s distributed leadership theory was developed by Richard Elmore in 2000 and it also serve as an underpinning theory for this study. This distributed leadership theory improves on those of Gronn and Spillane theories of distributed leadership by linking it to the improvement of instruction as well as the school performance. Elmore's theory further proposed that leadership should be enhanced by adopting standard-based reform as a benchmark. According to Davis (2009), the basis of Elmore's construct lies in Spillane and Gronn's principles of utilizing multiple sources of leadership, emphasizing individual expertise, as well as working in concert towards a common goal. It is stressed by Elmore that the theory of leadership must go beyond the trait theories into a broader term that can be referred to as directing and guiding. He also emphasized distributed leadership in a form of multiple sources of direction and guidance by experts in the organization towards the improvement in the school pedagogy which has a direct effect on its performance.

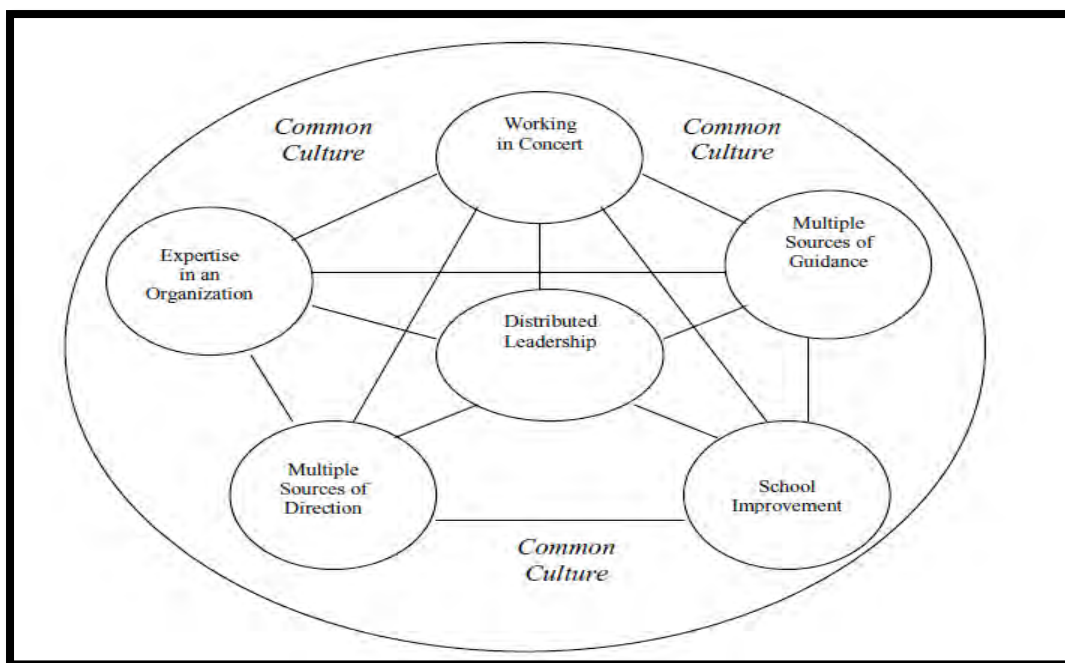


Figure 2.1. Elmore (2000)'s distributed leadership theory

Robinson (2008) spelt out the logical links of leadership to student outcomes as : those influence that attempts to cause changes in the thoughts and or actions of followers; distinguishing those that are based on those influence processes associated with leadership rather than with manipulation, coercion or force; and tracking the impact of the change in followers for student outcomes. Robinson (2008) also suggests that ‘if distributed leadership research is to make stronger links with student outcomes, it needs to be informed by a normative theory that is grounded in our knowledge of the conditions that teachers require to improve teaching and learning’ (p.251). According to Heikka, Waniganayake, and Hujala (2013), and following the contextualization of distributed leadership; leadership distribution has to be organized and focused on the ways which support pedagogical functions and processes.

2.2.2 Micro-Foundation Perspective of the Resource Base View (RBV)

Micro-foundation perspective of the resource base view was used in this study as its underpinning theory (Barney & Felin, 2013; Barney, Ketchen, & Wright, 2011;

Garbuio, King, & Lovallo, 2011). The resource base view of micro-foundation perspective according to Felin and Foss (2009), brings in individual level inputs to the form of resource base view. The macro or organizational level of resource base view on the other hand, established the importance of bundling the internal resources together in dynamic and unique ways in order to realize the success or make the organization more effective. If the resources are considered valuable, hard to imitate, rare and non-substitutable, sustainable competitive advantage may be achieved (Barney, 1999).

According to resource base view, resources are all assets, routine, processes, skills, capabilities, attributes, orientation, knowledge and information controlled by organization which enables it to execute strategies that enhance effectiveness and competitiveness ability of the organization (Barney, 1995; Janney & Dess, 2006).

The resource base view explains the question of what contributes to the success and effectiveness of an organization and therefore, theorizes that greater emphasis should be placed on leveraging every available internal capability and resources in an establishment as compared to Porter (1980) view of external forces, positioning and industry-based approach as integral factors towards competitive advantage (Hitt & Ireland, 2002).

The recent focus of resource base view towards micro-foundation perspective of internal organizational resources highlights the central role of human capital or people as the foundation and key resources crucial to organizational effectiveness and competitiveness (Barney & Felin, 2013; Foss, 2011; Garbuio et al., 2011). According to Felin and Foss (2009), human resources through individual employees' competencies, coordinated efforts and interactions; organizational value are created and the broader goals of the organization are achieved. Moreover, as people or human are seen as a vital internal resources, the origin of an organizational value, competitiveness

and capabilities is better explained by having a closer evaluation on individual level valuable attributes of the people embedded in the organization (Barney & Felin, 2013).

Therefore, the micro-foundation perspective of resource base view suggests that the organizational capabilities, values, routines and effectiveness emerged or are created as a result of individual performance which originated from individual motivation, actions, behavior and interactions (Barney & Felin, 2013; Foss, 2011).

As a result of this, Foss (2011); P. M. Wright and McMahan (2011) revealed that, it becomes pertinent for one to understand the individuals that constitute the organization before exploring matters at the organizational level. This study focuses on universities effectiveness rooted from the contribution of interaction among their own individual-level behavioural attributes which may enhance institutional effectiveness. The micro-foundation has also emphasizes the important roles of key employees which include leaders alongside their behavioural practices in terms of leadership functions, participatory decision making and cooperation within the leadership team as well as quality administrative and academic processes which as micro-foundation resources influence universities effectiveness (Barney & Felin, 2013; Foss, 2011; Khan, 2013). Consequently, the individual leaders' inputs would potentially exert significant impact to the success of their followers groups and the universities at large ((Jing & Avery, 2011; C.-W. Yang, 2008). The Resource base View and developing theory believe on the fact that basis or approach for an organization to attain competitive advantage or effectiveness lies largely on how such organization uses the bundle of productive resources it possesses (Barney, 1991; Peteraf, 1993; Wernerfelt, 1995). Therefore, based on the assumption of resource base view, quality administrative process is positively related to institutional effectiveness, quality academic process which is positively related to institutional effectiveness and it can be deduced that quality

administrative and academic processes which according to resource base view include both tangible and intangible resources significantly mediate the relationship between leadership and institutional effectiveness. These assumptions are evidence in the activity theory.

2.2.3 European Foundation for Quality Management (EFQM) Excellence Model

The European Foundation for Quality Management (EFQM) excellence model is a well-linked quality instrument employed by more than 30,000 organizations in Europe to improve their performance (EFQM, 2013). It is adopted by numerous organizations as a planning and self-evaluation tool to find out where they are in terms of their performance, their expected performance and how to work towards achieving their goals (Arjomandi, Kestell, & Grimshaw, 2009). In relation to Arjomandi et al. (2009), the model suggested the using of RADAR scoring matrix as an instrument for measurement in which R signifies results in terms of the organizational achievement, A denotes approach in terms of the plans and policies, D connotes deployment in terms of the degree in which the approaches are executed, A signifies assessment in terms of what the organization does to evaluate and R shows a review of both the approach and implementation of the approach (EFQM, 2012).

According to Hides, Davies, and Jackson (2004), excellence in university education can be reviewed in terms of accomplishing the mission and vision of the institutions; attaining or surpassing the yardsticks and internal measures; superlative practices; shareholders satisfaction; community bargaining, learning outcomes; spreading of good practices nationwide and worldwide; match balance between aspiration and actual assessment; encouraging character in staff and student surroundings; quality of teaching and learning. Grewal (2012) summarizes these into two activities: protective belt and

auxiliary belt. The protective belt is the workers development, teaching and learning, learner evaluation, and program that develop the factual learners' enhancement and knowledge that's dominant towards quality university education. Beyond the preceding, programmes that feature in the auxiliary belt are vital and have less uninterrupted influence on the world of the learners' proficiency. These programmes incorporate research as well as publication; university's policy regarding student access and staff recruitment; institution industry development plans and links with trade, business and skilled development industry in its structure.

Even though the EFQM model was not created for the demands of university education, various proofs have confirmed its application in the educational system (Becket & Brookes, 2008; Bou-Llusar, Escrig-Tena, Roca-Puig, & Beltrán-Martín, 2009; Claver & Tarí, 2008; Tarí, 2008). It has been observed as an instrument required by leadership to survive the complex transformation and it concentrates on strength and not marks; an area of progress and not faults (Arjomandi et al., 2009; Davies, Hides, & Casey, 2001; Tarí & Madeleine, 2012). The EFQM excellence model has nine criteria and they are in two segments: the enabler and the results. The enabler comprises of what the university does which are: leadership, strategy and policy, employee management, partnerships and resources as well as the process management. The results' aspect is made up of four components: people result, customers result, society result and key performance results.

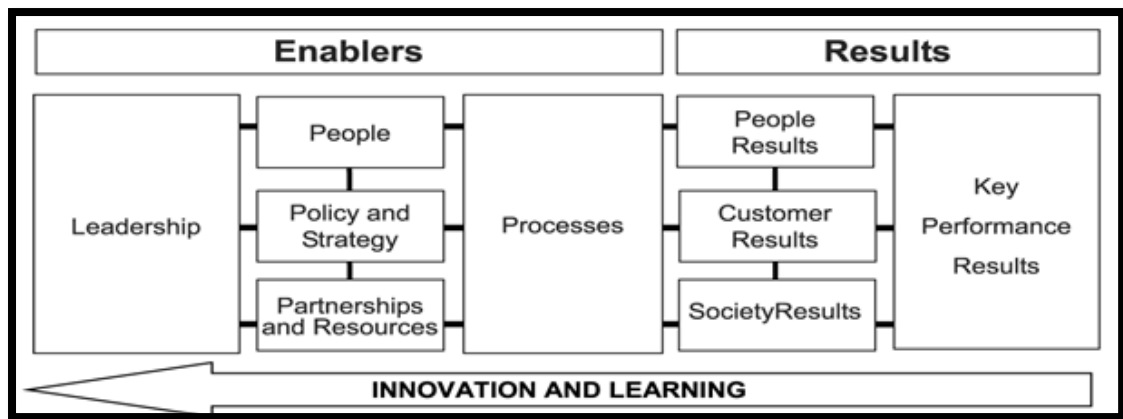


Figure 2.2. EFQM excellence model

Source: Model EFQM de Excelencia (2009)

The result section of the excellence model will be adapted to examine the institutional effectiveness. However, the strategic constituency approach and goal approach will be used to measure the institutional effectiveness of the universities. This is because it deals with the effect of the universities on stakeholders and their interest (Ashraf & Kadir, 2012; Schermerhorn, Hunt, Osborn, & Osborn, 2004). This model is perceived to involve contingency theory and total quality management theory and explains input and process (administrative and academic) as the determinant of the performance of an organization. According to the model, the leader alone may not be able to achieve the predetermined goals of the organization and therefore, he/she has to involve everyone in the organization towards the attainment of the organizational goals through policy and strategy, motivation, resource provision, collaboration as well as subordinate satisfaction.

The EFQM model establishes that other factors of quality implementation influence the result of an organization. This was revealed in the result of the study of Calvo-Mora, Picón, Ruiz, and Cauzo (2013) that process management has a positive relationship on the business result of private firms in Spain. According to Powell (1995), organization

acts more effectively in its goals achievement and better result when their activities are systematically developed, administered and improved through quality processes. As stated by Kanji, Malek, and Tambi (1999) the key processes are those factors that have a significant effect on the critical results of an organization.

Therefore, these underpinning theories (distributed leadership theory, resource base view, and contingency theory) can be reflected in the conceptual framework in figure 2.3.

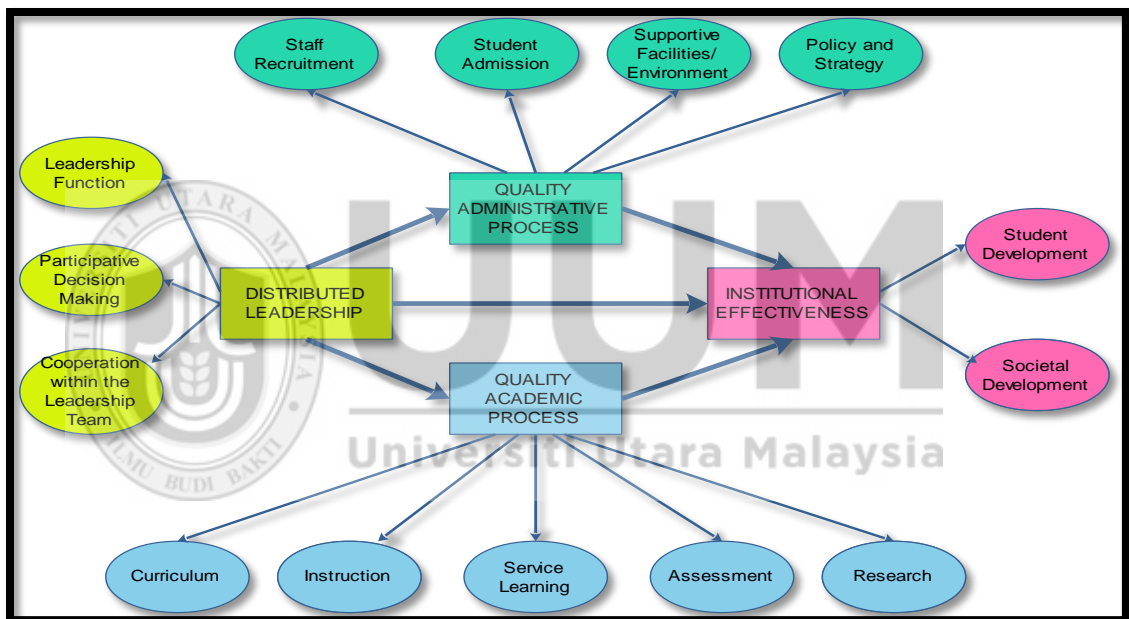


Figure 2.3. Conceptual Framework

2.3 The Concept of Institutional Effectiveness

The effectiveness of the university system has been a matter of deep-seated theoretical interest (Vihma, 2007). It is one of the matters that have continuously been of concern in any organizational discussion (Kaffashpoor, 2013) and the situation is not different in university education in the world and Nigeria in particular. Effectiveness has been defined as the extent to which the university systems are achieving their stated

objectives and the internal and external effectiveness are normally differentiated (Barrett, 2006). It is the extent to which an establishment's core mission is accomplished. The concept of institutional effectiveness as assessing all the functions of a higher education institution, including accountability, quality control, assessment, efficiency, student educational results, and student success, was developed by the SACS during the early 1980s (Malone, 2003; Nichols, 1989).

In SACS (2005), institutional effectiveness is the explicit, organized and documented procedures for measuring performance against ascertaining performance contrast to the goals and missions of the schools in all ramifications which include student learning outcomes for educational programmes as well as the appraisal of how far the school have been able to achieve those outcomes and the yielding of indication for improvement in respect to the outcome appraisal.

Institutional effectiveness therefore is built on a common understanding of the university's mission, the effectiveness of each member of the institution, and a supportive organizational environment (Malone, 2003). According to Kaffashpoor (2013), as organization attempts to achieve its stated goals, in-house instability and external intimidation are considered an obstacle which delay or disrupt the entire process. Welker and Morgan (1991) cautioned against confusing effectiveness with efficiency. They maintained that some commonly reported effectiveness measures, such as number of students enrolled in a program, the number of students graduating from a program, or size of building in square feet, are actually measures of efficiency, not effectiveness, although these measures do speak to accountability for resources used in education. Conrad and Gupta (2006) identified six basic types of assessing effectiveness in higher education institutions:

- a. Reputational ratings by peers or experts
- b. Citation counts of faculty members
- c. Faculty awards and honours (e.g., Fullbright or Guggenheim Fellowships)
- d. Student achievements after graduation (e.g., starting salaries, listing in *Who's Who*)
- e. Scores of entering students for national exams (e.g., SAT, ACT)
- f. Institutional resources (e.g., size of libraries, expenditures per student).

The overarching importance of institutional effectiveness cannot be overstated. In the highly focused and competitive economic environment of the 21st century, higher education must rely on individuals to lead institutions through the complex maze of accountability to stakeholders and accrediting bodies (Preszler, 2011). Institutional effectiveness measures are based on how well a college or university is meeting its mission and goals; meaning that the evaluation criteria differ among institutions.

A university is said to be effective if its results (outcomes) agree with its mission and both mission and results match or exceed the stakeholders' wants and expectations (Figure 2.5).

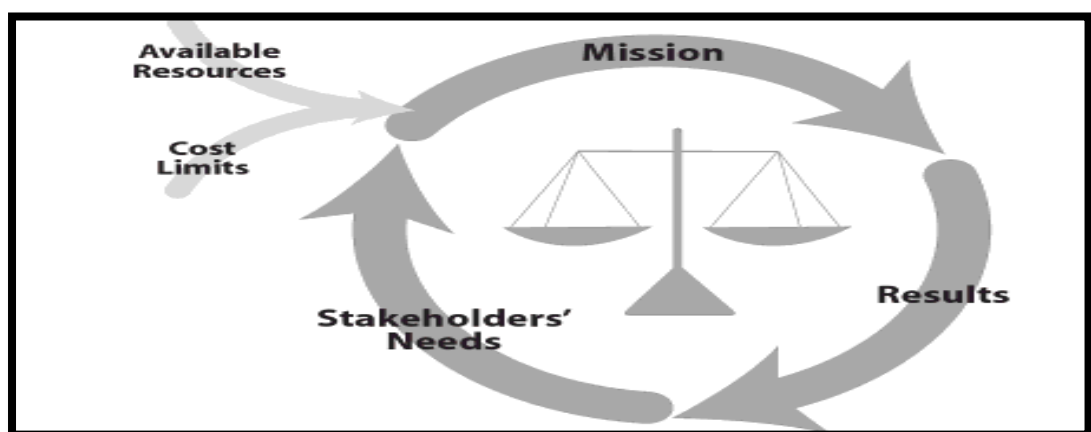


Figure 2.4. The key elements of institutional effectiveness.

Banta (2002); Banta and Duke (2009) integrate literature on assessment to explain the three segments of effective outcomes assessment in university education which are the planning phase, implementation phase as well as the improving and sustaining segment. The three phases are further divided into 17 attributes which is depicted in Table 2.4.

Table 2.1

Attributes of effective outcome assessment

Planning	Implementation	Improving and sustaining
1. Involves stakeholders (students, lecturers, administrator, student affairs professionals, employers, representatives from the community) from all over the organization to incorporate their curiosity and needs in order to plead for their backings.	5. Incorporates continuous communication with constituents concerning activities and discovery, and effective outcomes assessment produces data that guide improvement on a continuing basis.	15. Deliver a medium for signifying responsibility towards the university internal and external stakeholders.
2. Begins when the necessity is recognized; allows sufficient time for expansion. However, timing is vital.	6. Involves recognition that assessment is essential to learning, and therefore is everyone's responsibility.	14. Guarantee assessment data are constantly used for service and enhancement programs.
4. Bases assessment approaches on clear and openly stated program goals.	8. Devolves responsibility for assessment to the unit level.	13. Produces credible evidence of learning and organizational effectiveness.

Table 2.1 Contd.

4. Bases assessment approaches on clear and openly stated program goals.	7. Recognizes that learning is multidimensional and developmental and thus uses multiple measures, therefore maximizing reliability and validity.	16. Incorporate the hope that outcomes evaluation will be constant instead of irregular.
3. Has on-paper ideal with well-defined purposes that is connected to individual value goals and to a greater set of conditions that promote change. Assessment is s vehicle for improvement, not an end in itself.	11. Is undertaken in an environment that is friendly, supportive, and enabling on a continuing foundation.	17. Absorb current assessment in order to improve the assessment methods itself.
	10. Assesses processes as well as outcomes.	
	12. Has knowledgeable, effective leadership	

Source: Banta (2002, pp. 262-263).

Welsh and Metcalf (2003) noted four control variables influential in attitudes held by lecturers and administrators toward institutional effectiveness activities. These variables were internal versus external motivation; intensity of application; description of quality; and degree of participation.

2.3.1 Approaches to Institutional Effectiveness

Performance indicators, key performance indicators, performance measures, and performance metrics are all expressions used to illustrate a set of numerical measures of various facets of institutional effectiveness and performance (Suskie, 2006). Dolence and Norris (1994) consider performance indicators as measures which are scrutinized so as to ascertain the health, efficiency and effectiveness of the school in order to inform the stakeholders, leaders, and other members of staff whether the university goals have been achieved by using an appropriate resources. The situations or environment in which each of the prevalent effectiveness models most likely to be utilize are not general. Therefore, there is no any single model that embraces all possibilities or applies to all situations. Each approach has its own focus and strengths and therefore, none of these models can be swapped directly with the other models in assessments despite the fact that their combinations have been found in some studies (Cameron, 2005). The methods of measuring the effectiveness of the university include: the goal approach, the system resource approach, the internal process approach, the human relations approach and the multiple constituencies approach (Ashraf & Kadir, 2012; Cameron, 2005).

2.3.1.1 The Goal Approach

This is seen as the primary widely adopted university effectiveness model. The universities are said to be effective if he is able to accomplish its stated goals (Cameron, 1984; 1986; 2013; Campbell, 1981). This approach concentrate on output in order to discover the indispensable functional objective which include innovation, benefit and the quality of the product (Schermerhorn et al., 2004). This method considered favourable when the organizational goals are well-defined, overt, consensual, assessable and has time frame. Never the less, this approach frequently appropriate for

educational research institute that is accountable for their goals as well as confirmation of their comprehensive societal responsibility. However, any study that has power over investigative nature during scrutiny, freedom is paramount in which according to Ashraf and Kadir (2012), the goal-oriented techniques will merely be partly appropriate.

2.3.1.2 The System Resource Approach

The system resource method is another approach that takes note of input into the system. In this approach, the university is considered to be effective in relation to its ability to obtain its required resources. The model is considered very appropriate when a well-defined association occurred between the inputs and the outcomes of the university. Effectiveness is justified on the universities capabilities to attain essential resources from the outside world (Ashraf & Kadir, 2012). Therefore, if there is a balance connecting the student graduated or the services rendered by an institution and the resources invested or obtained by the institutions, such institutions according to Cameron (1981) are assumed to be effective. This method encourages the leaders of various universities to see their institutions as a sub system of the larger society rather than seeing it as a whole itself. Therefore , every aspect of the universities undertakings influences or affects its overall effectiveness which was supported by Mullins (2008).

2.3.1.3 The Internal Process Approach

Another approach towards assessing the effectiveness of the university system is the internal process technique. This techniques see how the resources provided to the university system are judiciously utilized towards servicing and graduate production (Ashraf & Kadir, 2012; Schermerhorn et al., 2004). With this approach, an institution

is effective when the internal procedures are absolutely regimented and members of such institutions are fully working towards the smooth running of the organization by contributing their own quota towards the effectiveness of the organization without being stressed or injured. The relationships among the institutional members are centered on confidence, honesty as well as good determination. However, information emanate on perpendicular and horizontal source. The inclination towards this technique in university education is the accomplishment of the institutional goals of delivering adequate and suitable information to the learners as well as the lecturers. According to Kleijnen, Dolmans, Muijtjens, Willems, and Van Hout (2009), one of the main essential task here is the information and communication gathering and management.

2.3.1.4 The Strategic Constituency Approach

This approach to the assessment of institutional effectiveness considers the impact of the university system on the major stakeholders and all that concerns them. According to this technique, the effectiveness of the universities is seen on how the marginal contentment of various components of the university is met. However, these various stakeholders have a diverse responsibility towards the university system either as the service or product (graduate) users or employers, prime mover of the university output, supplier of the resources, the dependent as well as the major advocate of the university (Cameron, 1981, 2013). It was observed that it is rational to adopt the strategic constituency method because the cost-benefit interactions in the research and educational environment cannot be easily expressed (Cameron, 2013). This is because; this technique presupposes an in depth thought regarding university effectiveness as it assesses the element in both the university and its environment. However, the notion of communal accountability is deliberated upon. This was because this idea was not

properly taken into account using the conventional techniques but it has become very essential for research and conventional universities as they are financed from public fund. Educational Policy formulators have therefore given more attention to societal obligation due to persistent decrease in resources accessible by the university towards research and development. Therefore, so as to assess how accountable is the university to the society, the research undertaken as well as the quality of graduate produced in connection to societal anticipation is considered.

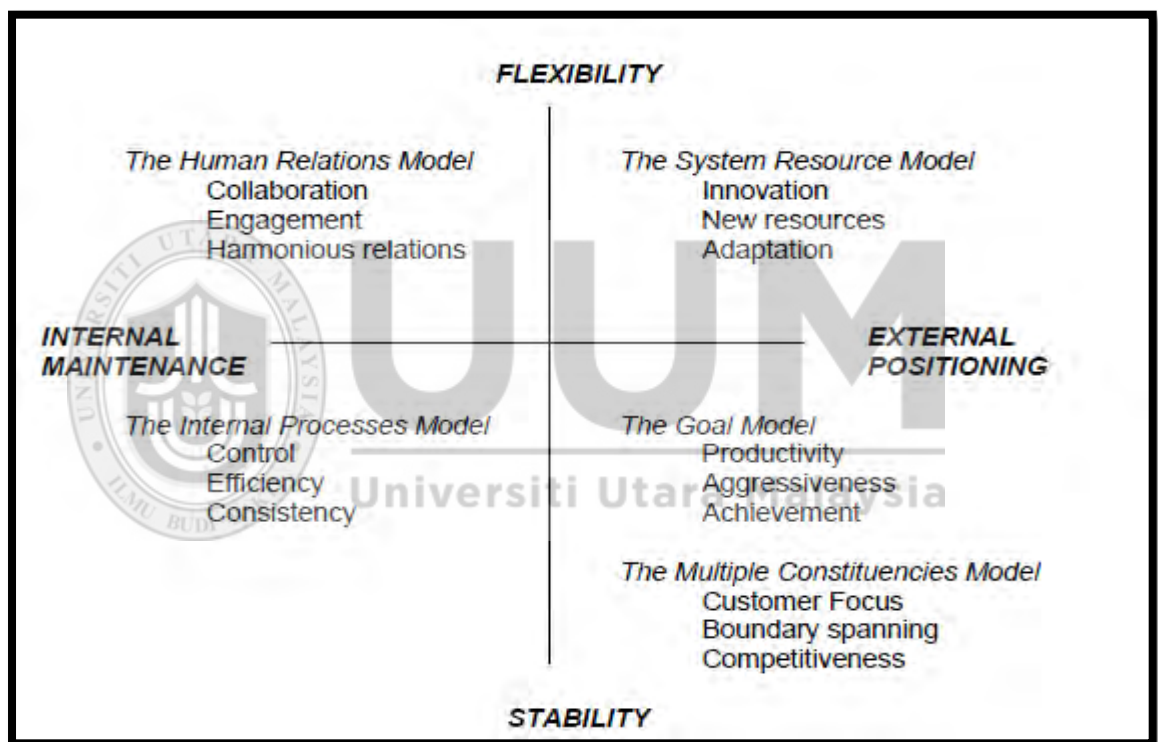


Figure 2.5. The Competing Values Framework of Organizational Effectiveness. An Integration of the Five Well-Known Models (with key areas of emphasis), Adopted from (Cameron, 2005).

2.3.2 Dimensions of Institutional Effectiveness

Before embarking on the actual measurement of any organizational effectiveness measures, Parhizgari and Ronald (2004) suggest two theorems. The first one is the boundaries of effectiveness which could be defined for each organization and the second theorem is a measurement of effectiveness in which the views of the employee

and/or the customers in the domain of effective factors provide the measure of organizational effectiveness.

According to Rojas (2000), huge numbers of studies have been conducted to assessment how effective is their organization which started in the early thirty's and was further expressed using diverse approaches as well as theories in the seventies to the present time (Karagoz & Oz, 2008). However, most method has been used towards appraising the effectiveness of the university system.

As identified by Antia et al. (1976) in her qualitative study, nine parameters can be used to determine the performance of the universities. However, these factors are interconnected with one another in which any lapses in any of the segment will definitely affect the overall achievement of the system. Among these elements are course development, corporate reputation, community tune, physical facilities development, profitability, learner's interactions, human capital investment, public responsibility and the quality of employee relations. Examining the model, one can categorically say that institutional effectiveness appraisal consist of many components in which it can be appraised using diverse indicators.

Institutional effectiveness was measured by Mills (2008) using two criteria which are: how productive the research in terms of the research expenditures; and the institution learning productivity in terms of graduation rates serving as a proxy. Kleeman and Richardson Jr (1985) in his study to measure the criteria for effectiveness studied the perceptions of effectiveness in three state universities in Arizona following certain technique of survey. Ten factors comprising 54 items statements were incorporated into the research instrument. 3,308 students from three different universities were sampled. According to them, what postulate the extent of university's effectiveness include

learners' services and programs; teaching as well as research quality; expertise and research publication; cultural undertaken concentration; minorities and women focus; sports; access to counseling services and workshops sports, graduate programs; school facilities available for community use through leasing; and criterion enrichment. However, the study revealed that learners programs and services as well as research and publication, and the postgraduate programmes in the school should be taken with utmost seriousness.

In a model introduced by Pounder (1999), nine element of university effectiveness in Hong Kong were used to examined the perceptions of their academic and administrative staffs which are:(a)growth, (b)output-efficiency, (c) quality, (d) planning-goal setting, (e) cohesion, (f) human resource development, (g) adaptability-readiness, (h) stability-control and (i) information management-communications. Seven groups comprising administrative and academic staffs from 7 different institutions were used for the study. The result of the study according to Pounder (1999) shown advancement towards valid and reliable self-evaluation in goal setting planning, consistency, information and communication management as well as output-efficiency which he believes can be the main aspect of Hong Kong's university model for institutional effectiveness.

According to A. A. Rahman, Ng, Sambasivan, and Wong (2013), component towards measuring the effectiveness of an organization include: enhance capability to revolutionize, the competency to anticipate surprises, enhanced harmonization of efforts, speedy promotion of new products, responsiveness to change in the market as well as reduced redundancy of information/knowledge. Their study reveals that training of employees to acquire individual and managerial skills improves the effectiveness of the organization.

Furthermore, An, Yom, and Ruggiero (2011) evaluated organizational effectiveness using two components which are organizational involvement and work satisfaction of the employees. 145 nurses working in Korean university hospitals were used as their respondents and their results revealed that the quality of vocational and integral institution's way of life for nurses will definitely improve the effectiveness of the organization. However, it was put forward that preferred patient result cannot be attained if the nurses are not efficiently and effectively cared for.

Cameron (1978), in his study work out a model for assessing the effectiveness in university system in which the model has been widely recognized more than any other model in the area of institutional effectiveness (Ashraf & Kadir, 2012; Cameron, 2005; Cameron, Mora, Leutscher, & Calarco, 2011; Choo, 2013; Hertelendy, 2010; A. A. Rahman et al., 2013). These models comprise of nine dimension (Cameron, 1978) which was furthermore classifies into four main domains of institutional effectiveness (Cameron, 1981) as shown in Table 2.2.

Table 2.2

The clusters of institutional effectiveness

S/N	Four domains	Dimensions
1.	The academic outcome	Students' academic growth, professional advancement, productivity of the lecturers as well as the capability to obtain resources.
2.	The external adaptation outcome	Student's livelihood progress as well as system openness and community interaction
3.	The extracurricular outcome	Concerned with the student's livelihood progress as well as system openness and community interaction
4.	The moral outcome	Student's educational contentment, the lecturers and administrator employment satisfaction and the organizational health

However, Cameron further merged the learner's individual training component into the academic cluster thereby reducing the dimensions into three (Cameron, 2005). Moreover, Cameron (2005) stated that the following parameters should be considered in assessing the effectiveness of an institution:

- (1) What time frame is to be employed?
- (2) What is the level of analysis that will be used?
- (3) From what perspective is effectiveness going to be judged?
- (4) On what area of interest is the implication of effectiveness going to be evaluated?
- (5) What is the reason behind the assessment of institutional effectiveness?
- (6) What kind of information is employed in judging effectiveness?
- (7) What is the equivalent to which organizational effectiveness is assessed?

However, there is no criterion that is universal to which the effectiveness of a university is measured (Cameron, 2013). Each criterion to be adopted depends on the circumstances surrounding the university and they will also give diverse results on how the university is effective. According to Clott (1994), the output of an establishment to see whether it meets the needs of the external environment in which it functions requires some measures of its effectiveness which is an external standard applied to outputs of the organization (Salancik & Pfeffer, 1978). Moreover, Cameron (1980) argued that when external constituencies have a powerful influence on the organization, a strategic constituencies approach is the most effective method to utilize when assessing the effectiveness of an organization.

According to Cameron (2013), before any approach are chosen, it is very important to take the background elements into consideration because of the multiplicity of cultures within the country or amongst countries which make it likely for an approach to fail in a country or an establishment and be successful in the other one because of the people's way of life there. Therefore, for this study, the goal model and the multiple constituencies' model will be used to access the institutional effectiveness. Therefore, the university goals and the graduate outcomes will be used as a basis for institutional effectiveness in this study.

Ewell (2009) has identified four predicaments of practice that need deviations in the present thinking about assessment in the assessment movement. These are the predicament of purpose that include improvement or accountability, summative against formative; stance in terms of standard of achievement, collective view of denotation and value of outcomes as well as consistent strategies to evaluate achievement; technique which are to put into operation series of methodologies like objective tests, general education testing, authentic assessment, rubrics, portfolios, or reflections and laying more emphasis on the techniques rather than on student learning and consequences in which environment or perspective affects outcomes and therefore, results should lead to improvement if the goals are important.

The importance of strategic planning, strong leadership, and institutional culture of institutional effectiveness was emphasized by White (2007) in a proposed model for integration and institutional effectiveness. Gallagher (2008) addressed the key area of strategic planning and found that although external mandates are the catalyst for institutional assessment, strong institutional leadership combined with clearly stated goals and policies are keys to successfully implementing and maintaining effective

measures and utilizing assessment data for continued improvement. Welsh and Metcalf (2003) adopted a slightly different perspective on the challenges faced when developing institutional effectiveness plans, and found that most challenges came from either technical or support issues. Many country have now mandated measures of institutional effectiveness to include assessment of student learning (Serban, 2007).

Generally, the processes and outputs of the universities are considered preferable to inputs when defining an institution's quality (Micceri, 2005). Factors affecting the measurement of the effectiveness of the institutions in terms of administrative and educational support that need to be addressed include their perceptions of institutional motivation, definitions of quality, depth of activities, and particularly, the level of personal involvement. This is because, the more people partake in the organizational effectiveness programs, the likelihood of comprehending their responsibilities which also enhance their support (Welsh & Metcalf, 2003).

Goals and directions for institutional effectiveness processes and quality control should be both specified and monitored for faculty, administrators, and staff in areas such as admissions, alumni services, collections, financial support, personnel resources, library facilities, information technology, marketing, or physical plant (Butterfield, 2006; Downey, von Hippel, & Hughes, 2008). Effectiveness is the responsibility of the institution, and of every member within it (Ewell, 2002; Tierney, 2008). Institutional effectiveness processes and reports should be coordinated through a well-developed institutional effectiveness plan.

Institutional effectiveness is a complex and multifaceted state of being (Collins, 2008). Among the factors cited most often in the literature as affecting institutional effectiveness are leadership style, strategic planning, and organizational

climate/culture. However, the effectiveness of the public universities in Nigeria will be measures viz-a-viz student development and societal development.

2.3.2.1 Student Development

A customer can be regarded as anyone a service or product is being offered to and in the university system, we have the internal and external customer. However, the needs of various customers are diverse and the universities are expected to observe the common needs of the various stakeholders as their major focus. According to Sahney, Banwet, and Karunes (2004), the diverse roles of the students in university education can be examined in four dimensions: they are the product in process, the workforce of the learning process, internal customers and internal customer in the process of course material delivery.

As argued by Nightingale and O'Neil (1994), quality learning by student can be illustrated in terms of student's ability to discover knowledge by him/herself; long-term preservation of the knowledge by the student (Gibbs, 1992); ability to observe the correlation between old and new knowledge; capability to generate new knowledge; student competency to employ his/her new knowledge for problem solving; ability to converse one's understanding or experience to others; willingness to grow into lifelong learners (Duke, 1992).

According to Preszler (2011) that examined the effectiveness of the university in terms of the goals in which they intend to achieve and the learning outcomes of the students; the attributes of university effectiveness are drawn from the vital graduates attributes which include research and analysis, ethical behaviors, personal and scholarly independence, information literacy, social and specialized understanding, and oral and

written communication skills and what they know and do after their studies in the university system (Funk & Klomprens, 2006; Gaudet, Annulis, & Kmiec, 2008; Monk, Foote, & Schlemper, 2012).

Despite the fact that series of student learning outcomes' models exist, some outcomes which include critical thinking, analytical as well as ability to communicate which are believed as a necessity for every graduate of the university system, and numerous outcome of student learning are tailored to incorporate those important learning results as part of the university program. According to Kuh (2008, 2013), the essential student learning outcome at all educational levels that should be realized are grouped into: practical and intellectual skills; knowledge of natural and physical world as well as human cultures; applied and integrative learning; social and personal responsibility.

Learners outcomes are classified by Astin (1991, 1997); Astin, Vogelgesang, Ikeda, and Yee (2000), into cognitive and affective sphere. Lenning, Lee, and Micek (1977) framework consists of evidence about the comprehensive outcomes of university education. Terenzini (1997) in enhancing the work of Astin's assessment model on the IEO assessment model, elaborate twelve inclusive classifications of learners' outcomes which include oral and mathematical skills; content knowledge, higher-order cognitive and academic improvement; career preparation; academic success, workplace skills; success in transitions; mental and emotional advancement; economic benefits; attitudes and values; quality of life as well as public development.

In 2002, the Australian government funded a project to expand the course experience questionnaire (CEQ) that was initially developed by Ramsden (1991) to measure broader dimensions of students experience (Griffin, Coates, Mcinnis, & James, 2003); the project led to the creation of more scale which include the graduate qualities scale.

Conceptually, the course experience questionnaire is designed as a substitute measure of the outcome of student learning.

According to Bourner, Heath, and Rospigliosi (2013), the main goals of university education that cut across all western university which are referred to as “tripartite-mission” of the university are: the higher education of student, the advancement of knowledge and services to those who are out in the four walls of university system. However, in order to accomplish this mission, the student-centre, subject-centre and service-centre must be incorporated into the operations of the university system. The subject-centre is to prepare the students to promote knowledge via research, application and dissemination of knowledge; the student-centre is to prepare students towards their own advancements; and the service-centre is to prepare the students with required disposition and capacity towards the advancement of the society. These can be evaluated via three indicators: knowledge, skills and attitudes.

2.3.2.2 Societal Development

As contained in the Nigerian policy guiding education, the main aim of government investment in education is for the society or national development (FRN, 2004). Lecturers however, are expected to be entirely committed to crucial matters and societal struggle confronting the schools, the country in particular and the world at large rather than being biased (Gutek, 2006).

Bruce and Gerber (1995) in their study about the perceptions of lecturers on student learning, characterize student learning in the form of improvement in knowledge; attainment of procedures and facts which can be applied into practice; learning by heart; explanatory process intended to comprehend reality and preciseness of meaning.

The study conducted by Ball (1999) stressed three challenging things about university education which he said, a university that is unable to make available the quality and quantity of engineers and instructors needed by its society is not an institution to be contented with; a university system that cannot cater for people who are supposed to be beneficial or who desire university education, cannot be called a satisfied university system; and a university system who is unable to justify the relevancy of first degree to the students is not a good university system. However, it is very unfortunate that Nigeria university system has not been meeting those criteria in terms of quality of graduate produced, the number and criterion of students' admission and staff recruitment (Okojie, 2013; Ololube, Amaele, et al., 2012).

Although, societal and individual responsibilities are always mentioned to be required; most outcomes of student learning in university system are still restrained to cognitive outcomes appraisal which according to Klein, Kuh, Chun, Hamilton, and Shavelson (2005); Shavelson and Huang (2003) include successful communication, analytical thinking and drawback resolution as well as backpedal from outcomes which include understanding, self-comprehension, cooperation as well as honesty.

As a result of the urgent necessity for progress and improvement in the country, there is need for the university system in Nigeria to be effective in order to provide the needed manpower development in the country that will enhance the economic growth of the country (Anyamele, 2004). Universities should be aspired to produce graduates who are inspirational leaders, effective collaborators and competent professionals ready to participate in the global community (Shook & Keup, 2012).

The social responsibility of the university system in producing a morally inclined graduate cannot be undermined in Nigeria in this era of insecurity and moral decadency

in the country. This was also reflected in the quotation of Lyndon Johnson when he said, “at the desk where I sit, I have learned one great truth; the answer for all our national problems, the answer to all the problems of the world, comes to a single word, the world is education”. As such, the world at large is looking up to university education for its development.

2.4 Concept of Distributed Leadership

2.4.1 Meaning of Leadership

The word "leadership" comes from a Germanic language root which means "to make go". However, leaders usually stumble in their attempt to know who makes what go? Several leaders have confidence that there is need to "make" their subordinates work by ordering them to carry out specific tasks. However, modern business certainties require the type of headship that believe less in giving order than in motivating people and therefore, leadership lies at the heart of achieving victory (Filson, 2000, 2002).

In every established organization, there must be someone charged with the responsibility of steering the affairs of such organization. Such an individual has to be faced with responsibility of executing those policies and decisions, likely to be taken within the organization in order for that organization to achieve its stated goals and objectives (Ogunsaju, 2006). Despite the fact that, there is no generally acceptable meaning of leadership; it is uncommon for two persons to lead or govern the same way. It therefore shows that, leadership will vary from one group or organization to another and there exists types of leadership or leadership behaviour in the university system.

Gardner (2010) views leadership as an act of persuasion by which a single person or leadership team persuades its establishment to follow the objectives sustained by a

superior or shared by the leader and his or her follower. According to Avolio and Gardner (2005), leadership in the university throughout the world in these period of economic crises is confronted with exceptional pressure from the society. Such pressures however necessitate a refocus of what signifies an authentic leadership in the university system.

According to Bush, Bell, and Middlewood (2010), there has been an increase in the universal attention on the leadership of the school system most especially, universities and university leadership since classroom practices have been seen as a major contributing factor towards students and institutional performance (Leithwood et al., 2010). According to Leithwood et al. (2010), leadership practices have four parts which are emotional part, rational path, organizational path and family path.

Researchers in the area of leadership generally have two different views of leadership (Sadeghi, Yadollahi, Baygi, & Ghayoomi, 2013). One group says it is acquired (Henrikson, 2006; Rowley, 1997; Ruvolo, Peterson, & LeBoeuf, 2004) while the other group claims that persons are born with leadership (Grint, 2000; Lowen, 1975). These views were investigated by Hoyt, Burnette, and Innella (2012); Sadeghi et al. (2013) in term of the two theorists, that is, incremental theorists who believe that leaders are made and, the entity theorists or classical trait theorist (Marturano, Wood, & Gosling, 2013) who believe that leaders are born with it. The study therefore revealed that incremental theorists have more leadership confidence than entity theorist. In over thirty years of leadership research, numerous categories of leadership behaviours are known and scholars have begun to examine the effect of leadership behavior on organizational effectiveness especially charismatic or visionary leadership and transformational leadership (Ling, Simsek, Lubatkin, & Veiga, 2008a, 2008b; Wang, Tsui, & Xin, 2011;

Yammarino, 2013; Yukl, 2008b). A troublesome challenge faced by scholars in the field is the difficulty in arranging various behaviours in a ranked nomenclature that is meaty as regards to the behavioural consequences (Yukl, 2008a).

2.4.2 Distributed Leadership in University Education

The role of leadership in the education setting, especially in university education is taking new dimensions. In recent times, many research endeavours have been focused on leadership behavior in higher education especially universities. Most of the focus has been on certain actions, attitudes, and usefulness expected of the leaders in this twenty-first century for them to be effective (Rasik & Swanson, 2010). There has however been a change from the incipient leadership models which distinguish democratic and tyrannical leadership to a contemporary leadership style that is characterized by servant and shared power leader (J. L. Chin, 2011; Yukl, 2008b). According to Heikka et al. (2013), suitable literature on leadership that were reviewed revealed that “distributed leadership research is comparatively new, evolving as a research focus during the late 1990s, and is primarily concerned with the study of school-based leaders” (p.31).

In modern years, the concept of distributed leadership has been well-linked to alternate the leader-centric conventional leadership models which advocate that leadership is not an individual but a collective property (Bolden et al., 2009). The models emphasize that leadership activities are a process of transferring information and that, leadership roles are conditional as well as the fact that various interpersonal expertise are associated with leadership practices (Nordengren, 2013). In developed countries of Europe and the United States, school leadership is progressively viewed as a key strategy in school reform (Nordengren, 2013).

Distributed leadership, focuses on how leadership is shared within organizations such as schools by several individuals, who engage in leadership with others or by themselves in an unpredictable ways at peculiar times (Spillane, 2006). Under this view, “leadership practice (as both thinking and activity) emerges in the execution of leadership tasks in and through the collaborations among the followers, leaders, and the situations” (Spillane, Halverson, & Diamond, 2004, p. 27). Such division of labour can occur in a variety of ways: multiple leaders may perform the same function together, perform the same functions in two different contexts simultaneously, or divide functions on the basis of expertise and availability (Spillane, 2012).

Distributed leadership theory provides a framework through which scholars can understand how individuals without specifically identified leadership roles can be called on to perform leadership in specific situations within a school environment. As a framework, distributed leadership is compatible with several current models of scholarship in educational leadership, which utilize a variety of collective leadership models (Nordengren, 2012).

Leadership can be viewed as indivisible from the goals and desires of the subordinates. Individual collaborations with variety of people in diverse stages of enthusiasm depend on the relationship among the leaders and the subordinates. Burns (1978) classified these dealings into transformational and transactional forms. According to him, leadership can be handled in authority and power point of view. In other words, the leaders are conceivable power welders. According to Nissinen (2001), among the most important leadership responsibilities is the integration of both the followers and leaders individual intention towards the accomplishment of the organizational goals and objectives. This superior objective is the vision, mission and strategy of the

organization being pursued by the leader. Vision has been described as a conceptual representation of a pragmatic and anticipated organizational prospective level (Kanji & e Sa', 2001).

However, this epitome shift in the field of leadership has herald the introduction of new leadership school of thought which according to Bryman (1992) included transformational, transactional and visionary leadership techniques. These modern approaches transmute the researches in the leadership domain which has also recognized prolong significance of study that enhance the awareness of leadership matters. Studies on leadership have enhanced the understanding of different styles of leadership which in their own ways enhance the performance of the organization.

This modern concept of leadership has enhanced people's knowledge about the impact of leadership on the performance of the system. The traditional analysis of leadership has been disapproved by scholars because of its failure to differentiate between management and leadership which according to Popper, Mayseless, and Castelnovo (2000), the notion of transactional, transformational and visionary leadership style was embraced because of such circumstances.

Weick (2012) had stated that leaders must embrace specific potentials because of this global uncertainty and insecurity. Such qualities include adaptive competence and improvisation. Improvisation encompasses adaptive management of a planned-out facts and this is however not all about creating something from nonentity. Therefore, improvisation is an instinctive or natural thing for effective leaders especially at the level of planning even though it is not often tackled at the strategic stage. However, Boal and Hooijberg (2000) assert that adjustable as well as soft competencies of the leader are essential at the strategic stage.

In his study of distributed leadership in schools in England; Oduro (2004) highlighted the factors that promote distributed leadership which he termed “pull” and those factors that inhibit distributed leadership practice that he also called “Push” factor (Figure 2.6). . As such, every university leaders are expected to pay attention to those factors in exercising the duty.

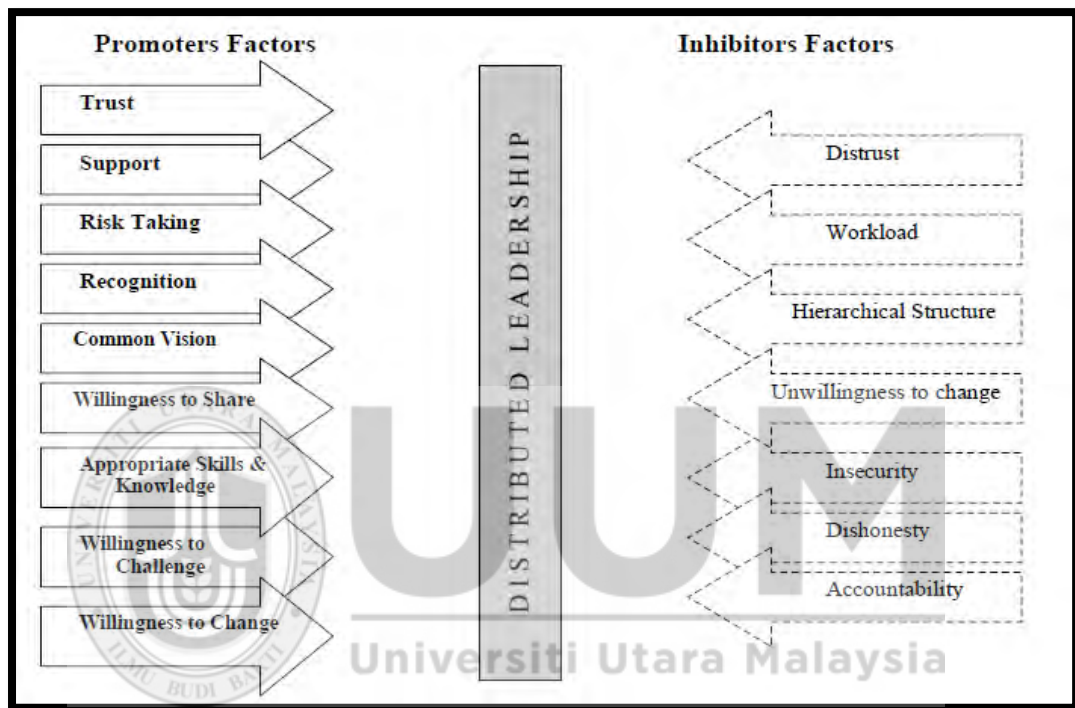


Figure 2.6. Pull and push factors of distributed leadership in schools. Adopted from Oduro (2004)

2.4.3 Dimensions of Distributed Leadership

There has been a misunderstanding or mix-up in describing the concept of distributed leadership which has given rise to a diverse nomenclature being used in the literature, such as democratic and shared leadership. These have been often interchangeable and instinctively used (Pearce & Conger, 2003; Pearce, Conger, & Locke, 2008; Woods, 2004).

Distributed, collective and shared leadership are often interchangeably used in the same study as if they mean the same thing, with researchers not providing definition or explanation on what is meant by each notion (Hammersley-Fletcher & Brundrett, 2008). The misunderstanding of the application of those notions has brought in confusion in the process of operationalizing distributed leadership which has created complexity when clarifying research findings implication.

In this study, dimension for distributed leadership was adopted from the operationalization of distributed leadership in Hulpia et al. (2011). They studied the approach of distributed leadership as a practice in three dimensions: leadership functions through different sources; participative decision making among various members of the organization; as well as cooperation within the leadership team.

2.4.3.1 Leadership Functions

There has been wide acknowledgement that in order to improve the school, leadership enhancement has been recognized as the main factor (Bush, 2008) and it is becoming more important for university leaders to understand their role in enhancing students' learning experience as well as ensuring that the structures and systems to support administrative and academic processes are established as part of their leadership responsibility and accountability (Rhodes & Brundrett, 2010). In the same way, Price Water House Coopers (2007) submitted that a school leader's behavior greatly influences the performance of the students and, there is an extensive recognition that the leader of a school has an essential responsibility towards elevating quality learning and teaching within their various universities.

According to Spillane, Diamond, Walker, Halverson, and Jita (2001), leadership practice focuses primarily on the interaction among the leader, his subordinate and the situation surrounding them. However, in his distributed leadership theory, Spillane (2006) buttressed that various sources of influence abound within the school system and empirical concentration has been repositioned on the “leader plus” phase of leadership functions (p.3). Moreover, leadership in the school system has taken a new dimension. It is not just a position but a practice by which various individuals within the university system will be involved to share or utilize their expertise towards achieving the goals of the university system. Therefore, leadership within the university system has been based upon multiple sources of influence (Leithwood & Mascal, 2008). For instance, who leads when the vice-Chancellor, the dean or the head of department is not available? And how the expertise of those who are not in a formal leadership position are involved in curriculum and instructional leadership towards achievement of the university goals and objectives (Spillane & Camburn, 2006).

As argued by Green (1999), three attributes are expected of university leaders in order to influence quality education which are : being supportive and interested in every efforts made by the members of school community in order to enhance teaching and learning process; being enthusiastic in offering encouragement and compensation towards the lecturers and among leaders in order to achieve teaching and learning excellence; and being knowledgeable of what make up educational excellence.

Leadership practice can be performed from various sources in the universities. However, it depends on the administrative or organizational structure of various universities which are very similar among the universities. For this study, it will be limited to the vice chancellor, deputy vice chancellors, deans and provost of the various

faculties and/or colleges, heads of department and directors of various institutes/centers. The study conducted by Leithwood and Mascall (2008) revealed that faculty capacity, work setting and motivation are greatly influenced by academic who are formally designated to perform a role. Therefore, the role of every leadership team has a distinct impact on lecturer's commitment. However, each of them has supervisory and supportive roles to perform and this study will be assessing the supervisory and supportive roles they perform towards the university goals' achievement. The leadership functions were examined by Hulpia et al. (2011) through strength of vision (De Maeyer, Rymenans, Van Petegem, van den Bergh, & Rijlaarsdam, 2007), offering of intellectual stimulation and instructional leadership (Hallinger, 2003) and supportive behavior (Hoy & Tarter, 1997). The supervisory aspects were however examined from the theory of instructional leadership for monitoring and supervising academics (Leithwood & Jantzi, 1999, 2000).

According to Hulpia et al. (2011), the support received by lecturers irrespective of which of the leaders does that, is essential to their commitment and this has a positive effect on organizational effectiveness. This is in support of Leithwood and Jantzi (2000) and Robinson, Lloyd, and Rowe (2008) who stressed that the regularity of leadership practice is what matters and not how the leadership is performed by a distinct leadership role. Therefore, this study examined the leadership functions in terms of the supportive and supervisory roles of the university leaders.

2.4.3.2 Participative Decision Making

Decision making has been perceived as one of the essential tasks of any university leader (Hulpia et al., 2011) which can make or mar the achievement of the organization. Decision can be viewed as the conscious efforts made for the purpose of achieving a

goal (Idoko, 2010). Decision making has been seen as an integral part of leading any organization and as such, every educational leader makes decisions in order to establish objectives, organize, control and direct the educational process (Alabi, 2002). Decision making is thus a process of identifying alternatives and choosing one of the alternatives in solving a problem or address an opportunity.

A participative or shared process of decision making where lecturers are involved can be referred to as an element of distributed leadership (Ronald H. Heck & Hallinger, 2009; Seashore Louis, Dretzke, & Wahlstrom, 2010). According to Mayrowetz (2008), the collaborative method that involve a broader collection of actors in the overall decision making process within the school system would help to reduce the risk encounter in the process of delegation of responsibilities. Moreover, Somech (2010) stressed that the growing development of participatory decision making in the school system reflects the extensively shared confidence that decentralized and flatter management authority formations support the potential for promoting the effectiveness of a school.

As concluded by practitioners and scholars, the school system is facing enormous challenges which are considered too vast to be solved by one person (Ameijde, Nelson, Jon, & Meurs, 2009; Bolden, 2011; Bolden et al., 2009; Davis, 2009; A. Harris & Spillane, 2008; Ronald H. Heck & Hallinger, 2009; Hulpia, Devos, Rosseel, & Vlerick, 2012; Rabindarang, Bing, & Yin, 2014). They therefore, called for opinions and suggestions from school community members. Involving lecturers in decision-making process offers the collection of potential value needed for excellent schools (Somech, 2010) among which are: improving the quality of decisions made (Scully, Kirkpatrick, & Locke, 1995), contributing to the quality of work life (Somech & Bogler, 2002) and

enhancing lecturer motivation (K. Anderson, 2002; Taylor & Tashakkori, 1997; Vergheze, 1989).

Previous researches have revealed that participatory decision making process of lecturers has a significant impact on the outcomes of the organization (Hulpia et al., 2011). According to Robinson, Hohepa, and Lloyd (2007); Robinson et al. (2008), leaders who encourage and likewise participate directly through informal or formal professional learning will have a significant impact on student outcomes. This is similar to Bogler (2001) who concluded that the feelings of belongingness that lecturers have in the process of being involved in decision making will have a great impact on their job commitment. A study conducted by Appelbaum et al. (2013) on the relationship among employers job satisfaction, commitment and participatory decision making among Quebec manufacturing company, Canada revealed that employee trust in their leaders is an essential determining factor of employee's willingness to partake in the company's decision making procedure. Low participation in the organization decision making brings about low level of commitment and job satisfaction.

Nevertheless, other studies have argued that participative leadership in decision making does not have a direct influence on the effectiveness of an organization (Bogler & Somech, 2004; Somech, 2005). This is due to the fact that lecturers at times feel that more workload are given to them in the process of involving them in decision making as they will be given one role or the other to perform. As concluded by Hulpia et al. (2011), further studies are needed to identify the impact of participative decision making on the school system.

2.4.3.3 Cooperation within the Leadership Team

Distributed leadership has been viewed by Groon (2003) as a leadership practice that relies more on interactions among individuals in the organization rather than individual property. The believe that the value of distributed leadership is achieved through practice has become a subject of discussion (Cutajar, Bezzina, & James, 2013) which was also confirmed by Mayrowetz (2008). According to Haslam, Reicher, and Platow (2013), who examined the social identity theory of leadership, the way leaders and subordinates perceive or view each other as members of a common group or team is all about effective leadership.

It is not a matter of having many leaders but the ability of the leaders to harmonize their actions in order to have mutual influence on the improvement or effectiveness of the school (Mehra, Smith, Dixon, & Robertson, 2006). As argued by Scribner, Sawyer, Watson, and Myers (2007), the achievement of distributed leadership does not only rely on individuals carrying out diverse leadership roles effectively but rather on new principles of influence and interaction among various staff in the university system. Therefore, interactions among leaders are believed to be very vital than the kind of their formal leadership roles (A. Harris, 2010). Distributed leadership should not be limited to distribution of leadership roles among leadership teams but also how such roles are distributed and the cooperation among the leadership teams (Gronn, 2002; Spillane, 2006).

Findings from a study conducted by Muijs and Harris (2007) showed diverse ways that faculty leadership are available in schools. According to them, faculty leadership functions require ongoing leadership development, trust as well as cooperation among the leadership teams and also shared vision and the structures of the school is

paramount. This was supported by Briggs (2010) when he sought to express conditions that support cooperation among leadership teams in order to distribute their leadership. These are shown in figure 2.7.

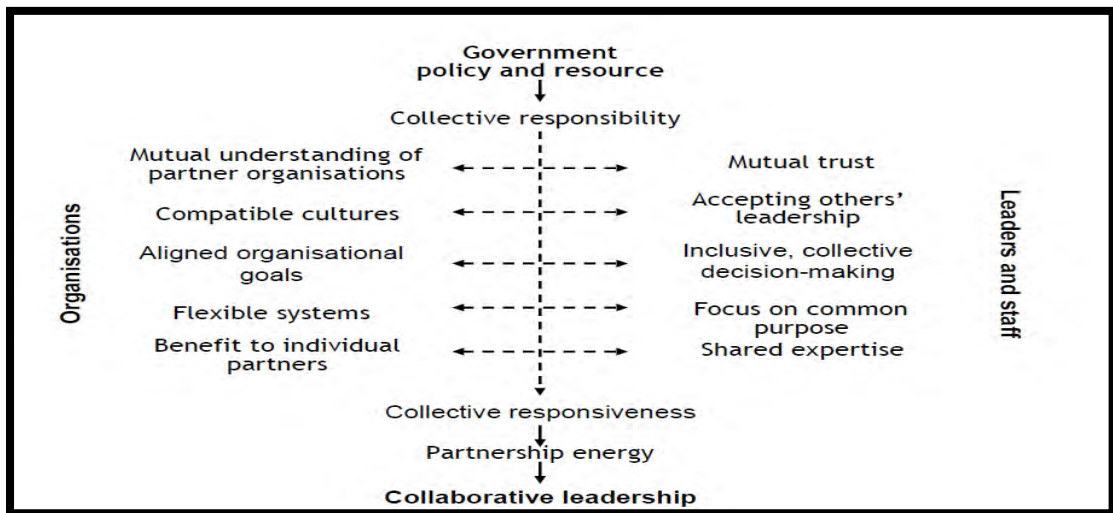


Figure 2.7. Beneficial conditions for collaborative/distributed leadership adopted from Briggs (2010)

As recommended by Senior and Swailes (2007), mutual believe and reliance, assigned objectives, compromise decision making and honest expression of frame of mind and discrepancy are some of the elements needed by an effective team. Likewise, there must be coordination, collaboration and consistency among the leadership teams (Buchanan & Huczynski, 2004) with a clear borderline amid the leadership team (Hackman, 2002).

Cooperation within the leadership team was examined in this study in terms of goal oriented, group cohesion and role clarity among the leaders (Hulpia et al., 2011). According to Hulpia et al. (2011), lecturers' involvement in decision making in the schools is not as essential as the cooperation inside the leadership team or the quality of their support.

2.5 Concept of Quality in University Education

Quality continues to be the central emphasis for the survival of any organization including the university system. Although, despite the great value attributed to the concept of quality, it remains a concept that cannot be easily defined because of its component and therefore, there is no universal meaning or definition to quality as the concept is as old as man itself (Reeves & Bednar, 1994). In every organization, there is an awareness of quality and Nigerian universities are not exempted from this fact since they are institutions that are not isolated from the society but strongly linked to it (Flores-Molina, 2011). According to Sallis (1996), the dynamic idea, the emotional and moral quality makes it difficult to be tied down to a single meaning.

Biggs (2001) viewed quality in three dimension viz: (i) quality as value for money which means that the university is accountable to the public by satisfying their demands which is justified by the resources they pay for the services; (ii) quality as fit for the purpose, that is, the universities have several determination which include teaching, research and community service in other words teaching is the reasons for making student to learn effectively and this can be achieved when the students have learnt to the expected requirements as a result of their teaching programmes with indispensable outcomes; and (iii) quality in terms of transformation which explains teaching in the universities that change student perception in totality and the way they apply that knowledge in solving their real world problems. Therefore, a quality institution is that with higher aims and in which lecturers and other staffs continually improve their practices in order to achieve such aims within the limited resources. That is why Hathaway (2009) said that the meaning of quality changes; depending on the views of the stakeholders (accreditation body, the school administrators, lecturers, parents,

employers, labour or student) and this makes it difficult to reach a consensus on what really constitute quality.

Quality has been defined by the British Standard Institution (1991) as the entirety of service or outcomes' attributes which put across its capability to fulfill the rational or intended desires. According to Garvin (1984), techniques for expressing quality include the superior philosophical techniques, the most cost-effective product-based method, the end-user centred techniques, the manufacturing-based method as well as the value-oriented operational management method.

Lomas (2002, 2004) has also viewed quality in four dimensions: (i) quality as excellence which equates quality to excellence and as such, university education is viewed as quality in relation to its perception as excellent; (ii) quality as fitness of purpose. That is, a product or services rendered by an institution can be regarded as quality if such product and services is able to meet customers' needs, requirements and desires and this can be related to the goals statement of the university. The quality of teaching is viewed in terms of the efficiency and effectiveness of the lecturers which is linked to the stated university's aims and objectives; (iii) quality as value for money which means the services provided by the university should be able to meet or exceed the expectations of the students and therefore should be accountable to the students as a measure of the value for the money they paid. This also supports Jongbloed, Enders, and Salerno (2008) who stated that universities are expected to be answerable to each other, the employee and the society at large.

Diverse techniques in expressing quality include: surpassing a lofty benchmark or passing a needed criterion; demonstrated by getting things accurate at the first attempt, making quality a culture through consistency; ensuring that the service or product

outcomes achieve the predetermined goals as well as the requirement and contentment of the stakeholders in terms of appropriateness of intention; ability to offer suggestions and proficiency towards the enhancement of newly established agencies in charge of quality assurance; expediting the connection between the accrediting agencies and the institutions (Harvey, 2007; Harvey & Green, 1993)

According to Barnett and Hallam (1999), the curriculum, learners' evaluation, teaching and learning as well as the staff training has been the fundamental activities in the university education which embrace quality. These accomplishments according to Grewal (2012) produce the "protective belt" to which the overall learners' student improvement and understanding is central to qualitative university education. However, other actions fall around the "auxiliary belt" which are also essential but however does not have an immediate effect on the learners' quality experiences which include the policies of the institutions, publications as well as the research; students' access; staff recruitment; and academic plans tailored towards the business, industry and societal relationship. Therefore, the quality can be termed in both qualitative and quantitative in university education.

Although, the concept of quality is not new in university education but there have however been a continuous discussion about the need for quality improvement in the university system and in education at large (UNESCO, 2005). The expectation of the societies on university education is very high and therefore, the quality services to be rendered by Nigerian Universities must be of high standard. In order to make sure that students and employers of graduates are sufficiently protected from unprolific quality courses and programmes, the National University Commission (NUC) as the main

accreditation agency in Nigerian universities, set a minimum academic standard for various programs ran in universities in Nigeria as a guideline for best practices.

In summary, looking at the various views of quality in higher education, one can categorically say that quality of university education in Nigeria can aptly be measured by customers or stakeholders' satisfaction and as revealed in the National Policy on Education.

2.6 Quality Administrative and Academic Processes

Every excellent organization are bound to design, manage as well as improve its processes in order to generate improved value for its customers and other stakeholders (Calvo-Mora, Leal, & Roldán, 2006). Previous researches have suggested that managing quality in university education context should be handled differently from how it is being handled in manufacturing or service sectors (Chua, 2004; C. N. Madu & Kuei, 1993). The need for quality supervision in university education arises because of the continuous increase in student population, restricted and better resources utilization, limited student involvement in teaching and learning, absence of commitment among staffs and the lack of accountability. Others include systematic internal monitoring and review procedure, students not possessing requisite capabilities especially generic skills in terms of problem solving, dependency, decision-making, inventiveness, adaptability and learning as well as the rising cost per unit. That is, efficiency, effectiveness and quality of university education is at a questionable state (Mohanty, 2013; Tulsi, 2001).

Systematic supervision of administrative and academic process is a necessity towards the process principle in education. Process supervision therefore encompasses the collection of behavioural and methodological exercise which were concentrated on

behavior and undertakings rather than the outcomes (Ibrahim, Amer, & Omar, 2011). That is, process management is a systematic tactic in which all the resources owned by the universities are used in most efficient and effective manner for the achievement of a desired performance (Sit, Ooi, Lin, & Chong, 2009). In a study of critical factors and performance measurement of total quality management, Motwani (2001) commented that process management stresses the value adding to a procedures, enhancing the productivity of every workers and improving the organizational quality. Several empirical studies have also proved positive relationship between process management and quality performance (Talib, Rahman, & Qureshi, 2013).

Huitt (2003) grouped administrative and academic processes into: input, context and classroom practices. The input includes factors that influence teaching and learning outside the classroom; context are the lecturers' qualities and that of the students they teach in the classroom; classroom processes which are the behaviours of the lecturers and that of the students in the classrooms and other factors or variables like the classroom environment and the relationship of both the lecturers and the students. It is a means by which the university system manages designs and enhances teaching and learning so as to reinforce its strategy, policy and satisfy completely the stakeholders' rising need.

According to EFQM (2009), sub- criteria for process management include: methodological design and administration; improvement as required using novelty in order to absolutely satisfy and produce to the stakeholders a rising value; services and student produced are tailored towards the needs and expectation of the stakeholders; services rendered, product produced, deliver and return, and stakeholder relationships are improved. In universities, these processes are identified as the processes of

administration and service, teaching and learning, and research (Da Rosa, Saraiva, & Diz, 2003; Zink, 1995).

Three approaches to total quality management have been identified by R. W. Harris (1994) as: customer focus approach where the idea of students' service is nurtured through staff training and development; staff focus approach that emphasis on enhancing the contribution of all members of staff towards school effectiveness. The third approach seeks to ensure conformity to requirement of certain strategic measureable facts of the educational process.

According to Lundquist (1998), educational process could be based on the resources that are inter-connected and undertakings in which inputs are transform into outputs. Such inputs include students' competency and those of their lecturers. Furthermore, Chua (2004) see educational process in higher education to include accuracy of curriculum content, instruction medium, assessment, teaching and learning, as well as content and delivery of course units. While, administration was sometimes understood to consist of three successive processes: vision, planning and policy (Krüger & Scheerens, 2012). However, administrative and academic processes begin even before the first day of the student in the classroom till his last day in the school; although numerous literature have limited academic process to curriculum, instruction and assessment.

This study build on the dimensions of process management as suggested by Calvo-Mora et al. (2006) which are administrative process, educational process and research process. The findings of their study reveals that research process is negatively insignificant in process management in higher education. Therefore, this study identify administrative process and academic processes (education and research process) as dimension for process management and the research process was identified as one of

the dimensions of quality academic process. This is consistent with the lean higher education (modified 11 June 2015) dimension of process management in higher education which are administrative process and academic process. According to lean higher education, the administrative process include admission, purchasing, facilities, hiring and budgeting; while academic process according to them include course design, teaching, improving degree program, student feedback, handling of assignment (Emiliani, 2004, 2005).

The dimension of process management in this study is also in line with Psomas, Fotopoulos, and Kafetzopoulos (2011) who examined the level of process management in certified companies. Using exploratory factor analysis, two factors were extracted from process management construct which they termed: core process management and the supporting quality tools. The core process management and the supporting tools are terms in this study quality academic process and quality administrative process respectively. Therefore, this study examine the administrative processes in terms of students' admission, staff recruitment, supportive resources, facilities and environment as well as policies and strategies while academic processes are examined viz-a-viz curriculum, instruction, service learning, assessment and research.

2.6.1 Components of Administrative Processes

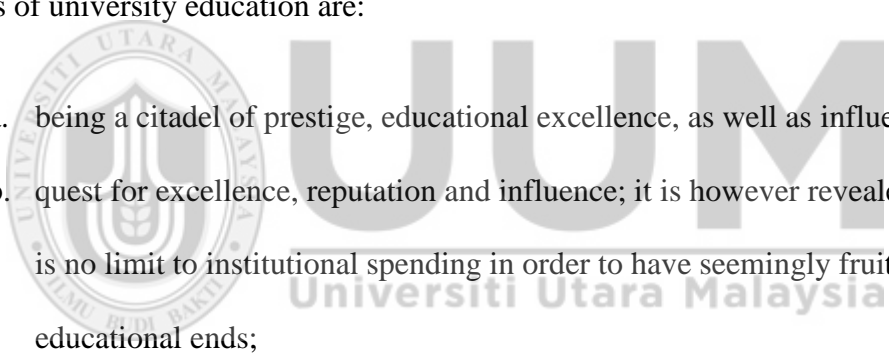
2.6.1.1 Staff Recruitment

Availability and quality of lecturers are an essential tangible element that have an impact on the perception of service quality in higher education setting (Oni & Abiodun, 2010). The quality of lecturers depict how effective and efficient a university is, because lecturers are referred to as the heart of the university system who also provide the

essential services to the society and the university system itself. They are also the ones that prepare university graduate as well as its research output (Obadara, 2013a).

The relationship between the process of recruitment and organizational effectiveness can be compared to the connection between the raw materials used to produce a product and the final out put (Sule & Ugoji, 2013). According to them, since no matter the technological and resources input into a bad material; nothing good can be achieved from the final product. That is, a good organizational development cannot be achieved without a better recruitment process.

As stated in Bowen's four laws of education, costs in higher institution, the dominant goals of university education are:

- 
- a. being a citadel of prestige, educational excellence, as well as influence;
 - b. quest for excellence, reputation and influence; it is however revealed that there is no limit to institutional spending in order to have seemingly fruitful educational ends;
 - c. Each institution raises all the money it can;
 - d. Each institution spends all the money it raises so as to lead towards ever increasing expenditure (H. R. Bowen, 1980, 1996; W. G. Bowen, 2013; Martin & Hill, 2013).

In Harbison and Hanushek (1992), educational inputs were classified into:

- a. Hardware in terms of school building, furniture, classrooms and sanitation
- b. Software namely curriculum, pedagogy, textbooks, writing materials, teaching and learning materials etc.
- c. Staffs in terms of the lecturers and the non-academic staffs

- d. Management and university structure and
- e. Context and circumstantial variables, which include the student's academic ability, community background and family.

In order to enhance teaching in the university system, it is a must for conservation of successful reform on teaching aspect which imperatively can be determined by the quality of the inputs (Blackstone, 1991). No matter how good and perfect the school curriculum is, if the lecturer is not academically competent, the curriculum would not be effectively implemented. Therefore, lecturer quality is synonymous with academic ability and the skills which he apply to teaching for the improvement of learning (Al Barwani, Al-Ani, & Amzat, 2012).

2.6.1.2 Student Admission

Admission of students into the university system has become a great issue because of the large differences in the number of applicant and the university quota provided by the university system. Because of this, it is very challenging for the university leaders in selecting the most qualified students for admission, but rather, a lot of policies were introduced in order to favour parties involved in the school system. As shown in Table 2.2, the carrying capacity is increasing arithmetically while the number of applicant is increasing geometrically and this has resulted into a continuous increase in the gap between the carrying capacity and the number of applicants into Nigerian universities.

Table 2.3

Applications, admissions and carrying capacity of universities in Nigeria

Year	Application	Admission	NUC Carrying Capacity
1989/1990	255,638	38,431	28, 214
1991/1992	398,270	61,479	35, 704
1993/1994	420,681	59,378	50, 255
1996/1997	376,827	56,055	58, 593
1999/2000	418,928	78,550	72, 487
2000/2001	467,490	50,277	74, 929
2001/2002	749,417	90,769	82, 295
2002/2003	994,381	51,843	70, 625
2003/2004	1,046,950	105,157	82, 655
2004/2005	841,878	122,492	82, 655
2005/2006	916,371	76,984	86, 755
2006/2007	806,089	123,626	86, 755
2007/2008	911, 653	107,370	90, 656
2009/2010	1,369, 491	188, 442	
2010/2011	1,493,604	356, 981	229,981
2011/2012	1,503,931		500,000

Source: compiled from Moti (2010) and NUC website.

The study conducted by Chukwurah (2011) among 125 students and 75 lecturers in university of Calabar, Nigeria revealed that post UME screening is not a true test of knowledge in selecting student for admission and the quota system has also affected the selection of brilliant student into the university system due to their geographical location (catchment area). The quota system which originates from the federal character commission to give equal opportunity for candidates seeking admission into the university system from different state has not been helpful. This is because; an average student will be given admission at the expense of the brilliant one. This practice has also affected the employment of lecturers into the university system.

2.6.1.3 Supportive Environment/Facilities

Supportive environment/facilities encompasses human environment, organizational climate and physical facilities (Akporehe, 2011; Okyere-Kwakye, 2013). Work environment has been defined as the entirety of conditions under which an individual or group of people perform their duties (Kerlin, 2013). According to him, work environment can Sustained professional development enhanced by an immersive field study, encouraged experienced lecturers to modify their instruction to include scientific inquiry strategies that challenged their students to maneuver and make sense of actual scientific data (Kerlin, 2013).

As highlighted by Omachonu and Einspruch (1994), the design of the appropriate environment can be affected by factors which include: availability and accessibility of lecturers, adequate laboratory and computer facilities, appropriate text book selection, adequate academic advising, ability of the lecturers to bring reality to the classroom, emphasis on the class and team projects, adequate office staff support and clearly stipulated grading policy.

In this technological age, any institution can achieve little without technological improvement and this can take place with the cooperation of the school leaders. Technological innovation has being defined by Bon and Mustafa (2013) as the embracing of new technologies that are integrated into the processes or products of the organization. Innovation in the university system can be viewed in two dimensions via: product and process innovation. Product innovation is the ability to produce a new good or service or improved on the existing one (Burgelman, Christensen, & Wheelwright, 2009) while according to Tarafdar and Gordon (2007) process innovation focused on enhancing the efficiency and effectiveness of production.

Table 2.4

Categories of supportive facilities/environment in university education

Supportive Environment/Facilities	Components
Physical Facilities	School building, Staff offices, Staff residential Libraries, accommodation, Workshops, Laboratories, Places of convenience for staff and student, Student recreational facilities, Students' canteen etc.
Human Environment	Relationship with colleagues, Relationship with administrators, Supervisors relationship with the school head and lecturers, Relationship among the staffs, administrators and stakeholders
Organizational Climate	Job satisfaction, Interpersonal relationship, group cohesiveness, task involvement, lecturers' condition of service, availability of needed tools to carry out their task, lecturers' professional development.

Sources: Ukeje, 1990; Akporehe (2011); Okyere-Kwakye (2013)

In Trivellas and Dargenidou (2009); Trivellas and Drimoussis (2013); innovator and the monitor, that is adaptive and stability leadership is found to be highly influential predictors of quality teaching and learning in university education. According to Trivellas and Dargenidou (2009), lecturers' teaching attitude and satisfaction arising from recognition and rewards were established to be convincingly associated with

affective commitment while resources availability and lecturers competence were ascertain to bring about continuous commitment.

Blackstone (1991) acknowledged that for libraries meeting the student's needs are becoming very hard because of unavailability of resources and the enthusiasm for goal achievement in terms of all university students to become computer literate has been cut short because the facilities are not there for them to learn. He further stressed that even though the university are facing resource constraint, the lecturers' and students' environment where they work is essential to be satisfactory and conducive.

2.6.2 Components of Academic Processes

2.6.2.1 Curriculum

Etymologically, the term curriculum spring from the Latin word "Currere" which denote a racecourse or a runaway on which one runs to accomplish a goal (Yarriswamy, 2010). Every institution of learning has pre-determined goals to achieve through the teaching and learning process within and outside the classroom and to facilitate this process, we need a means which in educational terms is called curriculum. The curriculum according to Tyler (1949, 2010), is defined as all learning experiences which a learner is expose to under the supervision of the lecturers. Therefore, the curriculum is a means by which the lecturers realize his ideals or objectives in his classroom.

Traditionally, the curriculum is meant to train the diverse abilities or faculties of the mind, with the help of discrete subjects included in it; this is very narrow in its approach because the courses were subject dominated which has to be mastered by the student. However, the modern concept of curriculum is much broader both in its approach to the

content of knowledge and also with regard to the needs and abilities of the learner as well as the changing needs of the society. Curriculum for any course of study must consist of some fundamentals of the subjects which are basic without which the higher details cannot be understood properly; these fundamentals are called the core curriculum in secondary school and foundational courses in higher education.

As issue of quality has being drawn, the attention of all nations in the world through the process of popularization of university education; China for instance has taken a measures to solve the problems of quality in their higher education by launching the construction and assessment of National Pilot Curriculum (NPC).

In Nigeria, better concentration to curricular and pedagogy innovation is poor (Ogbogu, 2013). This is evident in the high dropout rate of students from the Universities as well as the poor quality of University graduates. Dabalen et al. (2001) affirm that there is high increase of poorly trained university graduates and these deficiencies are in terms of written and oral communication as well as in practical technical expertise. According to them, the provision of education services is not market responsive and admission policies are not related to labour demand requirement. In developed countries, institutions adapt to the problem of labour market mismatch by forming knowledge alliance with different institutes that create knowledge in the country. In addition to this, the government launches additional vibrant labour market communication schemes that are connected to universities' professional guidance and better participation of private sector in curriculum discussion, lecturers' attachment, and research financing as well as student employment.

In Kpee, Oluwuo, and Baridam (2012), Nigerian universities curriculum are expected to have local content by stressing local values and home based cultural assets while

accommodating and absorbing the Global Knowledge Economy (GKE) and technology (without adulterating the local content) to produce and support the development of the community and individuals as balanced local citizens. However, if the result of such curriculum is being put in place; it will make university to develop a local person with international outlook. According to Kpee et al. (2012), It is projected that the relevant curriculum for Nigerian universities should be one that develops the students' intelligence to be in tune with unique self, local and global environment. That is, the university curriculum should be able to develop students to be abreast with social, economic, cultural, political and technological needs of the world as a whole and the country in particular.

As maintained by Cheng (2000, 2005), relevant curriculum must aim for the future and provide unlimited opportunities for students' learning. This is what Cheng simply calls the "triplication of education" which is: individualization, localization and globalization. However, had observed by C. Uche and Kpe (2007), most Nigerian universities professors are disconnected scholars making white elephant collar curricula for used in several faculties and colleges which in turn lead to turning out of white elephant graduates whose qualifications cannot be defended in the labour market. According to Matlay and Rae (2007), employability is a curriculum issue and there are various ways of fostering employability through the curriculum. Some will fit some system and circumstances better than the others but the best approach is the one that is best in content. According to Matlay and Rae, effective learning and employability intentions need to be supported by teaching, learning and assessment techniques that are consistent with the intentions of the curricula.

2.6.2.2 Instructional Process

Teaching has been perceived by Bauer, Askling, Marton, and Marton (1999) as part of the major responsibilities of the universities. The effectiveness of teaching in the university can therefore be realized to include specific practices and expertise demonstrated by the lecturers within a specific circumstance (Devlin & Samarawickrema, 2010). Teaching has been described as an art as well as a science (Silver, 1966). It is an art as it calls for exercise of creativity and talents and it can be viewed as science because it encompasses a repertoire of techniques, skills and procedures which according to Rao (2008) can be logically described, studied and improved upon.

Teaching is a formal process which usually takes place in the classroom situations (Rao, 2008). As pointed out by Stein and Spillane (2005), learning cannot be referred to as reflective process in which information are received but rather, it involves dynamic mental process that intervenes the works of the lecturers. However, the process of learning starts from learners' prejudice about the courses they are being taught.

Through teaching, a lecturer aims at giving information to the students, making the students acquire some skills, changing the attitude of the students, behavior modification for the learners, giving some experiences of life, molding the character of the students and shaping them to become good citizens for the bright future of the society in general and the country in particular. Therefore, any university that fails to achieve this is performing below the expectation of the society and therefore the leaders have a clarification to make.

As suggested by Seldin (1990), effective or quality teaching in the school system can be achieved viz –a-viz transforming the university atmosphere to make the campus

highly receptive towards teaching; helping the graduate students in improving their teaching expertise; making available proper tools and setting to enhance instruction; employing suitable incentives to improve instruction; and setting up an efficient lecturers' development scheme.

Cooperative learning has described as one of the learning strategy that aid student centered learning. It embrace learners achieving a shared goals by working in a small cluster(Gillies & Boyle, 2011).when students work cooperatively, they learn to pay attention to what other people's opinion, say, share ideas, give and receive help, clarify concerns, and create together new understandings.

Student-centered has been expressed as the main approach that help learners to think outside his or her favorite or inclination. These techniques sanction students through their individual involvement to scrutinize issues such as emotional, cognitive as well as behavioral using the content of the instruction (Crawley, Curry, Dumois-Sands, Tanner, & Wyker, 2008).

Electronic learning which is popularly express to as e-learning is gradually gaining recognition in university institutions all over the world (E. C. Madu & Pam, 2011). The extraordinary increases in the number of students' enrolled in Nigerian universities has uncovered the unfortunate bad conditions of infrastructural facilities in Nigeria. This ugly situation of overcrowded classrooms, shabby and derelict structures has resulted into poor quality of graduate produced in Nigerian universities which are unmarketable in this technology driven world. In a study carried out by Akuchie (2008) in five of the universities in North Central zone of Nigeria, the result of the findings shows that there is large proportionate of illiterate among the students and lecturers on ICT usage. The study further reveals that there is huge shortage of e-learning facilities in the sampled

universities and where available, it is not adequate or inoperative and for this fact, student and lecturers does not use ICT equipment for instructions. This was also supported by E. C. Madu and Pam (2011) in their study about e-learning in federal universities of technology, Minna- Nigeria. However, researches have also indicated that in spite of quality instruction, students still perform disappointingly (R. P. Perry, 1991; R. P. Perry, Hall, & Ruthig, 2005).

In a study conducted by Veloo and Haroon (2004) towards improving mathematics instruction in English in Malaysia secondary schools, three areas of teaching which include the preparation of lesson, instruction as well as the assessment of learning were investigated. The finding from the study shows that usage of terminology in instructional process has been the major challenge faced by teachers in the selected primary and post primary school. Therefore, weak foundation of knowledge can also create an obstacle to better student understanding in higher education.

2.6.2.3 Service Learning

Service learning is a pedagogy that combines classroom instruction with service to the community. According to Jacoby et al (2003), its aims are to provide learners with learning experiences that strengthen the curriculum, enhance students' personal as well as their interpersonal growth, and connect students to the needs of the community.

Ever since 1980s, the service-learning related courses in university education have risen significantly and even though the meaning of service learning embrace civil learning (Bringle & Hatcher, 1996, 2000, 2009; Howard, 2003), academic learning outcomes have being the major emphasis of various service-learning courses.

Service learning make available supplementary ways of achieving the goals of the university system, and university's credit status is necessary for service-oriented undertakings when service ascertain and assessed are tailored towards student learning. Lecturers that employ service learning in their courses realizes that it bring about new life within the classroom settings, improve the extent of conventional learning accomplishment, enhances learners concentration in the course, improve lecturers problem solving expertise as well as making training more pleasurable (Bringle & Hatcher, 1996). As speculated by Eyler, Root, and Giles Jr (1998), extended participation of student in service learning assist the student to identify the problems of the community and how it can be solved within the community settings which exposes them to have a constructive, prior and complex knowledge of likely challenges they can face as a student after graduation. That is, it helps to improve the public enhancement of the student (Eyler, 2002).

There has been a drastic expansion in the number of Service learning courses available in university education for the past three decades and researches have shown that service learning generate significant benefits in student learning outcomes (Astin et al., 2000; Bringle & Hatcher, 1996; Conway, Amel, & Gerwien, 2009; Crone, 2013; Eyler & Giles Jr, 1999; Yorio & Ye, 2012). A study by García and Longo (2013) draws upon the experiences of developing a new program in global studies at Providence College that focuses on civic engagement with local and global communities, with interviews and a focus group conducted with majors in the program; the paper concludes with demand for using service-learning as an instrument to train global citizens not simply as a one-time experience, but as part of the process for curricular integration.

In the study conducted by Tucker (2010) on the effect of service learning on the social, personal as well as the learning outcomes on the student; the study revealed that community commitment, academic learning, social and personal improvement are some of the major advantage student derived through service learning oriented courses.

2.6.2.4 Assessment Process

Assessment has been defined by a different scholar for different purposes which its aims or focus is for student learning. It has been seen as a persistent issue for university education globally and the Nigerian university system has not been left out; and the educational sector is tirelessly working to deal with it. As an example, assessment scores are perpetually small within the National student survey in United Kingdom and equally the postgraduate expertise surveys that was carried out by the academy of higher education, there has been a discussion taking shape towards an assessment that is authentic within the university system, that were loosely outlines as an assessment strategy that is connected to student expertise within the real world of employability framework and this discussion is rising within the university system (Groves, 2012).

Rowntree (1998)) define assessment as a process of a teacher or lecturers getting to know the quality of students' learning. However, the Department of Basic Education (2010) describe assessment as "a continuous strategic process of categorizing, gathering and clarifying information about the performance of students with various forms of measurement. This involves four stages: generating and gathering evidence of achievement; weighing this evidence; recording the results; and utilizing this information to comprehend and thereby assist the learners' development in order to improve the process of teaching and learning.

According to Jimaa (2011), there are four areas of assessment which are:

- Knowledge and understanding assessment by means of merging unnoticed examinations as well as in-course assignments which include reports, presentations, essays, quizzes and assessment based on problem solving.
- Intellectual skills' assessment by way of blending concealed written test, coursework that need problem solving and analysis which are connected to engineering.
- Assessment of practical knowledge by ways of summative assessments, constant formative assessment, and objective structured or practical test.
- Assessment of transferable skills by which series of task are incorporated into the curriculum, which contain oral presentation, coursework reports as well as exercise on research.

P. Black and Wiliam (2012) consider assessment as a pursuit that makes available the ability to transform teaching. However, it is said to be formative if its hint is really employed in order to modify the teaching to provide the needs of the students. In line with this description, assessment in the form of formative can take place in the mode of quizzes, classwork, class discussions, projects, homework, quizzes, question and answer period, teacher observation, simulations, performance evaluation as well as student conferences; whereas information or feedback arising from the task should be exploit in order to improve the students' learning. Moreover, facts arising from recent study has established it that when assessment in the form of formative is carried out appropriately, it can be a formidable tool for improving student achievement(Wren, 2008).

Gibbs (2010); Gibbs and Dunbar-Goddet (2007); Gibbs and Simpson (2004) highlighted some factors that should guide the lecturers assessment environment in terms of the number of times student experience summative-only assessment, the percentage of marks from examination, the forms of assessment techniques used, the extent of written and oral feedback experienced by the student, the number of times students undergo formative only assessment, the average pace of feedback from when the assessment was conducted, the velocity of crudeness of description of the objectives and outcomes of the course, and stages of procedures linking the assessment and outcomes techniques.

However, the question is how do lecturers use formative form of assessment to improve the student learning? Academics must however be desire to tackle series of hurdles when shifting to a practice of genuine formative assessment. Therefore, lecturers might need to modify their thinking about student learning as well as their learning capability; lecturers must also be ready to decline the transmission model that affirms that student understanding is as a result of effective transmission of knowledge. There is a profusion of evidence that this model does not really work (Wren, 2008).

Jimaa (2011) conclude in his study that the manner in which students are assess have a wide influence towards the students' learning and the amount of assessment of problem solving and critical thinking skills is recognize to have a positive influence on the outcomes of quality learning. He therefore saw assessment as a way of assisting learners to learn; a means of formulating decision about teaching and a means of reporting on student progress. However, it has to do with the quality of learning as well as the quality of teaching. That is, effective assessment can also serve as an avenue to showcase where a department or programme is doing well and this assists lecturers to see how their

course is applied to the overall programme. It has a profound influence on what and how the students study; how effectively they have studied as well as how much they study.

Thus, Assessment strategies can be examined in four different perspectives in order to verify understanding and collect proof of classroom learning that has taken place which according to Dodge (2011) include: reflections and summaries by which the learners pause to replicate what make sense out of what they have read and heard, obtain personal expression out of their learning experiences as well as enhancing their reasoning skills; lists, charts, and graphic organizers where learners through series of graphic organizers are able to build connections, organize data, and take note of the connection by means of engaging multifarious graphic organizers; Graphical knowledge illustration by which the learners can use each words and photos to form connections and enhance memory, simplifying recovery of information in a while, during which this "dual coding" will assist the lecturers to deal with diversity in the classrooms, inclination in learning techniques, and cooperative activities in which the learners are opportune to maneuver and converse with their colleagues as it exhibit and widen their understanding of the concepts.

According to Wren (2008) , summative assessment can be considered okay in the school system if the following criteria are met:

- Making use of self-assessment whereby students can input terminology (traffic light) to show aspects where their intellect is above average (green), average (yellow), or below average (red) with the intention of arranging revision or review.

- Once self-assessment is done, learners can break up into various groups of discussion unit that focus on particular areas of students' need.
- As a substitute to traditional study strategies, learners can create their own trial questions and answers to reexamine the course outlines in order to know the area they need improvement in preparation for their forthcoming exams.

Table 2.5

Characteristics of formative and summative classroom assessment

Characteristics	Formative Assessment	Summative Assessment
Purpose	Provide ongoing feedback to improve learning	Document student learning at the end of an instructional segment
Student Involvement	Encouraged	Discouraged
Student Motivation	Intrinsic, mastery-oriented	Extrinsic, performance-oriented
Teacher Role	To provide immediate, specific feedback and instructional correctives	To measure student learning and give grades
Assessment Techniques	Informal	Formal
Effect on Learning	Strong, Positive and long-lasting	Weak and Fleeting

Source: Adopted from McMillan (2007)

McDowell, Sambell, and Montgomery (2012) therefore suggested that it is necessary to get it right, the balance between assessment that makes judgments as regards if the students have certifiable skills or the one that helps them to learn. Moreover, McDowell (1995) further specifies the following checklist that faculties can use as a guide to measure how far they are providing a conducive environment for learning assessment:

- There should be better supply of informal and formal feedback from different sources which include lecturers, peers, automated sources, self and others (externals)
- Students should be given the privilege to put into practice their learning experience so as to develop and improve them
- Students should be encouraged to improve as a self-assessors and self-directed learners
- Students had to participate in learning undertakings that are appropriate, useful, meaningful or genuine in their course of study
- There should be a suitable balance between learning or formative assessment and summative assessment

However, McDowell (1995) acknowledges that there is still a long way to go in the assessment system of universities because of too much delay in marking work done several weeks earlier which make the feedback to become useless and this is not a good techniques (Catcheside, 2011). The quality and timeliness of assessment is a constant source of tension between the students and their various universities. In various National Student Survey carried out, it has consistently attracted the lowest scores from students.

2.7 The Relationship between Distributed Leadership and Institutional Effectiveness

The enhancement of vibrant model towards the evaluation of learners achievement is partially determined by outward-focused leadership who understand the directives of accreditation, strategically smart and conscious of the procedure for outcomes evaluation towards incorporating it to the comprehensive change and enhancement

initiatives of education with a technical comprehension of the analysis and design of the evaluation procedures (Peterson & Vaughan, 2002; Preszler, 2011).

According to Prajogo and Brown (2004), top-management commitment significantly affects the quality performance of any organization. In more recent works, concentrating on the imminent of management in organizations; Hamel (2012) stated that there is need to have second thoughts on both management structures and leadership processes in organizations in ways that are better fitted to complex and uncertain environments, globalization, connectivity and knowledge-societies. The conventional academic leadership draw attention to the learning procedure input by giving attention to teaching while the modern days leaders according to Richard DuFour (2002) concentrate on learning through changing their concentration and that of the university community from purpose to outcomes as well as from inputs to result. In the study by Papademetriou (2012) that examined the role of distributed leadership on school effectiveness and improvement among elementary schools in a district of Cyprus in Paphos; the results revealed that distributed leadership is a kind of leadership that bring about improvement of students' outcome, organizational effectiveness and job satisfaction among teachers. Furthermore, Obadara (2013a) in his study that examine the relationship between distributed leadership and sustainable school improvement among 200 public secondary schools out of a total of 595 schools in Lagos State; the result of the study revealed significant relationships between distributed leadership and school goal achievement; teachers' professional development; instructional programme management; effective teaching and learning; and promotion of school climate.

Herrera (2010) in her own study examined the perceptions of principals and teachers on the impact of leadership on school effectiveness. The result shows that principal's fulfillment of leadership responsibilities can predict the effectiveness of schools in the United States. Wang (2009) also in his study on the relationship among the leadership styles, organizational culture, job performance and organizational performance in banking sector in southern Taiwan contented that leadership styles significantly affect organizational performance. According to Fitzgerald and Gunter (2006), distributed leadership gives opportunity to build professional learning communities where teachers and student learning can help the school improvement.

Furthermore, in the study funded by Spencer foundation about changes that occurred in public schools leadership and its effect on student academic success in Canada and United State of America (USA), it was discovered that the major force that leads to a long time change was the sustainability of leadership (Christison & Lindahl, 2009). This was in support of Marzano, Waters, and McNulty (2005) that asserted that school effectiveness increases or decreases student changes of success and that what lead to school effectiveness is in large part, its leaders. That is, what leaders do in schools ultimately influences the success that student record.

In the study carried out at Taiwanese technological university by Lee (2013) on the influence of school supervisor's leadership style on organizational effectiveness, using organizational commitment and organizational change as mediators. The outcome of the study revealed that supervisor's leadership style has a significant and direct positive effect on organizational effectiveness.

However, some studies also indicated that there is no direct relationship between school leadership and school effectiveness. The study of leadership influence on students'

achievement in some selected schools in Netherlands was carried out by Bruggencate et al. (2012) which reveal that there is no direct relationship between school leadership and students' outcomes. A further finding according to Shakir, Issa, and Mustafa (2011) exposes that the prevailing distributed form of leadership in secondary schools in Pulau Penang does contribute to the effectiveness and improvement of the school.

Never the less, if schools are to be true learning organizations where student achievement is influenced by leadership, then the distributed view according to Georgiou (2012); A. Harris (2008); Spillane (2006) provides great potential for positive change and transformation in schools and school systems. A. Harris (2004) in his study look at the impact of distributed leadership on school improvement and it was concluded that while distributed leadership can assist in school capacity building and however suggested that further research should be conducted to corroborate the influence of distributed leadership on student learning outcome. Therefore, further study is required to examine the positive relationship between distributed leadership and institutional effectiveness.

Research carried out on school effectiveness according to Ng (2015) have pointed out that school leadership is ranked as one of the most essential school-related elements that impact student learning. Therefore, owing to the argument above, the researcher assumed there is positive relationship between distributed leadership and institutional effectiveness.

2.8 The Relationship between Distributed Leadership and Quality

Administrative Process

The core leadership functions in the school system that are often distributed by the school head using distributed leadership include setting the school mission, redesigning the school system, professional development programs as well as managing instruction (Leithwood, Day, Sammons, Harris, & Hopkins, 2006). According to Spillane (2006), leaders are expected to nurture an environment where individual members in the school system are given the opportunity to contribute significantly to the success of the organization. However, many studies have uncovered the importance of investigating leaders' behavior on the school learning environment (Hallinger & Heck, 1998).

Koopman (2006) conducted a study on elementary teachers' perception about principal leadership style and school climate in North Dakota public school district, United States. The outcome of the study revealed that there is a positive relationship between principal leadership behavior and collegial/disengaged teacher behavior (school climate).

Wallach (2010) examined the effect of distributed leadership on decision making in high school conversions. The study adopted a mixed-method drawing from leadership distribution and organizational learning theories to analyze the relationship between distributed leadership and decision making towards successful school reform. The findings of this study suggested that teachers' disparate sense making can lead to distrust as well as competition across the organization thereby causing shifts towards misaligned patterns of leadership distribution.

A correlational study conducted by G. L. Black (2010) among teachers and principals in a Catholic school board in Ontario on their perceptions on servant leadership and

school climate using mixed method approach. The findings revealed a significant positive correlation between servant leadership and school climate. Elmore (2000) cautions that collaborative work by teachers will not, alone, lead to changed teacher practices and improved learning outcomes as there must also be a clear organizational focus on large-scale change and whole-school improvement.

Harris (2002) found that distributed leadership is a key determinant of the motivation of teachers. With respect to school improvement and change, she points to an extensive body of research, which confirms that strong collegial relationships, mutual trust, support and a focus on enquiry are crucial for effective improvement. Distributed leadership also promotes a sense of belonging among participants, a sense of being valued members of their school community and a deep commitment to collective action for whole-school success (Crowther et al. 2002).

2.9 The Relationship between Distributed Leadership and Quality Academic Process

In education generally, leadership has been perceived by policy makers and stakeholders as a key role player in improving the quality of educational institutions (OECD, 2011; Wallace, O'Reilly, Morris, & Deem, 2011). The university system towards quality management as outlined by experts such as Deming, Juran, and Feigenbaum to improve instruction and service on college and university campuses around the world, higher education leaders have "borrowed" ideas from the corporate world in form of strategic planning and other types of planning, programming, and budgeting systems (PPBS). The adoption of a customer-focused management approach, however, calls for the "participation of all members" of a college or university, and presents a unique challenge to leaders who wish to transform their institutions.

A precise definition of leadership in a total quality management environment may be difficult to formulate, but its importance and presence would be hard to ignore (Aljodea, 2012). According to Durant and Wilson (1993) propositions, in order to implement TQM, there appears to be a need to attempt to identify and analyze the leaders' attitudes, perceptions, and descriptions of organizational processes, influence of leaders' perceptions and leadership style on success or failure in operational areas. MacBeath and Dempster (2008) suggested some principles that brings about leadership for active learning which include: leadership distribution, addressing learning, formation of favourable learning environment; establishing exchange of ideas concerning learning as well as leadership in the school, and ascertaining common perception towards accountability. It is this multifarious connections of leadership roles that bring about leaders competence and his accomplishment towards the university system (Rhodes & Brundrett, 2010).

Ebel (1991) realized the importance of leadership while he says; leadership is the key to excellence. The aim of management must be to help people to perform and improve their job. Leaders focus on improving the process, inform the management of potential problems and act to correct problems. Leadership also means that structural changes in the organization in terms of culture and actions must occur first from the uppermost of the organization.

Scholtes and Hacquebord (1988) suggested two areas of prominence for leaders which are: they should review Deming's methods and also, leadership studies should concentrate on differences. It was also pointed out by Bolden et al. (2009); Owlia and Aspinwall (1997) that inspirational leadership who is value driven from the top is required to successfully execute quality in higher education.

According to Sallis (2002), the contribution of leadership to quality culture in the educational system can be perceived in the area of a clear commitment to quality improvement; a vision for the institution; an ability to communicate the quality message; meeting customer needs; leading staff development; ensuring that the voices of customers are heard; a no blame culture: most quality problems are the result of management and policies and not the failings of staff; making sure that roles are obviously stated in the organizational arrangement which ensure there is supreme designation that warrant accountability and responsibility; leading innovation; creating successful group; developing suitable device useful for assessing and observing accomplishment as well as a struggle towards man-made obstacles' elimination be it cultural or organizational.

As stressed by Banta et al. (1996), an effective assessment requires an environment characterized by effective leadership. Even though the meaning of service learning incorporate civic learning, the students learning outcomes has remained the core emphasis of large number of service learning courses (Howard, 2001).

Moreover, Seldin (1990) argued that quality teaching can be enhanced by university leaders by providing necessary equipment and facilities, and classroom supplies when needed. It is also essential for the university administrators to understand when to boost lecturer's morale and correct necessary environmental shortcomings. He however concluded that outstanding teaching can only be encouraged when suitable rewards are provided to the lecturers. For there to be improvement in the university teaching programmes, Felder and Brent (1999) stressed that at each stages of the enhancement exercise, there must be teamwork and cooperation among the lecturers who will put it into action and the leaders who are expected to make available the needed resources. It is therefore imperatives for the university leaders in their various capacities to make

available incentives for lecturers in terms of salary supplements, equipment, travel grants, as well as promotions with the intention of improving teaching and learning in the school. Therefore, distributed leadership can said to have a positive and significant relationship on quality academic process.

2.10 The Relationship between Quality Administrative Process and Institutional Effectiveness

According to Sule and Ugoji (2013), a recruitment processes and procedures which help in attracting and retaining the best workers in an organization influence organizational health, which could be ascertained by looking into staffs' contribution to institutional goals and job satisfaction of the workers. Therefore, workers must be well managed by the institution for efficiency, effectiveness and high productivity in the organization.

Despite the fact that several studies has ascertained a significant relationship between quality of facility and the achievement of students (Roberts, 2009; Uline & Tschannen-Moran, 2008; Uline, Tschannen-Moran, & Wolsey, 2009), the survey conducted in 520 public schools in USA by A. J. Bowers and Urick (2011) revealed that facility disrepair has no direct effects on the achievement of mathematics students in USA and therefore proposed that a mediated effect should be incorporated. According to Leithwood and Jantzi (1999), school conditions are series of actions and determinations that is taken within the school environment but outside the classroom in an effort to improve classroom teaching and learning. In B. P. Perry (1994), what assure quality teaching is in the knowledge, attitudes and the skills possess by a lecturer as well as being passionate of their work and perform leadership role. Therefore, the authentic quality of university education should therefore be measured on student understanding and what task they can perform after their experience in the university.

The study carried out by Cardoso, Ferreira, Abrantes, Seabra, and Costa (2011) intends to find the relationship among teacher-student collaboration, self-confidence, student-student interaction and its influence on students' academic performance. The sample for the study comprise of 2000 Portuguese high school students and it was revealed in the study that teacher-student and student-student interaction has a direct and positively influences the performance on the learners, which in turn has direct and positive influences on their academic attainment. Supporting prior researches, this study suggested that an appropriate pedagogical interaction and effective learning environment should be enhanced to improve students' learning outcomes.

In a study carried out by A. A. Rahman et al. (2013) employees training for managerial skills and process assist to enhance the effectiveness of the establishment as well as knowledge attainment, knowledge protection and knowledge application which interact with the training and expertise of employees managerial process to increase the effectiveness of the organization.

In an effort of measuring the effectiveness of an institution, Ottih (2002) opined that one of the indicators of the system approach is the capability of the institution to obtain limited and valued resources and these cannot be acquired when there are influences on processes and procedures of recruitment. When the best applicant is recognized and positioned on the job, they stay and provide the utmost best in the institution, thereby helping the institution to achieve its predetermined goals. As stated by Nightingale and O'Neil, for quality learning to take place in the school, the following condition is required to be fulfilled: the student is emotionally and intellectually prepared to conform to the learning undertakings required; when the students have or see the reason to learn; when student obviously link up old knowledge to new one; student being active

in the course of learning; and when the school climate supportive and conducive for learning. The study of Kgaile and Morrison (2006) that examined the variables that influence school effectiveness in South Africa also perceived staff involvement and interconnectivity as a major factors contributing to university's effectiveness in south Africa.

Hasan and Kerr (2003) in their study on the relationship between total quality management practices and organization performance in service organizations, it was discovered that TQM practices like employee involvement, top-management commitment;; training; service design; supplier quality; quality costs; benchmarking; quality techniques, and customer satisfaction leads to quality performance and higher productivity. This was also consistent with C. C. Yang (2006) who reported that TQM practices including process management, employee empowerment and teamwork, customer satisfaction management, quality goal setting and quality tools training have significant positive effects on customer satisfaction and that the implementation of TQM is an effective measures by which organizations can achieve competitive advantage.

A study applying structural equation modeling approach (Sánchez-Rodríguez, Dewhurst, & Martínez-Lorente, 2006) provided an insights into the existing information technology (IT) and TQM theory and practice on quality and operational performance. The outcome of their study reveal that TQM initiatives generate significant positive improvements in quality and operational performance. In line with this, Prajogo and Sohal (2004) identified the multidimensionality of total quality management in relationship with organization performance using Structural equation model (SEM) approach. Data were collected form 194 Australian firms and the finding

revealed that the mechanistic elements are significantly related to quality and innovation performance.

Sila and Ebrahimpour (2005) explored the relationships among TQM factors such as leadership, process management, strategic planning, human resource management, customer focus, information and analysis and the results confirmed a positive relationship with human resource results, organizational effectiveness as well as financial and market results. They identified leadership, process management and, information and analysis as the key factors that act as the foundations on achieving organizational effectiveness (Fotopoulos & Psomas, 2010).

Previous studies have also identified effective communication as an important factors in an organization which systematically enhance employees' involvement and customer satisfaction and thereby improves the effectiveness of the organization (Ooi, Bakar, Arumugam, Vellapan, & Loke, 2007; Yusuf, Gunasekaran, & Dan, 2007). Looking at the findings of previous studies, it can be postulated that quality administrative process has a positive significant relationship on institutional effectiveness.

2.11 The Relationship between Quality Academic Process and Institutional Effectiveness

Quality is the goal of any organization whether it is business or educational. As with any new strive, change is the greatest obstacle to overcome. As asserted by Hernandez (2001), Change brings about feelings of dissension, whether in business or a school setting. Despite the argument that quality implementation stresses the allocation of power to employees; the actual application phase involves a greater deal of control on employees.

As argue by Rautopuro and Vaisanen (2001), it is indisputable that quality teaching enhances student learning as well as inspiring improvement in both the general competences and specialist knowledge demanded by the society and working life of this modern days. Moreover, if students perceived teaching as pertinent towards the achievement of their goals, they will always be contented and therefore motivated to study harder. According to Stefani (2004), evaluation of learners' learning is very essential particularly in this varying world of university education because of the changing needs of the stakeholders' expectation of their graduates. Because of this, it becomes necessary for all staffs to be involved in enhancing student learning most especially new recruited lecturers to allow them to comprehend the basic student evaluation principles which according to Stefani (1998) will assist them in their assessment process towards student learning.

In Mehrotra (2004), practical proofs have shown that the quality tenet assist the schools to: reaffirm the purpose, functions and responsibilities of the institutions; work out inclusive leadership training for lecturers at every levels; enhance schools as a "way of life."; design staff enhancement program that will deal with the staff opinion and confidence in the school; draw up all-embracing child-development initiatives that traverse all category of schools; employ research as well as professional support information to drive the institutional practice and policy.

P. Black (2002); P. Black and Wiliam (1998) analysis of study that has turn out to be the ground breaking effort on formative assessment of learning; these authors asserted that classrooms were viewed by educational policy makers in form of a "black box," where specified efforts are provided and precise outputs, in terms of increase knowledgeable students expected to graduate. That is, the obligation of turning out the

anticipated students with minute or no influence rests strongly on the capabilities of the lecturers. However, this task is increasing in this 21st century because the stakeholders continue to insist on increased responsibility and accountability from the school system.

According to Hitt, Haynes, and Serpa (2012), due to the recent global competitive environment, there is need for organizations as well as the universities to be ground breaking and innovative in their activities. This indicates that universities in Nigeria and globally should be up and doing to discover existing opportunities in order to produce graduates and services that will meet the taste of its external community (Alvarez & Barney, 2007). In order to achieve this, various university leaders are expected to acquire and sustain a culture that will promote and enhance innovation as well as contributing towards the improvement of teaching and learning (Pellet, 2008).

Criterion evaluation with other form of continuous assessment can be regarded as formative assessments when they offer speedy response to lecturers and are employed to assist individual student or clusters of students in their study. Nevertheless, formative assessment is not restricted to tests. According to Boston (2002), formative assessment techniques employed by instructors to create an approachable transformation of teaching and learning through the conventional ways which are: lecturers' observation, home work as well as classroom discussion. Never the less, easily using these routine may be insufficient; therefore, information gathered from such exercise should be utilized by the lecturers timely enough in the process of making decision which according to Stiggins and Chappuis (2008) enhance student learning. Therefore, assessment has been regarded as the cornerstone of institutional effectiveness and it is the ground work for the improvement of the curriculum and school accountability

(Preszler, 2011). Therefore, it can be deduced that quality academic process has a positive and significant relationship on institutional effectiveness.

2.12 The Mediating Role of Quality Administrative Processes

Mediating variable which is also referred to as process variable (Louis Cohen, Lawrence Manion, & Keith Morrison, 2011, p. 60; Steinberg et al., 2010); intervening variable (Valdebenito, Labarca, & Jensen, 2013) and causal effect variable (Pardo & Román, 2013); is an imaginary notion concept that try to elucidate the relationship that exist between the dependent and independent variables which try to look at how the dependent and independent variables are linked together (Baron & Kenny, 1986; Hair, Hult, Ringle, & Sarstedt, 2014). For the conclusion of a mediation analysis to be valid; Judd and Kenny (2010) stressed that the causal hypothesis must also be valid.

Despite the fact that many studies have found direct relationship between distributed leadership and institutional effectiveness (Davis, 2009; Lambert-Knowles, 2013; Papademetriou, 2012), there are also evidences in other studies that school leadership can have a significant indirect impact on student learning outcomes (Bell, Bolam, & Cubillo, 2003; Hallinger & Heck, 2010; Leithwood & Jantzi, 2006; Robinson et al., 2008).

Many international research studies have observed little or no significant direct effect of leadership practices on student achievement and leadership practices have been statistically proven to have a significant effect on school learning environment's component (Leithwood, Louis, Anderson, & Wahlstrom, 2004). This was also supported in the study carried out by Cardoso et al. (2011) that revealed a significant

positive relationship between school learning environment and student achievement in Portuguese high school.

D. Braun, Gable, and Kite (2008) studied the relationship among essential leadership preparation practices, principal leadership behavior, school learning environment and student achievement in Rhode island middle and elementary schools. The findings of the study shows that school learning environment has an indirect relationship between leadership behavior and student achievement. The result shows that principal leadership behavior has a significant positive relationship on school learning environment and the school learning environment also have a strong relationship with student achievement.

Moreover, according to Stein and Spillane (2005); Hallinger and Heck (2010), there is evidence that there is no direct relationship between leaders' practices and student achievement but an indirect influence through school learning environmental factors like school culture, teacher quality, parental involvement were observed to have a great influence on student achievement. Therefore, as argued by Marzano (2003) that the social, political and economic context where the schools operate has an intense influence on student development, the influence of school –level practices cannot be underestimated as teachers quality and other factors were identified by Darling-Hammond (2007) to have a significant effect on student achievement.

As suggested by scholars (Day, Gronn, & Salas, 2006; Ronald H. Heck & Hallinger, 2009; Leithwood, Anderson, et al., 2010) that distributed leadership in schools provide a sustainable means of enhancing the types of learning focused climate which brings about high-performing school; this study therefore identified quality administrative processes cum student admission, staff recruitment, supportive facilities/environment

as well as school policy and strategy as one of the mediator between distributed leadership and institutional effectiveness.

2.13 Quality Academic Processes as a Mediator

According to Southworth (2009), leadership influence can be seen in three dimensions: direct effects, indirect effects and reciprocal effects. Direct effects is when the actions of the school leaders directly influence the school outcomes, indirect effects is when leaders influence the school outcomes indirectly by means of other variable while reciprocal effects is a situation where by the school leaders influence the subordinates/lecturers and lecturers affect the leaders and through these procedures the school results are influenced (Drummond & Halsey, 2013; Ronald H Heck & Hallinger, 1999, 2005). Therefore, whatever the universities' leaders want to see occurring in the school system; actually depend on others implementing them.

However, all these three dimensions can be perceived in the universities' leadership work but indirect effects are the enormous and most frequent of all because leaders cannot perform his duty without others and through others (Southworth, 2009). Effective leaders exercise their work directly by means of their indirect impact which is achieved via series of processes and strategies (Southworth, 2013). In a study conducted by Arjomandi et al. (2009), the curriculum of the program, students' assessment, service learning and staff professional training are the core activities that could influence the output of the university system. This was also evident in the study conducted by Leithwood and Jantzi (2006) that found no significant relationship on leadership and student achievement but leadership practices was found to be significantly related to teachers' classroom practices.

Furthermore, in the study conducted by Robinson et al. (2008) to investigate the virtual relative influence of distinct leadership behavior on the non-academic and academic outcomes of the students. This study make a contrast between instructional and transformational leadership using five leadership measurements that is: determining goals and expectations; purposeful resourcing; coordinating and assessing teaching as well as the curriculum; making sure that the school environment is orderly and supportive as well as encouraging and participating in teachers' development which the outcome of the result suggested that the higher the leaders concentrate their work, relationships, and learning on the essential functions of learning and teaching; the better their impacts on the student outcomes. However, this study concluded that leadership practice and research should be more connected to the evidence of effective teaching as well as teachers' effective learning.

According to Hallinger and Heck (1996, 2010); Ronald H. Heck and Hallinger (2009), several studies that were carried out to examine how the student outcome is influenced or affected by the school leaders have revealed an unconvincing or weak outcomes while studies that take into consideration a mediating or moderating variables incline to testify a significant effect. A study conducted by Timperley (2005) in New Zealand to explore the distributed leadership influence on school improvement revealed that the effect of distributed leadership on school effectiveness varied consistently with the approach of leadership distribution and it was also asserted that for leadership to achieve a desired improvement in teaching, lecturers must be supported to provide student with a valuable instructions.

Since a considerable amount of the effects of leadership on learners' outcomes are facilitated by the school condition (Leithwood & Jantzi, 1999), it is an essential

challenge that research on leadership should recognize those adaptable conditions that has a direct influence on students learning as well as inquiring the nature and potency of their relationship with the leaders (Goodnow & Wayman, 2009).

2.14 Summary of Chapter Two

This chapter is the continuation of chapter one which reviewed past studies on the three variables identified in this study i.e. distributed leadership, quality administrative and academic processes and institutional effectiveness. The indicators to be used to measure the variables were also discussed. The relationship among the dependent, independent and the mediating variables were reviewed and the justification for carrying out this study were stressed. For instance, why quality administrative and academic processes were used as the mediating variables was justified.

Previous studies reviewed have signified some relationship among the variables and construct which need to be examined further more in order to have a good stand. Therefore, in order to answer the research questions raised, the methodology to be adopted will be examined in chapter three of this work.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This research was carried out to identify the relationship between distributed leadership, quality administrative and academic processes and institutional effectiveness in public universities in Nigeria. Furthermore, the mediating role of quality administrative and academic processes on the relationship between distributed leadership and institutional effectiveness was determined. The study also investigate the issues impeding the effectiveness of public universities in Nigeria. Therefore, this chapter discusses the research paradigm, research design, population and participants of the study, research instrument as well as method or procedure for data collection and analysis, ethical considerations and chapter summary.

3.2 Research Design

This study adopted a quasi-mixed method designs (Teddlie, 2009). This is because the qualitative and quantitative data that were collected were not incorporated to answer a particular question. The quantitative approach was conducted to answer research questions 1, 2 and 3 while qualitative method was conducted to answer research question 4 (L Cohen, L Manion, & K Morrison, 2011). A combination of surveys and semi-structured interview was applied to elicit information for the study (Creswell & Plano Clark, 2011; Ivankova & Stick, 2007). The researcher decided to choose mixed method design because of the expected outcomes; timing of the data collection and type of design most suited for a field (Creswell, 2014).

This study adopted a mix method design because it represents a series of different quantitative and qualitative features which are revealed in terms of the language used, orientations, sampling, types of data, research questions, data collection procedures and types of analysis (Tashakkori & Creswell, 2007). According to Creswell and Plano Clark (2007), a single method was inadequate to answer all the research questions completely. Therefore, the combination of both qualitative data and quantitative data will bring about better understanding of the relationship among distributed leadership, quality administrative and academic processes and institutional effectiveness. It also help to understand better, the issues impeding the effectiveness of public universities in Nigeria and as such, a mix method approach was identified as the best approach for this study.

3.3 Quantitative Method

3.3.1 Population and Sampling

The population for this study comprised all the 37, 504 lecturers in the 79 public universities in Nigeria. This include 23, 030 lecturers in federal universities and 14, 474 lecturers in the state-owned universities. The population of male lecturers to female lecturers is 83: 17 (Alechenu, 2012). This study focus on public universities because the concept of distributed leadership are most common in public institutions as most decisions are taken by the proprietors in private institutions. The enormous government funding of education as a social goods to the citizenry call for their accountability to the society and this justify why public universities are considered for this study. The lecturers were chosen as the population of this study because it was suggested by Diamond (2013) that distributed leadership can be implemented either at district, school

or university department level. Therefore, lecturers were chosen to assess leadership practices both within the department and at the school level.

3.3.1.1 Sample Size

The sample size for this study was 450 lecturers from both federal and state universities in five geopolitical zones in Nigeria. This sample size was reached after considering many justifications for choosing sample size. In any survey, an appropriate sample size is essential to reduce the total cost of sampling error and as such; the power of a statistical test is considered paramount in this study. According to Alreck and Settle (1995) which was supported by Hair, Black, Babin, and Anderson (2010, p. 643), any models containing five or fewer constructs with more than three observed variables (items) requires a minimum of 100 sample size or more. While Onwuegbuzie and Johnson (2004) stated that 51 sample size for one tail and 64 sample size for two tail hypothesis are recommended for the minimum sample size in a causal-relative research method (Collins, 2010).

As suggested by Bruin (2006); Borenstein, Rothstein, and Cohen (2001); a prior power analysis was conducted in order to determine the minimum sample size for this study using G*Power 3.1.9.2 software (Faul, Erdfelder, Lang, & Buchner, 2007). Power analysis is the probability of rejecting a false null hypothesis (H_0) or in order words, the probability of obtaining a valid findings (Cohen, 1988). An alpha significance level (err prob; 0.05), power ($1-\beta$ err prob; 0.95), medium effect size f^2 (0.15) and the three predictor variables (DL, QADP and QACP) was used to conduct the priori power analysis and the result as shown in figure 3.2 shows that a minimum sample of 119 will be suitable to test a regression based model (Faul et al., 2007).

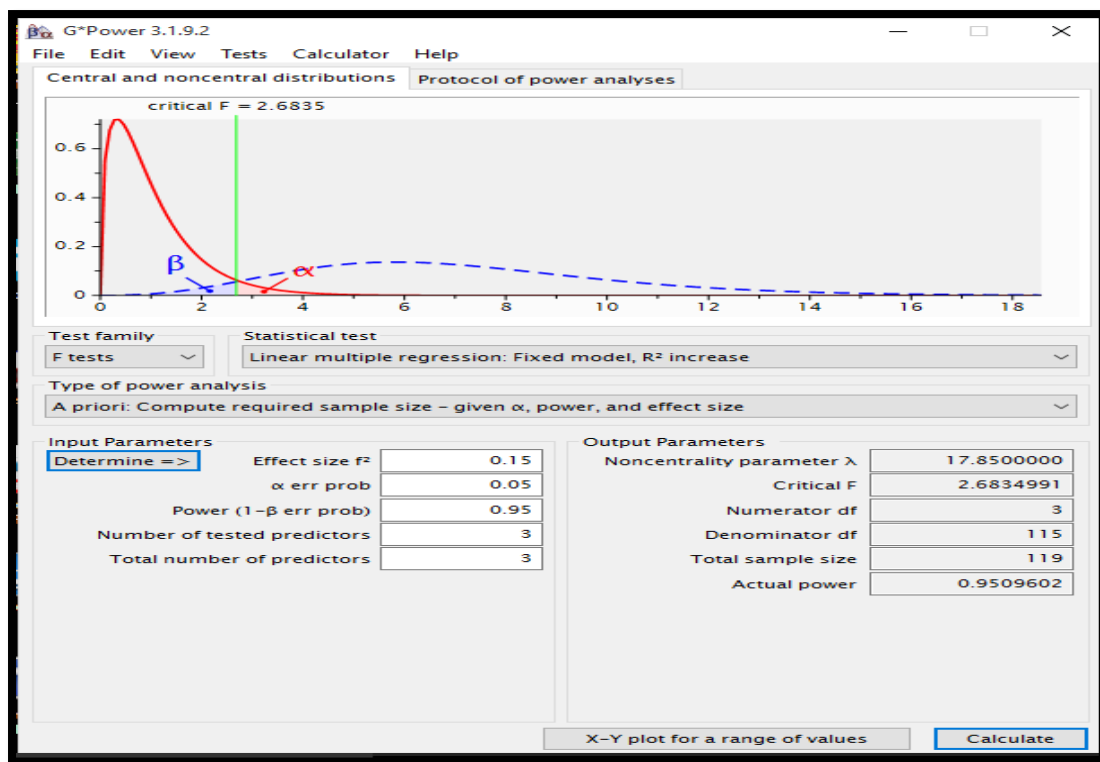


Figure 3.1. Output of a Priori Power Analysis

However, Hair et al. (2010) further stressed that the minimum required sample size for a study depends on the complexity and the features of the measurement model. They therefore suggested that any model that has seven or less latent constructs, the required minimum sample size is 300 (Awang, 2013). The research model in this study has four constructs all in second order measurements and to fulfil all the required conditions highlighted above; 50% of 300 were added to 300 because of high non-response rate among Nigerian lecturers. As such, 450 participants was considered as the sample size for the quantitative aspect of this study. The breakdown is shown in Table 3.1 and Table 3.2 for federal and state universities respectively.

3.3.1.2 Sampling Techniques

A multilevel mix sampling technique was used to select participants for this study using both the non-probability and probability types of sampling (Onwuegbuzie & Leech,

2007; Teddlie & Yu, 2007). The following strategies was undertaken to select the sample size:

i. The universities were stratified into two strata viz-a-viz federal universities and state-owned universities. The 40 federal universities was grouped according to their geographical location in order of their year of establishment and the same procedure was adopted for the 39 state-owned universities. The North-East geopolitical zone was excluded from the study because of the current crises and insecurity in the zone, tagged “Boko Haram”. Therefore, first university on the list as grouped according to geopolitical zone was selected for the study where two universities comprising one federal and one state university were selected from each zone without any bias. Looking at the sampled universities, one can categorically say that the highly ranked and low ranked universities were selected for this study, which was also useful for the study.

ii. A proportionate random sampling technique was adopted in the second stage. The sample size was apportioned according to the number of faculties or colleges so that each college or faculty can have an equal representation in the sample of the study. The total number of faculties in the sampled universities is 90. Therefore, the sample size of 450 respondents was divided by the 90 faculties/colleges, which means that 5 respondents were selected in every sampled faculties in this study.

iii. A systematic random sampling technique was used to choose the respondent in various faculties in which lecturers who have spent at least three years in the university were selected in various academic blocks in the faculties. Moreover, the dean or sub-dean, one head of department and 3 academic staffs were selected as respondent in the study because of the mediating variable which is the quality administrative and academic processes. Only lecturers who have spent at least three years are considered in this study because of the nature of items in the questionnaire and their familiarity

with their present universities. A total of 450 lecturers were used as respondent for the quantitative study.

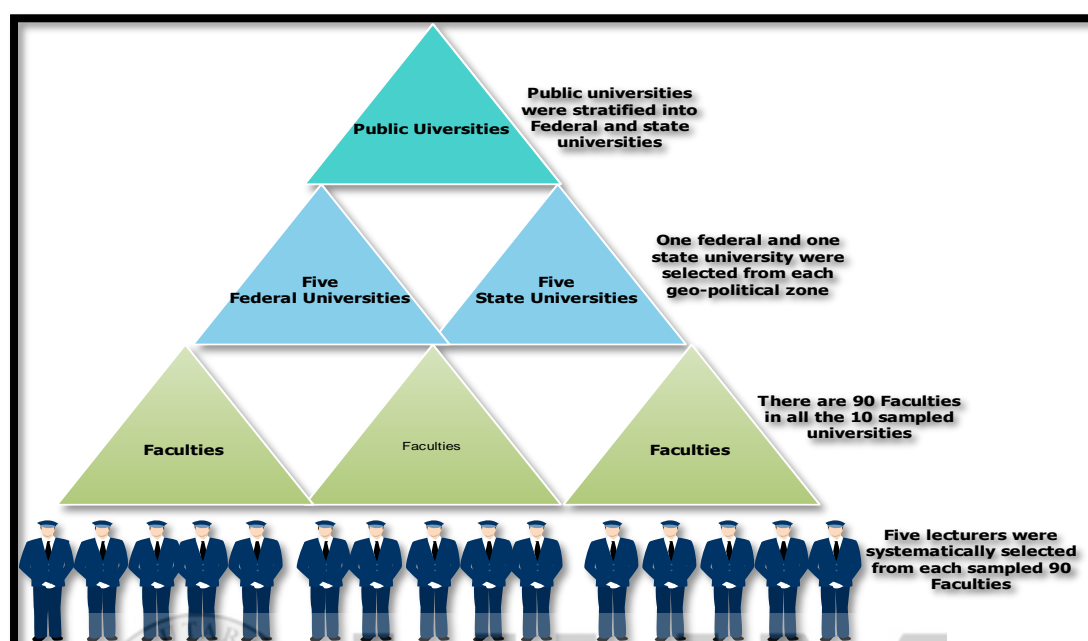


Figure 3.2. Sampling Techniques

Table 3.1

List of the sampled federal universities

S/N	Sampled Universities	Year Founded	Numbers of Faculties/ Colleges	Population of Lecturers	University Location	Ranking	Sample Size
1	University of Ilorin	1975	13	674	North-Central	6	65
2	Ahmadu Bello University, Zaria	1962	12	1,460	North-West	5	60
3	Federal University of Technology, Owerri	1980	6	488	South-East	12	30
4	University of Benin	1970	13	974	South-South	3	65
5	University of Ibadan	1948	9	1,146	South-West	1	45
	Sub-Total		53	4742			265

Table 3.2

List of the sampled state-owned universities

S/N	Sampled Universities	Year Founded	Numbers of Faculties / Colleges	No. of Lecturer	University Location	Ranking	Sample Size
1	Benue State University, Makurdi.	1992	7	385	North-Central	82	35
2	Kano University of Science & Technology, Wudil	2000	6	144	North-West	77	30
3	Abia State University, Uturu.	1981	8	372	South-East	36	40
4	Rivers State University of Science & Technology	1979	7	252	South-South	32	35
5	Ekiti State University	1982	9	363	South-West	97	45
	Sub-Total		37	1516			185
	TOTAL		90	6258			450

3.3.1.3 Unit of Analysis

For the fact that the problem statement of this study focus on the effectiveness of public universities in Nigeria and the effectiveness of public universities was examined in terms of goals and strategic approach. It becomes necessary that data was collected from academic staffs as they are in the best position to reveal the current situation regard the independent variable and the mediating variables for this study (Chua, 2004). Therefore, lecturers from public universities was be the unit of analysis in the quantitative research while both academic leaders and lecturers was the unit of analysis for the qualitative research.

3.3.2 Research Instrument

A survey was used to obtain information from the sample for the quantitative aspect of the study. There are three research instruments designed for the quantitative aspect of the study. These are Distributed leadership inventory (DLI), Qualitative administrative and academic process Questionnaire (QAAPQ); and Institutional Effectiveness Questionnaire (IEQ).

3.3.2.1 Distributed Leadership Inventory

The first one is the Distributed Leadership Inventory (DLI) which was adopted from Hulpia et al. (2011) to gather the opinion of the participants as regards the leadership practices in their various universities in Nigeria. This portion of the instruments will be administered to lectures in the sampled universities in this study. This is because of the mediating variable that includes quality academic process that is directly related to the academic staffs.

The distributed leadership inventory (DLI) which was developed by Hulpia et al. (2009) based on leadership functions, participative decision making and cooperation among the leadership team. Table 3.4 shows the Cronbach's (α) and the p value obtained.

Table 3.3

Distributed leadership instrument source

S/N	Dimension	Source(s)	Cronbach's α
1.	Leadership function	Hulpia et al. (2009)	0.91
2.	Participative decision making	Hulpia et al. (2009)	0.81
3.	Cooperation within the leadership team	Hulpia et al. (2009)	0.93

3.3.2.2 Quality Administrative Process Questionnaire

The second aspect of the instrument is the measurement of the quality administrative process. It was adapted from the research of different studies reviewed which include both empirical conceptual articles. The quality administrative process in this study includes staff recruitment process, student admission, supportive environment/ facilities as well as policy and strategy.

Table 3.4

Measurements for Administrative process

S/N	Dimension	Source (s)	Cronbach's α
1.	Staff recruitment Process	Sule and Ugoji (2013)	Not reported
2.	Students admission process	Chukwurah (2011)	0.75
3.	Supportive Environment/Facilities	Akporehe (2011); Patterson et al. (2005); Ramsden (1991)	0.76 - 0.89
4.	Policy and Strategy	Calvo-Mora et al. (2006)	0.78

3.3.2.3 Quality Academic Process Questionnaire

The third instrument is tagged “ Quality Academic Process Questionnaire” (QAPQ) which were adapted from various studies review which include Ramsden and Martin (1996); March and Roche (1993); Ramsden (1991); Aldridge and Rowley (1998) which was used to draw out information from the academic staffs as regards their views concerning the academic process in their respective institutions. It was grouped into five dimensions in compliance with the Research framework: the curriculum, instructions, assessment, service learning, research and development.

Table 3.5

Measurements for quality academic process

S/N	Dimension	Adapted	Cronbach's α
1.	Curriculum	Jenkins (2012)	.88
2.	Instructions	Ramsden (1991); Veloo and Awang Hashim (2009)	.76
3.	Service learning	Steinberg et al. (2010)	.53
4.	Assessment	Ramsden (1991)	.74
5.	Research	Calvo-Mora et al. (2006)	.61

3.3.2.4 Institutional Effectiveness Questionnaire

The fourth one is the Institutional Effectiveness in Nigeria Questionnaire (IENQ) which will be adapted from various studies reviewed on institutional effectiveness using the goal and the strategic constituency approach to measure the institutional effectiveness of the universities. This is because it assesses the relevance of the universities on their stakeholders and also their interest (Ashraf & Kadir, 2012).

Table 3.6

Measurements of Institutional effectiveness

S/N	Dimension	Source (s)	Cronbach's α
1	Student development	Pihie and Mahyuddin (2008)	.79
2.	Societal development	FRN (2004)	Not reported

3.3.3 Validity and Reliability of the Instruments

Validity is the ability of an instrument to measure what is expected to measure for a construct (Awang, 2013; Creswell, 2012). Reliability refers to the ability of the study to produce the same information over time (Colton & Covert, 2007; Gall, Borg, & Gall,

2002). It is the extent of how reliable is the said measuring model in measuring the intended latent construct. The validity and reliability were carried out using quantitative and qualitative approach.

3.3.3.1 Control of the Measurement Error

Measurement error which is the degree to which a variable that is being measure, do not perfectly describe the latent constructs of interest (Hair et al., 2014). In order to keep the measurement error at its minimum stage, the researcher use interval scales for all the items in this study and the validity as well as the reliability of the items were tested at different times before and during pilot study as well as during the main study. Face and content validity was carried out during the development of the instrument. The use of structural equation modelling as the analysis techniques is also helpful in controlling the measurement error through the assessment of the measurement model (Hair et al., 2010).

3.3.3.2 Content and Face Validity

In order to ascertain the content validity for the instrument that was used in this study, five experts in education, management and test and measurement were consulted. A copy of the questionnaire each were given to expert in the field of education testing services, teaching/lecturer evaluation consultant and educational leadership who were either professor or professor emeritus for validation. They were ask to print out the soft copy sent to them and make necessary comments on the hard copy and send a scan copy back to the researcher and all their suggestions were incorporated. The corrected one were later send to 10 potential respondents for face validity. A copy of the questionnaire was given to each of them to seek their opinions about the appropriateness of the items'

statement in terms of their wordings, the instructions, general formatting, and understandability of the scales in order to detect if there is any difficulty that may arise in filling the questionnaire. Therefore, some of the suggestions that were made were effected on the final copy of the questionnaire before conducting the pilot study.

3.3.3.3 Pilot Study

In order to determine the sample size for the pilot study, Hertzog (2008) suggested that the samples size should range between 10 and 40 and other study like Lackey, Wingate, Brink Pamela, and Wood Marilyn (1998) suggested 10 % of the sample size for the full study to be used. To meet these conditions, 160 respondents were selected for the pilot study. However, only 101 valid responses were gathered.

The pilot study was conducted at the University of Abuja (FCT) which was not part of the sample for the study and it is located at the federal capital territory which is at the centre of the country. 101 academic staffs including the Head of Departments and Deans/Provosts of faculties/colleges were selected across the six faculties in the University for the Pilot Study.

The analysis of the pilot study was done using SPSS 20 and SmartPLS 2.0 as it is good for handling little number of responses. As all the items in the instrument are reflective indicators, the reliability and construct validity was tested and reported. The principal component analysis was done using SPSS. From the result of the analysis, the loadings are between 0.71 and 0.90 which is greater than the threshold value of 0.6 as suggested by W. W. Chin (2010). Furthermore, the average variance extracted are between 0.58 and 0.75 which is greater than the threshold value of 0.5. The composite reliability are between 0.81 and 0.96 and the Cronbach alpha value are between 0.75 and 0.96 which

are all greater than the threshold value of 0.7. Therefore, the instrument are said to be valid and reliable. (See Tables 3.7 -3.10).

Table 3.7

Pilot study result for Distributed Leadership measurement

Constructs	Dimensions	Items	Loadings	Composite Reliability	AVE	R ²	Cronbachs Alpha
Distributed Leadership	Leadership Functions	LF1	0.76	0.95	0.74	0.62	0.94
		LF4	0.83				
		LF6	0.86				
		LF7	0.92				
		LF8	0.83				
		LF9	0.91				
		LF10	0.88				
	Participative Decision Making	PDM1	0.81	0.94	0.73	0.63	0.93
		PDM2	0.87				
		PDM3	0.92				
		PDM4	0.90				
		PDM5	0.86				
		PDM6	0.77				
	Cooperation within the Leadership Team	CLT1	0.78	0.92	0.65	0.79	0.89
		CLT2	0.77				
		CLT4	0.78				
		CLT6	0.77				
		CLT8	0.86				
		CLT9	0.89				

Table 3.8

Pilot study result for Quality Administrative Process measurement

Constructs	Dimensions	Items	Loadings	Composite Reliability	AVE	R ²	Cronbach Alpha
Quality Administrative Process (QADP)	Staff Recruitment Process	QADP7	0.87	0.93	0.71	0.79	0.90
		QADP8	0.88				
		QADP9	0.88				
		QADP10	0.83				
		QADP11	0.76				
	Student Admission Process	QADP2	0.85	0.92	0.71	0.74	0.90
		QADP3	0.87				
		QADP4	0.79				
		QADP5	0.90				
		QADP6	0.79				
	Supportive Environment /Facilities	QADP12	0.88	0.94	0.69	0.90	0.92
		QADP13	0.91				
		QADP14	0.81				
		QADP15	0.81				
		QADP16	0.92				
	Policy and strategy	QADP17	0.72	0.96	0.70	0.75	0.95
		QADP19	0.74				
		QADP21	0.82				
		QADP23	0.84				
		QADP24	0.86				
		QADP25	0.90				
		QADP26	0.85				
		QADP27	0.82				
		QADP28	0.82				
		QADP29	0.76				
		QADP30	0.86				

Table 3.9

Pilot study result for Quality Academic Process measurement

Constructs	Dimensions	Items	Loadings	Composite Reliability	AVE	R ²	Cronbach Alpha
Quality Academic Process (QACP)	Assessment	QACP32	0.86	0.90	0.65	0.54	0.87
		QACP33	0.87				
		QACP35	0.71				
		QACP39	0.81				
	Curriculum	QACP2	0.82	0.96	0.70	0.65	0.96
		QACP6	0.91				
		QACP7	0.89				
		QACP6	0.84				
		QACP7	0.93				
		QACP8	0.82				
		QACP9	0.80				
		QACP10	0.82				
		QACP12	0.86				
		QACP13	0.73				
	Instruction	QACP15	0.80	0.81	0.58	0.66	0.75
		QACP19	0.87				
		QACP21	0.69				
		QACP23	0.72				
	Service Learning	QACP24	0.74	0.95	0.75	0.70	0.94
		QACP25	0.86				
		QACP26	0.88				
		QACP27	0.86				
		QACP28	0.93				
		QACP29	0.89				
		QACP31	0.89				
	Research	QACP44	0.90	0.89	0.72	0.55	0.81
		QACP46	0.79				
		QACP47	0.86				

Table 3.10

Pilot study result for Institutional Effectiveness measurement

Constructs	Dimensions	Items	Loadings	Composite Reliability	AVE	R ²	Cronbachs Alpha
Institutional Effectiveness	Student Development	STD1	0.83	0.94	0.65	0.83	0.93
		STD2	0.8				
		STD3	0.81				
		STD4	0.88				
		STD5	0.87				
		STD6	0.89				
		STD7	0.73				
		STD8	0.71				
		STD9	0.71				
	Societal Development	SOD1	0.78	0.95	0.71	0.88	0.94
		SOD2	0.76				
		SOD3	0.85				
		SOD4	0.86				
		SOD5	0.79				
		SOD6	0.89				
		SOD7	0.9				
		SOD8	0.83				
		SOD9	0.85				



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Table 3.11

Breakdown for the measurement items during and after pilot study

Section	Construct	Dimension	Initial items	Items deleted	Final items	Total
A.	Demography		8	-	8	8
B.	Distributed Leadership Inventory	Leadership functions	13	6	7	19
		Participative Decision Making	6	-	6	
		Cooperative within the leadership team	8	2	6	
C.	Quality administrative process	Student admission process	6	1	5	26
		Staff recruitment process	5	-	5	
		Supportive environment/facilities	9	2	7	
		Policy and strategy	10	1	9	
D.	Quality academic process	Curriculum	16	5	11	28
		Instruction	7	4	3	
		Assessment	9	5	4	
		Service Learning	8	1	7	
		Research and development	7	4	3	
E.	Institutional Effectiveness	Student development	10	1	9	18
		Societal development	9	-	9	
	Total		131	32	99	99

3.3.4 Procedure for Data Collection

Introduction letter from the College of Arts and Sciences was collected to facilitate the cooperation of the participants in responding to the questionnaire and the interview questions.

The responses from the participants were received directly by the researcher with the help of two research assistants in each of the sampled schools. This is because, it help to rectify any queries that need to be addressed immediately with the design of the questionnaire. It also ensures good response rate where the researcher can check the

questionnaire before finally receiving it to make sure that all questions and statements were responded to.

The distributed leadership inventory (DLI), quality administrative process questionnaire (QADPQ), quality academic processes questionnaire (QACPQ) and the institutional effectiveness questionnaire (IEQ) was administered to the sampled lecturers to elicit information for the quantitative research questions.

3.3.5 Data Analysis

Both descriptive and inferential statistics were employed for the analysis of the data collected for this study. SPSS 20 was used for the data screening, respondent's profile as well as the analysis for the data collected for research question one. The level of distributed leadership, quality administrative and academic processes and institutional effectiveness were adjudged low, moderate and high. The six point scale were collapsed into three groups and the mean value between 1-2.66 were adjudged low, 2.67-4.33 (moderate) and 4.34-6 as high (Sassenberg, Matschke, & Scholl, 2011).

The research hypotheses in line with the quantitative aspect of the research questions two and three as well as the validity and reliability of the instrument through the assessment of the measurement and structural model was analyzed using the SmartPLS 3.1.2 which is referred to as "the second generation of multivariate data analysis" (Fornell, 1982, p. vii).

PLS-SEM was used for the analysis of the data because it is recommended to be used by Cassel, Hackl, and Westlund (1999) when the model is complex and in this study there are four constructs which are in second order form and 99 indicators. It is also essential because of the items in the study are formative and reflective in nature which

other software analysis may not appropriately handled (Hair et al., 2014). Moreover, W. W. Chin and Newsted (1999); Wetzels, Odekerken-Schroder, and Van Oppen (2009) recommended its usage when the theoretical framework of the study is not yet fully formed. Furthermore, PLS-SEM is suitable for this study as it takes into account measurement error and as a matter of fact, it is categorically required by some highly indexed journals.

Using the PLS approach of structural equation modelling to source information regarding the relationship between the variables of the study; the analysis of the model was carried out viz-a viz measurement model and the structural model (Calvo-Mora et al., 2006). PLS was used to assess the measurement model for theory confirmation, to suggest possible relationship among variables and for prediction since PLS assumes that all measured variance can be explained in a study.

3.3.5.1 Measurement Model

Measurement model according to Hair et al. (2014) indicates the association between the latent or unobserved variables and the observed/measured variables (items/indicators/ scales for each construct). In evaluating the measurement model, the confirmatory factor analysis was carried out to measure the construct validity (discriminate validity and convergent validity) and reliability of the items. The average variance extracted (AVE) as well as the composite reliability (CR) for the variables in the study was calculated. According to Gefen, Straub, and Boudreau (2000), the CR must be ≥ 0.7 , $AVE \geq 0.5$ while Nunnally and Bernstein (1994) recommends a value of 0.7 for the cronbach alpha. The convergent validity are ascertained when the outer model loadings are greater than 1.96 at 0.05 level of significance. Once the

measurement model is validated and found reliable, the structural model was also assessed.

3.3.5.2 Structural Model

The structural model according to Hair et al. (2014) deals with dependent relationships connecting the constructs in the hypothetical model. It is a useful representation of interrelationships among constructs i.e. it explain the relationship between latent variables. The relationship among the variables in the formulated hypotheses in this study as indicated in the model was tested through the structural model. The structural model comprised of the exogenous variable which is distributed leadership and the endogenous variables comprising the quality administrative process, quality academic process and institutional effectiveness. The structural model was assessed for collinearity issues, relevance and significance of the structural model relationships, level of R^2 , effect sizes and the predictive relevance (Q^2). Bootstrapping which is consistent with W. W. Chin (1998a) was used to generate the t-statistics and the standard errors as it represents a non-parametric approach for estimating the precision of the PLS estimates which allowed the researcher to assess the statistical significance of the path coefficients.

3.4 Qualitative Method

This study adopted a generic qualitative inquiry method. The method is chosen in this study as the focus of the study is to understand the issues impeding the effectiveness of public universities in Nigeria. It is not guided by an explicit or established set of philosophical assumptions (Caelli, Ray & Mill, 2003).

According to Percy (2015), generic qualitative inquiry method is appropriate when a researcher is investigating senior level manager regarding their experiences about a phenomenon. It is also a good approach to be used when a research problem require a mixed-method or qualitative methodology. As this study is conducted to examined the issues impeding the effectiveness of public universities in Nigeria, the researcher has a pre-knowledge or understanding about leadership, quality administrative and academic processes as a determinant of institutional effectiveness as identified in the quantitative part of the study. Therefore, asking one or two questions according to Percy, Kostere and Kostere (2015); Percy (2015) may expand the previous knowledge and as such, generic qualitative inquiry approach is appropriate for this study.

3.4.1 Participants

In order to select participants for the semi-structured interview that was conducted for this study, a purposive sampling technique was adopted. One deputy vice chancellor, two dean/provost of a faculty/college, three head of departments, one lecturer I and a registrar were purposively selected for interviewed in this study. Therefore, a total of eight participants were interviewed for the study comprising four from state universities and another four from federal universities.

As suggested by Onwuegbuzie and Collins (2007), the sample size for a qualitative study should be moderate in the sense that it should not be too small that data saturation, informational redundancy or theoretical saturation will be very hard to accomplish and the respondent should not be too large that a profound case-oriented will not be attained. However, as this study utilizes generic qualitative research method, Krueger (2007) recommends between six to nine respondents; Morgan (1997) recommends between six

and ten respondents while B. Johnson and Christensen (2008) suggested six to twelve respondents. Therefore, 8 respondents were used for this study.

These set of participants were purposively selected because of their ranks and their working experiences in the university system. The selected participant has at least 12 years of either teaching or administrative experience or their position ranges from senior lecturers to the vice chancellor. They have a better idea of the problems confronting the university system. They are also appropriate as the study examines the university system and the variables identified in this study can better be explained by this people (Chua, 2004).

3.4.2 Trustworthiness of the Study

The term validity and reliability are of importance to quantitative paradigms while terms like credibility, dependability, transferability and confirmability are required in the process of designing a study in qualitative research which according to Creswell (2009) signifies a means by which the investigator checks for the accuracy of the findings by using specific techniques. Qualitative reliability refers to the consistency of the researcher's approach and may be demonstrated through carefully documented procedures and steps (Creswell, 2009). The compiled instrument was given to the supervisors and two other experts to review the content and face validity of the instrument before a pilot study was conducted.

Trustworthy is the concept used to explain the validity and reliability of a qualitative research (L Cohen et al., 2011; Suter, 2012). According to Yusoff (1999), the trustworthiness of a qualitative research can be examined viz-a-viz credibility,

transferability, dependability and confirmability. In order to achieve this approach of reliability and validity of the study, the following measures were undertaken:

In order to ascertain the credibility of this study, the researcher seek additional mentors outside his university so as to share ideas. A lecturer at university of Ilorin, A professor emeritus from John Hopkins University who is a teaching and faculty evaluation consultant and the director of educational testing service, Ohio state university were involved in the study apart from the supervisor. For the transferability of the study, a thick description (Yusoff, 1999), was adopted for this study. The research context was clearly explained so that the readers will be able to have a clear understanding as well as interpret the findings of the study. Evidence was provided by the researcher in order to permit verification of the outcomes of the study by the readers.

Member checking which according to Creswell (2008) is a process in which the researcher ask one or participants in the study to check the accuracy of the account. The findings from the interview were taken to two of the participants for their verification. This essence of this is to establish the credibility of the findings as the researcher may have done everything possible to fulfil his role as the main instrument but bias influence could still occur in the data (Creswell, 2012). Two of the informants were given the draft copy of the findings and the themes as a means of feedback and to confirm if their views have being correctly transcribed (Bloor, 1997).

Furthermore, the researcher conducted peer review which were in two stages. The first stages involved the researcher's supervisor who is an expert in qualitative study with singular focus on the process of data analysis in order to attain a clear view of the analysis process as well as the formation of themes for the study. Trustworthiness was also attained through the evaluation of interview questions by the researcher's

supervisors where the feedback receive from them were used to further improve the interview guide.

The second stage on the other hand involve informal discussion with colleagues specifically, those using qualitative approach in their study. The researcher had discussion with three PhD students in school of multimedia and communication, college of government as well as school of education and modern languages. The essence is to seek their opinion in reviewing the tentative themes established by the researcher in order to ensure its acceptability. This strategies involves questions and answers between the researcher and his colleagues relating to the study where the themes where modified severally in order to be aligned with the focus of the quantitative study.

Lastly, an audit trail process was carried out to assist the researcher in searching and keeping abreast of events that take place in the field (Guba & Lincoln, 1994). This phase involves the researcher describing how he collect the data. How the data was categorized and how the decision was made. The researcher jot down daily activities right from data collection until findings. This helps the researcher to keep abreast of his predictions, thinking and formation of intuitive ideas from onset (Creswell, 2012).

3.4.3 Pilot Study

The pilot interview was conducted by the researcher as a practice session towards the actual interview for the study. This was aimed at familiarizing the researcher with the interview strategies; to ensure that the questions are understand by the respondents and to create the contextual suitability of the conditions in getting their responses (Creswell, 2008). Furthermore, the pilot study was to explore the realistic conditions, the

possibility of interviewing method in collecting data for analysis in answering the research question four posed in this study. The pilot study gave the researcher insights into how clear the questions were formulated and what kind of responses that might generate which serve as a techniques for getting questions right rather than getting the interview right (Jacob & Furgerson, 2012).

A pilot interview was conducted by the researcher with two academic leaders at University of Abuja. The interview was recorded in order to help the researcher in the process of transcribing. The types of responses gotten from the participants help the researcher to have an idea of the categories or themes that might emerge in the actual study. The first interview was conducted with a professor and HOD while the second interview was conducted with a deputy vice chancellor. The feedback of the pilot study help the researcher to revise the interview schedule and to develop the required interviewing skills. Conclusively, the pilot interview was helpful in familiarizing the researcher with strategies of inquiry that were employed during the interview for the final study.

3.4.4 Data Collection

This study used a semi-structured interviews to disclose and describe the participants' viewpoints on issues impeding effectiveness of public universities and how institutional effectiveness can be enhanced. In order words, the subjective view according to Marshall (2014) was the focus. In order to gather data for the analysis of the qualitative research question four, a deputy vice chancellor, two deans/provost, three head of departments and two lecturers was interviewed in five of the sampled universities and therefore, a total of 8 interviewees were involved in this study. A semi-structured interview was chosen as suggested by Percy et al. (2015) that data collection for a

generic qualitative inquiry are always in the form of semi or fully structured interview and survey. An individual face to face interview (L Cohen et al., 2011) was conducted to investigate the issues impeding institutional effectiveness and how such issues can be addressed.

An interview protocol was developed to gather information from the participants. A copy of consent letter was given to each participant to seek their consent to participate in the study before the initial interview. The researcher also went back to see them after their agreement to partake in the interview in order to establish rapport with them and a duration of 15-20 minutes was spent with them.

The interviewee was supplied necessary information about what the research entails most especially the introductory segment and their cooperation was requested in terms of their time and valuable information that will enhance the achievement of the research. Questions were asked from the participant in such a manner that there was no variation of the content as well as the context of the questions. The researcher seeks the permission of the interviewee to record their conversation and an audio tape was used for the recording. However, such device was appropriately tested and used in order to be sure of the effectiveness and how reliable is the device.

The interview protocol was adapted from Cameron (1978) and at the end of every interview, the respondents were appreciated for taking their time and 3-in-1 pen was given to each participant.

3.4.5 Data Analysis

In order to analyze the qualitative data that was collected to answer the research question four, the interview conducted was analyzed using thematic analysis. This is

because Percy et al. (2015), suggested that generic qualitative inquiry is best analyzed using thematic analysis. It is a process of pinpointing, analyzing and reporting patterns with a data. It lay emphasis on identifying, probing and recording patterns or themes within data (V. Braun & Clarke, 2006). The themes are patterned across data sets that are important to the description of a phenomenon and are associated with a specific research question (Daly, Kellehear, & Gliksman, 1997). Generally, according to Patton (2002), thematic analysis is described as any qualitative data reduction and sense-making effort that takes a volume of qualitative material and attempts to identify core consistencies and meanings which are usually called themes or patterns. Analyzing a quantitative data using thematic analysis involves six phases which are familiarization with the data; generating initial codes; searching for themes among codes; reviewing themes; defining and naming themes; as well as producing the final report (V. Braun & Clarke, 2006). Table 3. 12 shows the six stages for the qualitative data analysis. The thematic analysis was done using Nvivo 10 which was generated from the transcripts of the audio tapes that were recorded during the interviews, and it was guided by the research question 4 in this study.

Table 3.12

Phases of Thematic Analysis

Phase	Process	Result
Phase 1	The researcher read and re-read the transcribed data in order to become familiar with what the data entails, paying specific attention to patterns that occur	Preliminary "start" codes and detailed notes.
Phase 2	The researcher generate the initial codes by documenting where and how patterns occur. This happens through data reduction where the researcher collapses data into labels in order to create categories for more efficient analysis. Data complication is also completed here. This involves the researcher making inferences about what the codes mean.	Comprehensive codes of how data answers research question.
Phase 3	The researcher combine codes into overarching themes that accurately depict the data and as such describes exactly what the themes mean, even if the theme does not seem to "fit." The researcher also describe what is missing from the analysis.	List of candidate themes for further analysis.
Phase 4	In this stage, the researcher looks at how the themes support the data and the overarching theoretical perspective. The data were categorized into the predictors of institutional effectiveness and the researcher needs to go back and find what is missing.	Coherent recognition of how themes are patterned to tell an accurate story about the data.
Phase 5	The researcher define what each theme is, which aspects of data are being captured, and what is interesting about the themes. In this phase, the research identify leadership issues, administrative issues, academic issues and other issues that were not captured in the quantitative study.	A comprehensive analysis of what the themes contribute to understanding the data.
Phase 6	As the researcher write the report, he decide which themes make meaningful contributions to understanding the issues impeding the effectiveness of public universities in Nigeria and as such, the researcher conducted "member checking" for the participant to see if their description is an accurate representation.	A thick description of the results.

The responses from the interviewee were coded. According to Flick (2009); Gibbs (2008), coding is one of the main attribute for analyzing qualitative data. An axial and open coding techniques (Strauss & Corbin, 1990) was used in this study. This is because, “it refers to a casual situation that lead to a phenomenon, phenomenon it selves; and consequences” (Strauss & Corbin, 1990, pp. 100-106) which is the focus of the interview. The responses from the interview were then broken down into segment of text after transcription. Each dataset was read thoroughly and analyzed based on the principles of ethnographic semantics (Spradley, 1979) in which the meanings that people give to their verbal expressions are the primary focus of investigation .

The constant comparative method according to Bogdan and Biklen (1998); Creswell (2012) was used to develop an understanding of the data. This method of thematic analysis involved deriving and categorizing major themes that emerged from the interviews. The analytic process involved multiple readings of the data to identify linguistic instantiations of reoccurring themes that addressed the study’s central research question. Emerging themes (Miles & Huberman, 1994; Miles, Huberman, & Saldaña, 2013) were coded throughout the interactive process of data reduction, verification and further data analysis. Theoretical analysis approach of thematic analysis was used in analyzing the issues impeding the effectiveness of public universities in Nigeria. The approach was best chosen because the researcher has some predetermined themes which are taken from the qualitative study. However, the possibilities of emerging new themes were also identified.

The final themes that emerged reflect evidence of the participants’ evolving understanding of the perceived issues impeding the effectiveness of public universities

in Nigeria. Based on these analytical categories, the data were re-examined to identify evidence of self-reported shifts in the lecturers' identities.

3.5 Ethical Procedures

This study applied ethical procedures as suggested by Sekaran (2007) in the research settings. The researcher make sure that the respondents' participation were voluntarily. The researcher briefly described in the introductory part of the survey as well as that of the interview guide, the nature of the research, the duration of the study as well as the research questions.

Furthermore, anonymity of the respondents in both the survey and interview conducted were ensure by the researcher and this was explained to the respondents that information obtained from them will be treated as confidential and solely used for academic purposes. The expected benefit of the research were clarified to the respondents so as to relieve any fear that they might have in mind concerning the information that will be provided.

3.6 Summary of Chapter Three

This chapter explains methodology and research designed adopted for this study. The methodology is referred to as the heart of the research and if not carefully structured and designed can forfeit the objectives of the study. The study adopted a mixed method where both the qualitative and quantitative techniques that was adopted were discussed in terms of the population of the study, the sample size, sampling strategies adopted in choosing the sample, how the validity and reliability of the instrument were ascertained, the research instrument that was used in gathering data for the study, the strategy for data collection as well as the data analysis techniques. The research framework was

designed so as to guide the methodology to be adopted in carrying out the study. The analysis of the data that was collected were explained the subsequent chapter.



CHAPTER FOUR

QUANTITATIVE FINDINGS

4.1 Introduction

This chapter presents the results of analysis for the quantitative data that were collected via the questionnaire designed for this study. This study explains the relationship between distributed leadership, quality administrative and academic processes and institutional effectiveness. The first aspect of the analysis which deals with the quantitative data collected through the responses from the survey shows the respondents' demographic profile, the screening of the data collected, measures of validity and reliability of the measurement model, model specification, path analyses of the structural model through which the result of the hypotheses tested were shown. The data screening was done using SPSS why the testing for the relationship was carried out using Smartpls 3.1.2.

The second phase of the findings deal with the qualitative data that was gathered through interview and was analyzed using Nvivo 10. The aim of the study was to investigate the issues impeding institutional effectiveness in Nigeria public universities.

4.2 Response Rate of Distribution

In this study, an aggregate of 450 questionnaires were distributed to academic staff in ten public universities in Nigeria within five out of the six geo-political zones in Nigeria with the exemption of North-East geo-political zone of the country due to the prevalence of insecurity in that geo-political zone. 367 copies were returned which represent 81.6 % response rate. However, out of these 367 questionnaires that were returned, a total of 346 were usable for data analysis. The remaining 21 questionnaires

were excluded due to large numbers of un-responded items in the questionnaire. This accounted for 76.9% valid response rate which is higher than 30% suggested by Sekaran (2003).

Table 4.1

Response Rate of the Questionnaires

Response	Frequency	Rate (%)
No. of questionnaire administered	450	100
Returned questionnaires	367	81.6
Returned and usable questionnaires	346	76.9
Returned and excluded questionnaires	21	4.7
Questionnaires not returned	83	18.4
Response rate		81.6
Valid response rate		76.9

4.3 Data Screening

In any multivariate analysis, data screening is considered necessary as it helps the researcher to identify any possible violation of the key assumptions regarding the techniques applied during data analysis (Hair, Money, Samouel, & Page, 2007). Analyzing the data according to Pallant (2011) requires that the data should be assessed to ensure its ability to reflect the phenomena under study. Data screening was carried out after the data collected was completely inputted into the SPSS software. This is necessary as suggested by Tabachnick and Fidell (2007), when SmartPLS is the main analysis techniques to be adopted. Therefore, the researcher examined the patterns of missing data, identification of univariate and multivariate outliers, identification of statistical assumptions for multivariate analysis such as linearity, and multicollinearity of each constructs under study (Hair et al., 2014).

4.3.1 Accuracy of Data Input

As all the 346 returned and usable questionnaire were coded and entered into the SPSS, the researcher make sure that the negatively worded items were reversely coded. The researcher examined the accuracy of the inputted data and it was found that there was no out of range values for each of the individual items/variables when checked against the six semantic differential scales used in the questionnaire of this study.

4.3.2 Missing Data

Missing data are often a human-centred problem in a survey research. Missing data occur when a respondent either fails to answer one or more question(s), consciously or unconsciously; which may negatively affect the outcome of the empirical research if not properly treated before analyzing the data collected for the study. The suggestions of Hair et al. (2014) were considered in treating the missing data. According to them: when the amount of missing data on a questionnaire exceeds 10%, the observations should be removed from the data file; if a high proportion of responses are missing for a single constructs, then the entire observation may be removed even if the overall missing data on the questionnaire does not exceed 10%; Other alternatives such as mean value replacement or case wise deletion can also be used in the treatment of missing data.

Out of the 367 questionnaires that were returned, 21 of it revealed missing data with more than 10% (10 statements or items) of the questionnaire un-responded to. Therefore, as suggested by Hair et al. (2014), the questionnaires were therefore not suitable to be used for analysis and were discarded. In the remaining 346 questionnaire, 5 randomly missing values were treated using mean value replacement by making inferences based on vertical and horizontal pattern of response due to the small number

of missing cases which according to Hair et al. (2010), “if there is less than 5% missing values per indicator, mean value replacement is recommended instead of case wise deletion to treat the missing values when running PLS-SEM” (p.61). This is shown in Table 4.2.

Table 4.2

Total and Percentage of Missing Value

Construct	Dimension	No. of cases with missing value	No. of missing values per case
DL	Leadership Functions	NIL	NIL
	Participative decision making	1	2
	Cooperation among the leadership team	NIL	NIL
QADP	Staff recruitment process	1	1
	Student admission process	1	3
	Supportive environment/facilities	NIL	NIL
	Policy and strategy	NIL	NIL
QACP	Curriculum	1	2
	Instruction	NIL	NIL
	Assessment	NIL	NIL
	Service Learning	NIL	NIL
IE	Research	NIL	NIL
	Student development	1	3
TOTAL	Societal development	NIL	NIL
		5	12 out of 34,254 data points
Percentage			0.035%

4.3.3 Assessment of Outliers

Outliers according to Hair et al. (2014) is “an extreme response to a particular question or extreme responses to all questions” (p.71). They are observations or measures that are much smaller or much larger when compared with the vast majority of the observations (Aguinis, Gottfredson, & Joo, 2013). According to Mooi and Sarstedt

(2011), the presence of outliers in the data set in any regression-based analysis can distort the estimates and invariably lead to undependable results. Outliers can be categorized into three major types: (a) Errors Outliers- data point(s) far from the rest because of inaccuracies, accuracy due to error of sampling, errors in observations, errors in recording, errors in preparing data, errors in computation, errors in coding, or error of data manipulation; (b) Interesting Outliers- data point(s) identified as outlying observations, but not an error outliers and which need to be further investigated; (c) Influential Outliers- Outliers already confirmed as interesting outliers and investigation shows that they cause important changes in the outcome of the data analysis, this error could be as a results of respondents bias or errors as a results of items or questions engineering. Therefore, reporting how outliers are defined, identified, and handled is very important to the conclusion or outcome of an empirical research (Aguinis et al., 2013).

In order to detect outliers in the data set, frequency tables were tabulated for all variables using the minimum and maximum statistics to check if there is wrong data entry and the statistical table shows that there was no any value found outside the expected range. Furthermore, as recommended by Tabachnick and Fidell (2007), the data set were examined for univariate outliers on each single variable. Items (variables) were computed into set of a new variable as obtained in the model and the outlier diagnosis was also done by means of boxplots as suggested by Aguinis et al. (2013) using IBM SPSS statistics which shows some influential observations which are not outliers. The multivariate outliers were also assessed using Mahalanobis distance (D^2). Based on the 91 observed variables of the study, the recommended threshold of chi-square is 137.19 ($p < 0.01$). Mahalanobis values that exceeded this threshold were

deleted. Therefore, 41 cases of multivariate outliers were detected and subsequently investigated.

The 41 potential interesting outliers were considered as influential outliers by testing if their removal from the initial PLS-SEM model specification changes the model fit values of the endogenous variable, institutional Effectiveness ($R^2 = 0.696$), the mediating variables Quality administrative ($R^2 = 0.559$) and quality academic process ($R^2 = 0.351$). The 41 cases were temporarily removed from the data sets leaving a total of 305 cases ($n=305$) and the model was re-specified. The re-specified model results show an increase in the values of the model fit parameters (IE- $R^2 = 0.724$; QADP- $R^2 = 0.565$ and QACP $R^2 = 0.376$). There were equally changes in the inner model prediction (path coefficients) values for the exogenous constructs. This confirmed the potential outliers to be influential outliers and a bad one which need to be removed to improve the model fit and the prediction scores of the exogenous latent variables on the endogenous latent variables. Therefore, 305 cases were analyzed to determine the descriptive and inferential statistics for this study.

4.3.4 Test of Normality

Previous research has traditionally assumed that PLS-SEM provides accurate model estimations in situations with extremely non-normal (Cassel et al., 1999; Reinartz, Haenlein, & Henseler, 2009). However, testing for normality has been seen as an important and common procedure in statistics tests and multivariate data analysis in which many tests have been proposed (Doornick & Hansen, 1994). Such tests include the use of visual tools, such as stem and leaf plots, normal Q-Q plot. Others are the use of skewness and kurtosis (Hair et al., 2010), and Kolmogorov-Smirnov tests (Mooi & Sarstedt, 2011). Lack of normality in variable distributions could distort the

relationships between the variables of research and the significance of the results in multivariate analysis (Chernick, 2011). Therefore, “it is important for researchers to examine the normality of their data distributions before proceeding to analysis stage” (Hair et al., 2014, p. 55). As argued by Field (2009) that it is more important to look at the shape of the graphical distribution rather than looking at the value of the kurtosis and skewness statistics when a sample is 200 and above. According to Field, a larger sample decreases the standard errors which in turn inflate the value of the kurtosis and skewness statistics. The test for normality for this study was however carried out using histogram and the normal probability (Q-Q) plot, followed with skewness and kurtosis, and lastly the Kolmogorov-Smirnov test.

As a first step, the normal probability plot (Normal Q-Q plot) was done for the entire variable (constructs) of the model. The observed value for each score of the variable is plotted against the expected value from the normal distribution. A reasonably straight line suggests a normal distribution (Pallant, 2011). The normal probability plots indicated that all the research variables are normally distributed.

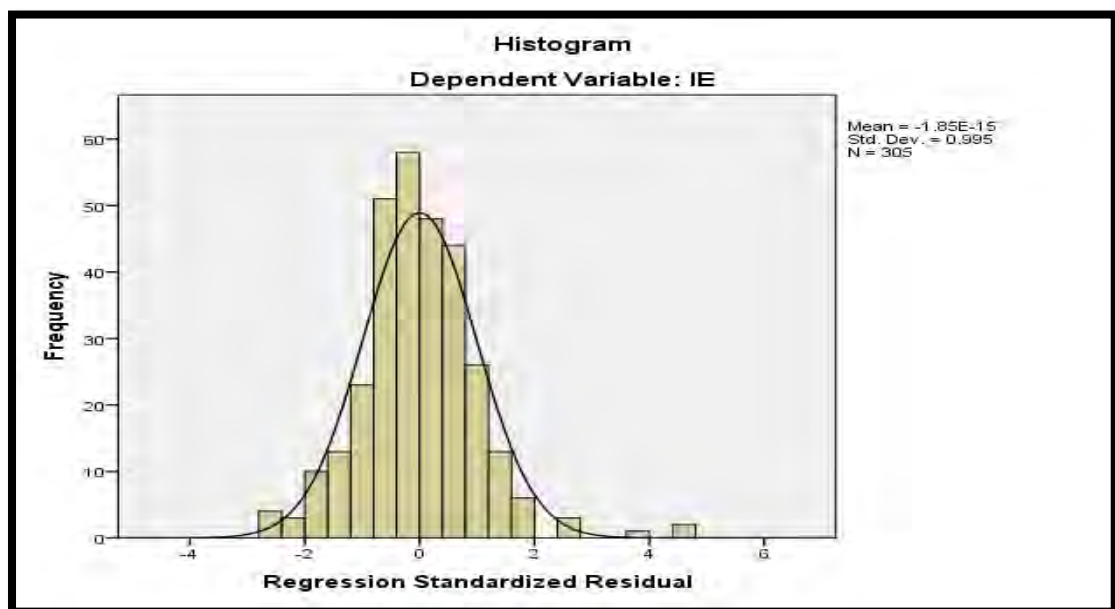


Figure 4.1. Histogram for test of normality

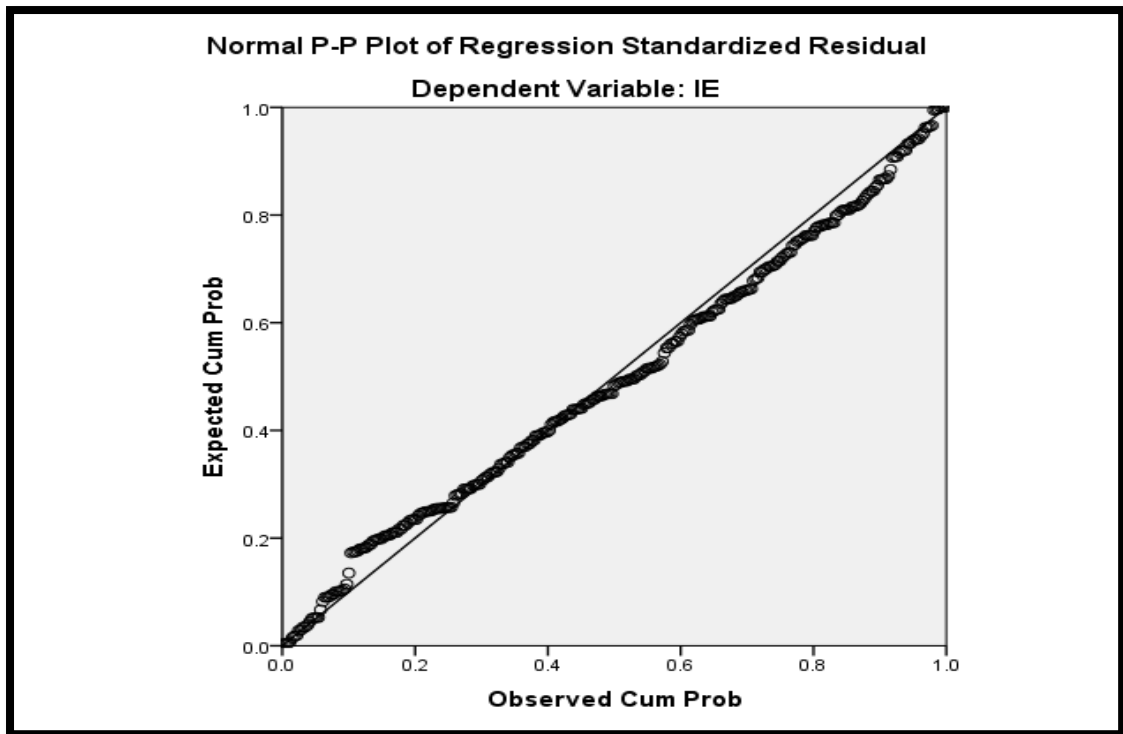


Figure 4.2. Normal Q-Q plot

In the second step, normality test was conducted by examining the skewness and kurtosis of the distributions (Hair et al., 2007; Pallant, 2011; Tabachnick & Fidell, 2007). Skewness is the extent to which the distribution of a variable is symmetrical. When the distribution of the observed scores of the variable clustered to the left at the low values or to the right-hand side (high values) of graph, then the distribution is assumed to be skewed. Kurtosis on the other hand measures the peakness of the distribution. When kurtosis is positive, the distribution is peaked with most of the cases clustered at the center (long thin tails), but if negative then the distribution is somewhat flat, with many cases in the extreme. When both skewness and kurtosis are close to zero (0), the distribution of the observations is considered to be normal (a situation unlikely to occur in human-centered research). As a general rules, when skewness exceeded the range ± 1 , the distribution is considered skewed. For kurtosis greater than

+1 ($> +1$), the distribution is considered too peaked, while kurtosis less than -1 (< -1), the distribution is too flat. Any distribution of the observation exceeding the above guideline (rules) is considered to be a non-normal distribution (Hair et al., 2014; Pallant, 2011).

As revealed in Table 4.3, the kurtosis and skewness values of the variables are within the ± 1 acceptable range. Therefore the entire constructs are said to be normal.

Table 4.3

Values of Skewness and Kurtosis of measured variables

Construct	Skewness	Standard Error	Kurtosis	Standard Error
Distributed leadership (DL)	-.364	.131	.100	.261
Quality administrative process (QADP)	-.319	.131	-.281	.261
Quality academic process (QACP)	-.362	.131	-.362	.131
Institutional Effectiveness (IE)	-.339	.131	-.032	.261

4.3.5 Multicollinearity Test

Collinearity arises when two indicators are highly correlated and when more than two indicators are involved, it is called Multicollinearity. That is, multicollinearity is said to have occur when two or more exogenous variable latent constructs become highly correlated. It arises in the context of structural model evaluation when more than two construct are highly correlated (Hair et al., 2014).

The presence of multicollinearity among the exogenous constructs tends to increase or boosts the size of standard errors which often leads to confusing and misleading results as it distort the estimates of regression coefficients as well as their statistical significance test (Hair et al., 2010; Hair, Ringle, & Sarstedt, 2011; Pallant, 2011; Tabachnick & Fidell, 2007). According to Hair et al. (2010), a correlation matrix of the

exogenous latent constructs should also be examined and a correlation coefficient of 0.90 and above indicates multicollinearity between the exogenous variable. As shown in Table 4.4, the correlations between the exogenous latent constructs were sufficiently below the suggested threshold values of 0.9. This shows that Distributed leadership, quality academic process and quality administrative process are independent and were not highly correlated.

Table 4.4

Correlation Matrix of the exogenous latent constructs

No	Latent Constructs	1	2	3	4
1	Institutional Effectiveness	1.00			
2	Distributed Leadership	0.58***	1.00		
3	Quality Academic Process	0.84***	0.61***	1.00	
4	Quality Administrative Process	0.74***	0.75***	0.76***	1.00

Furthermore, to assess the level of multicollinearity, Hair et al. (2014) suggested that researchers should compute for tolerance value, variance inflation factor (VIF) and condition index. Furthermore, this study examined the tolerance value, variance inflated factor and condition index for the exogenous latent constructs. Tolerance represents the amount of variance of a predictor variable not explained by the other predictor variables in a structural model while VIF is the degree to which the standard error has been inflated due to the presence of collinearity and therefore, it is the reciprocal of tolerance. A condition index (CI) according to Götz, Liehr-Gobbers, and Krafft (2010) is used to assess the presence of critical collinearity levels in formative measurement models. A tolerance of 0.20 or lower and a VIF of 5.0 or higher and condition index of 30 or higher suggest a multicollinearity problem. As shown in Table 4.5, all the tolerance values

exceeded 0.20, the VIF values are less than 5 and the condition index are less than 30 which is the recommended cut-off value multicollinearity issue in this study.

Table 4.5

Tolerance and variance inflated factor (VIF) value

Latent constructs	Collinearity Statistics		Condition
	Tolerance	VIF	Index
Distributed Leadership	.454	2.201	11.017
Quality Academic Process	.321	3.114	14.808
Quality Administrative Process	.433	2.311	18.784

4.4 Non-Response Bias Test

At times, the sampled respondents are unwilling or unable to participate in a survey and non-response bias occurs when the results of the respondents differ in meaningful way from those of the non-response. These responses according to Malhotra, Hall, Shaw, and Oppenheim (2006) could be as a result of attitude, personalities, demography, motivations or behaviours of the respondents which may affect the outcomes of the study by limiting the generalizability of the sample to the population of the study.

Out of the 450 questionnaires distributed, only 367 respondents have responded to the survey. However, only 346 questionnaires were usable for this study due to high level of missing data in the other 21 responses. There was also a legitimate concern about whether non-respondents did not respond due to a systematic reason, which might raise questions about the validity of the result of the study (Bhattacharjee, 2012).

The researcher therefore considered last respondents as a prediction of non-respondents for cases in which there were a priori grounds (Armstrong & Overton, 1977). Therefore, all returned questionnaires were classified into two: the first group tagged “early respondents” are questionnaires that were returned within three weeks of distribution

date while; the second group tagged “late respondents” were questionnaire returned after three weeks of distribution. The early questionnaire returned were 215 out of which 17 of them were discarded due to high level of missing data. The late responses which comprised 152 questionnaires, only 154 were usable as 4 were also discarded as they are not completely filled. After deleting the affected outliers’ cases, a total of 175 and 130 were classified as early and late responses respectively.

A non-response bias was tested using SPSS version 20. The result in Table 4. 6 showed that there were no much deviations in the responses of the earlier and late responses. Comparing the responses on both early and late respondents revealed that there were no significant differences in their responses which therefore, made the researcher to conclude that there is no existence of non-response bias in the study. Also, an independent sample t-test was conducted to investigate the differences between the early and late respondents. The result for the significant level of Levene’s test for equality of variance for the variable suggested that no systematic differences existed between the early and late responses as the entire variable are not significant. Therefore, non-response bias is not a problem in this study. Furthermore, with response rate of 81.6% achieved in this study, the issue of non-response bias is not a major issue (Wagner & Kemmerling, 2010; Werner, Praxedes, & Kim, 2007).

Table 4.6

Result of Independent-Samples T-test for Non-Response Bias

Variables	Group	N	Mean	Std. Deviation	Std. Error Mean	Levene's Test for Equality of Variances	
						F	Sig.
LF	Early response	175	3.933	1.019	0.077	0	0.99
	Late response	130	3.624	1.006	0.088		
PDM	Early response	175	4.103	1.000	0.076	3.709	0.055
	Late response	130	3.901	0.870	0.076		
CLT	Early response	175	4.012	1.000	0.076	0	0.986
	Late response	130	3.782	0.976	0.086		
STA	Early response	175	4.039	1.117	0.084	0.177	0.675
	Late response	130	3.637	1.151	0.101		
SFAP	Early response	175	3.728	1.171	0.089	0.142	0.707
	Late response	130	3.314	1.135	0.100		
SEF	Early response	175	3.790	0.989	0.075	0.007	0.933
	Late response	130	3.540	1.008	0.088		
PS	Early response	175	4.230	0.988	0.075	0.302	0.583
	Late response	130	3.898	0.947	0.083		
CUR	Early response	175	4.329	0.998	0.075	0.352	0.553
	Late response	130	3.992	1.068	0.094		
INS	Early response	175	3.823	0.943	0.071	0.026	0.871
	Late response	130	3.449	0.936	0.082		
SL	Early response	175	3.962	1.024	0.077	0.272	0.602
	Late response	130	3.737	0.979	0.086		
ASS	Early response	175	4.233	0.954	0.072	2.468	0.117
	Late response	130	3.790	1.109	0.097		
RS	Early response	175	4.181	1.013	0.077	1.161	0.282
	Late response	130	3.782	1.063	0.093		
STD	Early response	175	4.445	0.899	0.068	0.341	0.56
	Late response	130	4.006	0.968	0.085		
SOD	Early response	175	4.279	0.931	0.070	0.15	0.699
	Late response	130	3.838	0.921	0.081		
DL	Early response	175	4.016	0.887	0.067	1.931	0.166
	Late response	130	3.769	0.785	0.069		
QADP	Early response	175	3.947	0.947	0.072	0.013	0.908
	Late response	130	3.597	0.929	0.081		
QACP	Early response	175	4.106	0.864	0.065	0.435	0.51
	Late response	130	3.750	0.878	0.077		
IE	Early response	175	4.362	0.866	0.065	0.07	0.792
	Late response	130	3.922	0.910	0.080		

Source: The Researcher

4.5 Common Method Variance Test

The researcher also tested for common method bias (i.e. variance attributed to measurement method rather than variance explained by the study's constructs). Three tests were conducted to examine the common method bias in this study. Firstly, the exploratory factor analysis was performed where all the measurement items were entered and the result of the analysis yielded fourteen factors explaining a cumulative of 75.91% of the variance, with the first (largest) factor explain 44.03% of the total variance which is less than 50% (Podsakoff, MacKenzie, & Podsakoff, 2012) which is an evidence suggesting lack of substantial common method bias.

Secondly, a confirmatory factor analysis was performed by the researcher by modelling all items as the indicators of a single factor and the results show a poor fitness which according to Malhotra et al. (2006), common method is not a significant problem. Thirdly, the correlation matrix (Table 4.5) shows that the highest inter-construct correlations are below 0.90 which is also evidence according to (Bagozzi, Yi, & Phillips, 1991) that common method bias is not a serious problem. Therefore, Common method bias is not a problem in this study.

4.6 Demographic Profile of the Respondents

The profile of the respondents was analyzed by the researcher using their demographic characteristics in terms of university, university types, gender, highest academic qualification, faculty, rank, length of service as a university staff and age. The detailed analyses are presented below.

4.6.1 Respondents Profile by University

Of all the 346 respondents, 33 (10.8%) belong to university A, 24 (7.9) belong to university B, 31 (10.2) belong to university C, 31 (10.2) belong to university D, 30 (9.8%) belong to university E, 27 (8.9%) belong to university F, 49 (16.1) in university G, 25 (8.2%) in university H, 14(4.6%) belong to university I and 41(13.4%) in university J. this show that all the sampled universities are well represented. A summary of theses profile is presented in Table 4.7.

Table 4.7

Respondents Distribution by University

Sampled Universities	Frequency	Percent	Valid Percent	Cumulative Percent
University A	33	10.8	10.8	10.8
University B	24	7.9	7.9	18.7
University C	31	10.2	10.2	28.9
University D	31	10.2	10.2	39.0
University E	30	9.8	9.8	48.9
University F	27	8.9	8.9	57.7
University G	49	16.1	16.1	73.8
University H	25	8.2	8.2	82.0
University I	14	4.6	4.6	86.6
University J	41	13.4	13.4	100.0
Total	305	100.0	100.0	

4.6.2 Respondents Distribution by University Type

Out of 346 respondents, 178 (58.4%) are from federal universities while the remaining 127 (41.6%) are sampled from the state universities selected from the five geo-political zones used in this study. the summary are shown in Table 4.8.

Table 4.8

Respondents Distribution by University type

University Type	Frequency	Percent	Valid Percent	Cumulative Percent
Federal Universities	178	58.4	58.4	58.4
State Universities	127	41.6	41.6	100.0
Total	305	100.0	100.0	

4.6.3 Respondents Profile by Gender

Out of the 305 valid responses used in this study, 229 (75.1%) of them are males while the remaining 76 (24.9%) are females. The number of respondent by gender is a reflection of the total number of male and female lectures in public universities in Nigeria. The summary is presented in Table 4.9.

Table 4.9

Respondents Distribution by gender

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	229	75.1	75.1	75.1
Female	76	24.9	24.9	100.0
Total	305	100.0	100.0	

4.6.4 Respondents Profile by Highest Qualification

As seen in Table 4.10, 152 (49.8%) of the respondents are Ph.D. holder; 125 (41%) had master degree while the remaining 28 respondents representing 9.2% of the total number of valid questionnaire holds a first degree. The details are shown in Table 4.10.

Table 4.10

Respondents Distribution by Highest Qualification

Qualification	Frequency	Percent	Valid Percent	Cumulative Percent
Ph.D.	152	49.8	49.8	49.8
Master	125	41.0	41.0	90.8
Bachelor	28	9.2	9.2	100.0
Total	305	100.0	100.0	

4.6.5 Respondents Profile by Faculty

The respondents were grouped into eleven faculties as used in this study. 26 (8.5%) of the respondents are in faculty of agriculture, 16(5.2%) are in arts, 35 (11.5%) are in administration/management, 17 (5.6%) are in health science. The faculty of physical/life science has the highest number of respondents followed by faculty of education with total number of 73 (23.9%) and 72 (23.6%) respectively. The faculties of pharmacy and law has the least number of respondents with 3 (1%) and 6 (2%) respectively. The summary is shown in Table 4.11.

Table 4.11

Respondents Distribution by Faculty

Faculty	Frequency	Percent	Valid Percent	Cumulative Percent
Agriculture	26	8.5	8.5	8.5
Arts	16	5.2	5.2	13.8
Administration/Management	35	11.5	11.5	25.2
Science				
Health Science	17	5.6	5.6	30.8
Education	72	23.6	23.6	54.4
Engineering Technology	14	4.6	4.6	59.0
Law	6	2.0	2.0	61.0
Physical/Life Science	73	23.9	23.9	84.9
Pharmacy	3	1.0	1.0	85.9
Social Science	43	14.1	14.1	100.0
Total	305	100.0	100.0	

4.6.6 Respondents Profile by Rank

As revealed in the descriptive analysis, the highest number of respondents 69 (22.6%) are Lecturer I followed by 62 (20.3%) who are lecturer II, senior lecturers are 61 (20%). Professors and Associate professors has the least number of respondents with 21 (6.9%) and 13 (4.3%) respectively. 30 (9.8%) are graduate assistant while 49 (16.1%) are an assistant lecturers. Summary has presented in Table 4.12.

Table 4.12

Respondents by Rank

Ranks	Frequency	Percent	Valid Percent	Cumulative Percent
Graduate Assistant	30	9.8	9.8	9.8
Assistant Lecturer	49	16.1	16.1	25.9
Lecturer II	62	20.3	20.3	46.2
Lecturer I	69	22.6	22.6	68.9
Senior Lecturer	61	20.0	20.0	88.9
Associate Professor	13	4.3	4.3	93.1
Professor	21	6.9	6.9	100.0
Total	305	100.0	100.0	

4.6.7 Respondents Profile by Work Experience in the University

Of the 305 valid respondents, the highest number of them 117 (38.4%) have a work experience between 0-5 years. 78 (25.6%) had 6-10 years' work experience, 62 (20.3%) had 11-15 years, 17 (5.6%) had 16-20 years, 24 (7.9%) had 21-25 years' work experience. 6 (2%) had 26-30 years of work experience while only 1 (0.3%) had over 30 years of work experience. See Table 4.13.

Table 4.13

Respondent Distribution by Work experience in the university

Work Experience	Frequency	Percent	Valid Percent	Cumulative Percent
0-5years	117	38.4	38.4	38.4
6-10years	78	25.6	25.6	63.9
11-15years	62	20.3	20.3	84.3
16-20years	17	5.6	5.6	89.8
21-25years	24	7.9	7.9	97.7
26-30years	6	2.0	2.0	99.7
31years & above	1	.3	.3	100.0
Total	305	100.0	100.0	

4.6.8 Respondents Profile by Age

As revealed in the descriptive analysis, 29 (9.5%) of the respondents are between age 20-30 years, 89 (29.2%) are between 31-40 years of age, 109 of the respondents representing 35.7% are in the age brackets 41-50 years. 66 (21.6%) are between 51-60 years while 12 of the respondents representing 3.9% are above 60 years of age.

Table 4.14

Respondent Distribution by Age

Age Bracket	Frequency	Percent	Valid Percent	Cumulative Percent
20 - 30 years	29	9.5	9.5	9.5
31 - 40 years	89	29.2	29.2	38.7
41 - 50 years	109	35.7	35.7	74.4
51 - 60 years	66	21.6	21.6	96.1
61 years and above	12	3.9	3.9	100.0
Total	305	100.0	100.0	

4.7 Descriptive Statistics of the Research Constructs (Variables)

The descriptive statistics for all latent variables in this study was computed through means and standard deviation. Six-point semantic differential response scale (Burge et al., 2011; Flocke, 1997) of strongly disagree (1) at one end and strongly agree (6) at the other end was used to measure the indicators for all the latent variable of this study. The

descriptive statistics in the form of means and standard deviations for the latent variables were computed. The results are presented in Table 4.15 and for easier interpretation, the responses to the six-point scale was categorized into three namely: 1.00- 2.66 as low; 2.67-4.33 as moderate and 4.34 – 6.00 as high (Sassenberg, Matschke, & Scholl, 2011).

As shown in Table 4.15, the mean values of all the three dimensions of distributed leadership construct are 3.77, 3.92 and 4.01 while the distributed leadership construct itself has a mean value of 3.90. This means that the respondents tend to have a moderate level of perception of distributed leadership in their various universities. For quality administrative process construct with four dimensional constructs, the mean value of the dimension ranges from 3.50 to 4.08 and the quality administrative process has an average mean of 3.76. This also shows that the respondents' perception of quality administrative process in their school is moderate. Furthermore, quality academic process whose dimension has a mean value ranging from 3.61 to 4.17 have an average mean of 3.93 which is also considered moderate although, it is higher than the average mean value of quality administrative process. However, the descriptive statistics shows a high score for institutional effectiveness (mean = 4.18; standard deviation = .91) and its two dimensions: student development and societal development have a mean score of 4.26 and 4.09 respectively. This indicates that the respondents tend to have a high perception of institutional effectiveness in public universities in Nigeria.

Table 4.15

Descriptive Statistics for all Research Constructs (Variables) of the Study

Research Variable	Code	No of items	Mean	Std. Deviation
Leadership Function	LF	7	3.766	1.058
Participative Decision Making	PDM	6	4.010	.963
Cooperation among the Leadership Team	CLT	6	3.917	1.002
Distributed Leadership	DL	19	3.898	.860
Student Admission	STA	5	3.834	1.144
Staff Recruitment	SFA	5	3.497	1.195
Supportive Facilities/ Environment	SFE	7	3.627	1.011
Policy and Strategy	PS	9	4.076	.983
Quality Administrative Process	QADP	26	3.759	.948
Curriculum	CUR	11	4.168	1.057
Instruction	INST	3	3.612	.979
Service Learning	SL	7	3.860	1.011
Assessment	ASS	4	4.030	1.062
Research and Development	RD	3	4.003	1.075
Quality Academic Process	QACP	28	3.934	.881
Student Development	STD	9	4.261	.958
Society Development	SOD	9	4.093	.946
Institutional Effectiveness	IE	18	4.177	.907

Note: 1-2.67 (Low); 2.67-4.33 (Moderate) and 4.34 - 6.00 (High)

4.8 Assessment of the Measurement Model

4.8.1 Overview

Two major approaches to model estimation in structural equation model (SEM) have been identified namely, variance based SEM and covariance based SEM (CB-SEM). Partial least square- structural equation modeling (PLS-SEM) is a variance-based approach to SEM. It uses the obtained data to estimate the relationships between the path models (coefficients) with the aims of reducing the error terms (residual variance) of the endogenous constructs in the structural model (W. W. Chin, 2010; Hair et al., 2014).

The PLS-SEM was used to estimate the theoretical model for the research using SmartPLS 3.1.2 application software (Ringle, Wende, & Will, 2005). The PLS-SEM approach as a variance based approach was chosen as the major analysis techniques for this study instead of Covariance-Based SEM (CB-SEM) because: (1) it is good for model development and prediction; (2) can be use when normality assumption of data are not met; (3) can be used for model with large number of indicator (observed) variables; (4) is appropriate for a complex model; and (4) suitable when the phenomenon under investigation is new and measurement model need to be newly developed (Hair et al., 2014; Hair et al., 2011; Urbach & Ahlemann, 2010). A PLS-SEM assessment is in two stages which are the measurement model and the structural model assessment. Two main approaches namely, reflective and formative measurements have been acknowledged for evaluating the validity and reliability of any measurement model. First, the reflective measures which are represented by arrows pointing from the construct to the indicators are calculated in PLS-SEM by the outer loadings. While the formative measures which are presented by arrows pointing from the indicator to the construct are calculated by their outer weights. However, all indicators in this study are reflective measures which are shown in Table 4.16. Therefore, the assessment of reflective models in this study will be examined via: indicator reliability, internal consistency reliability and construct validity (convergence and discriminant validity).

4.8.2 Individual Item (Indicator) Reliability

Indicator reliability can be defined as the proportion of indicator variance that is explained by the latent variable. The value is between 0 and 1. According to Hair et al. (2014); Hulland (1999), indicator reliability is assessed by examining the outer loadings

of each construct measures. That is, when indicator and latent variable are standardized, the indicator reliability equals the squared indicator loading. Following the rule of thumb that any reflective indicators whose loadings within the PLS model are smaller than 0.4 should be eliminated (Hair et al., 2014; Hulland, 1999; Peng & Lai, 2012). However, no item in the measurement model is deleted as the least and only loading less than 0.7 is LF1 whose loading is 0.683. This is shown in Table 4.16. This means that all the items (indicators) used in this study are reliable.

4.8.3 Internal Consistency Reliability

The internal consistency reliability is assessed after the unidimensionality of the indicators have been carried out. The Partial Least Square Structural Equation Modelling (PLS-SEM) employs the use of composite reliability (ρ_c) instead of Cronbach's alpha (α) which estimate the reliability based on the inter-correlations of the observed indicators variables to measure the internal consistency reliability. The prioritization of items in accordance with their individual reliability by PLS-SEM couples with the limitations of Cronbach's alpha (α) such as it assumes equality of all indicators loadings; it is sensitive to the number of indicators on a construct; and it underestimate the internal consistency reliability has made it imperative for an alternative means of measuring internal consistency reliability which composite reliability (ρ_c) has readily fill the gaps. According to Hair et al. (2014), composite reliability (ρ_c) takes note of outer loadings of every indicator variables and it is calculated using the following formula:

$$\rho_c = \frac{(\sum_i l_i)^2}{(\sum_i l_i)^2 + \sum_i \text{var}(e_i)}$$

Where l_i is the standardized outer loadings of the indicator variable i of a specific construct, e_i represent the measurement error of indicator variable i , and $var(e_i)$ is the variance of the measurement of error defined as $1-l_i^2$.

As shown in Table 4.16, the composite reliability coefficient of each latent variable both in the first and second order are between the range of 0.824 and 0.967 which are above the threshold value of 0.7 as suggested by Hair et al. (2011). Thus, suggesting the adequacy of internal consistency reliability of the measures used in this study.

Table 4. 16

Psychometric properties for first order construct

Constructs	Items	Loading	Composite Reliability	Average Variance Extracted
Leadership Function			0.927	0.646
	LF1	0.683		
	LF2	0.782		
	LF3	0.8		
	LF4	0.87		
	LF5	0.79		
	LF6	0.837		
	LF7	0.85		
Participative Decision Making			0.908	0.621
	PDM1	0.726		
	PDM2	0.768		
	PDM3	0.819		
	PDM4	0.853		
	PDM5	0.821		
	PDM6	0.735		
Cooperation within the Leadership Team			0.935	0.706
	CLT1	0.811		
	CLT2	0.853		
	CLT3	0.819		
	CLT4	0.875		
	CLT5	0.854		
	CLT6	0.826		
Student Admission Process			0.892	0.624
	STA1	0.836		
	STA2	0.853		
	STA3	0.764		
	STA4	0.782		
	STA5	0.706		

Table 4.16 Contd.

Staff Recruitment Process		0.928	0.72
	SFR1	0.886	
	SFR2	0.869	
	SFR3	0.871	
	SFR4	0.803	
	SFR5	0.811	
Supportive Facilities and Environment		0.928	0.648
	SFE1	0.717	
	SFE2	0.796	
	SFE3	0.755	
	SFE4	0.848	
	SFE5	0.883	
	SFE6	0.766	
	SFE7	0.856	
Policy and Strategy		0.953	0.691
	PS1	0.846	
	PS2	0.79	
	PS3	0.771	
	PS4	0.868	
	PS5	0.836	
	PS6	0.849	
	PS7	0.828	
	PS8	0.833	
	PS9	0.854	
Curriculum		0.967	0.728
	CUR1	0.839	
	CUR2	0.852	
	CUR3	0.884	
	CUR4	0.884	
	CUR5	0.854	
	CUR6	0.803	
	CUR7	0.896	
	CUR8	0.854	
	CUR9	0.826	
	CUR10	0.846	
	CUR11	0.845	
Instruction		0.824	0.61
	INST1	0.797	
	INST2	0.776	
	INST3	0.77	
Assessment		0.941	0.798
	ASS1	0.875	
	ASS2	0.902	
	ASS3	0.888	
	ASS4	0.909	
Service Learning		0.959	0.768
	SL1	0.828	
	SL2	0.872	
	SL3	0.88	

Table 4.16 Contd.

	SL4	0.903		
	SL5	0.903		
	SL6	0.898		
	SL7	0.848		
Research and Development			0.929	0.814
	RD1	0.881		
	RD2	0.917		
	RD3	0.907		
Student Development			0.962	0.739
	STD1	0.87		
	STD2	0.852		
	STD3	0.808		
	STD4	0.868		
	STD5	0.841		
	STD6	0.853		
	STD7	0.879		
	STD8	0.856		
	STD9	0.908		
Societal Development			0.951	0.685
	SOD1	0.706		
	SOD2	0.887		
	SOD3	0.893		
	SOD4	0.864		
	SOD5	0.804		
	SOD6	0.829		
	SOD7	0.833		
	SOD8	0.824		
	SOD9	0.791		

4.8.4 Convergent Validity

This measured the extent to which each indicator of a constructs share a high proportions of variance and converges in comparison to indicators measuring other constructs. Convergent validity tests if whether an item measures the construct it is expected to Measure. The criterion for measuring convergent validity is the AVE proposed by (Fornell & Larcker, 1981). AVE which is equivalent to the communality of a construct is the sum of square loadings of indicators associated with a construct divided by the number of indicators. Convergent validity is achieved when the AVE

value is 0.50 and above which means that, the construct explains more than half of the variance of its indicators on the average. When the value of AVE is below the threshold value of 0.50, convergent validity is not achieved because the construct on the average cannot explain the variance of its indicators due to errors in the items (Hair et al., 2014; Urbach & Ahlemann, 2010). As shown in Table 4.17, there is adequate convergent validity of the measures as their AVE values ranges from 0.610 to 0.814. Which exceed the minimum acceptable level of 0.5 as suggested by Bagozzi and Yi (1988) and thus, indicating adequate convergent validity.

Table 4.17

Overview of the model quality

Construct	AVE	Composite Reliability	R Square	Cronbach's Alpha
Assessment (ASS)	0.798	0.941	0.727	0.916
Collaboration with the leadership team (CLT)	0.706	0.935	0.796	0.916
Curriculum (CUR)	0.728	0.967	0.825	0.963
Instruction (INST)	0.610	0.824	0.703	0.701
Leadership functions (LF)	0.646	0.927	0.664	0.907
Participative decision making (PDM)	0.621	0.908	0.779	0.877
Policy and strategy (PS)	0.691	0.953	0.848	0.944
Research and development (RD)	0.814	0.929	0.718	0.885
Staff recruitment process (SFAP)	0.720	0.928	0.775	0.902
Supportive facilities/ environment (SFE)	0.648	0.928	0.848	0.908
Service learning (SL)	0.768	0.959	0.737	0.949
Societal development (SOD)	0.685	0.951	0.909	0.942
Student admission process (STAD)	0.624	0.892	0.660	0.848
Student development (STD)	0.739	0.962	0.920	0.956

4.8.5 Discriminant Validity

Discriminant validity is defined as the extent to which the measures of a construct are distinct from the measures of another constructs by empirical standards. When discriminant validity is established, it means that, a constructs is distinct in its

representation of a phenomena in comparison to other constructs in the model. Two methods have been proposed for measuring discriminant validity in a reflective measurement model, namely: (a) Examination of the indicators cross-loadings. The indicators loadings for a particular construct should be greater than its loadings (cross-loadings) on the other constructs in the same model under consideration. Where any of the cross-loading is greater than the actual construct loading, then discriminant validity is violated and not achieved for that particular construct; (b) Fornell-Larcker criterion- a conservative method of assessing discriminant validity examine and compare the square root of AVE of each latent construct with the latent variable correlations of other latent construct. The square root of AVE should be greater than its correlations with other constructs, otherwise Fornell-Lacker discriminant validity criterion assumed not meet for a reflective measurement models (Hair et al., 2014; Urbach & Ahlemann, 2010). As shown in Table 4.18, the square root of the average variances extracted (in bold) were all greater than the correlations among the latent construct which suggest discriminant validity.

Furthermore, as suggested by W. W. Chin (1998b), the indicator loadings of a construct should be higher than the cross loadings and as shown in Table 4.19, all the indicators loading are higher when compare with other reflective indicators in the measurement model. Therefore, the measurement items suggest discriminant validity.

Table 4.18

Fornell-Larcker Criterion

	ASS	CLT	CUR	INST	LF	PDM	PS	RD	SFAP	SFE	SL	SOD	STAD	STD
ASS	0.894													
CLT	0.614	0.840												
CUR	0.686	0.595	0.853											
INST	0.705	0.580	0.683	0.781										
LF	0.382	0.547	0.410	0.371	0.804									
PDM	0.466	0.727	0.443	0.473	0.584	0.788								
PS	0.614	0.697	0.658	0.626	0.488	0.580	0.831							
RD	0.760	0.563	0.685	0.709	0.381	0.471	0.616	0.902						
SFAP	0.577	0.680	0.645	0.614	0.484	0.509	0.702	0.573	0.849					
SFE	0.649	0.727	0.648	0.668	0.490	0.609	0.794	0.627	0.773	0.805				
SL	0.683	0.495	0.634	0.742	0.271	0.371	0.564	0.701	0.496	0.579	0.876			
SOD	0.707	0.624	0.774	0.656	0.402	0.532	0.676	0.690	0.624	0.674	0.627	0.828		
STAD	0.492	0.581	0.513	0.534	0.415	0.521	0.644	0.479	0.730	0.665	0.441	0.581	0.790	
STD	0.720	0.557	0.739	0.665	0.327	0.419	0.664	0.685	0.593	0.632	0.603	0.829	0.516	0.860

Table 4.19

Loadings and cross loadings

Items	CLT	LF	PDM	CUR	INST	SL	ASS	RD	STAD	SFAP	SFE	PS	SOD	STD
CLT1	0.81	0.45	0.66	0.47	0.42	0.38	0.57	0.46	0.43	0.47	0.54	0.52	0.49	0.45
CLT2	0.85	0.52	0.67	0.51	0.47	0.39	0.51	0.50	0.52	0.53	0.65	0.59	0.55	0.43
CLT3	0.82	0.47	0.57	0.48	0.49	0.40	0.46	0.42	0.51	0.62	0.63	0.60	0.54	0.45
CLT4	0.88	0.46	0.55	0.57	0.56	0.42	0.56	0.52	0.44	0.61	0.60	0.59	0.54	0.54
CLT5	0.85	0.40	0.55	0.55	0.52	0.48	0.57	0.54	0.48	0.62	0.64	0.63	0.56	0.53
CLT6	0.83	0.46	0.66	0.43	0.47	0.43	0.43	0.40	0.54	0.58	0.61	0.58	0.47	0.42
LF1	0.44	0.68	0.35	0.35	0.29	0.19	0.38	0.26	0.26	0.34	0.31	0.38	0.35	0.37
LF2	0.48	0.78	0.49	0.36	0.31	0.25	0.25	0.29	0.34	0.40	0.40	0.43	0.37	0.34
LF3	0.36	0.80	0.41	0.31	0.31	0.20	0.31	0.29	0.30	0.38	0.42	0.41	0.31	0.27
LF4	0.49	0.87	0.51	0.40	0.38	0.25	0.36	0.38	0.39	0.47	0.47	0.42	0.39	0.31
LF5	0.44	0.79	0.50	0.35	0.25	0.18	0.28	0.34	0.33	0.41	0.39	0.37	0.29	0.18
LF6	0.41	0.84	0.50	0.29	0.27	0.24	0.30	0.29	0.35	0.36	0.37	0.34	0.26	0.18
LF7	0.45	0.85	0.51	0.24	0.28	0.22	0.29	0.30	0.36	0.37	0.40	0.41	0.30	0.20
PDM1	0.55	0.44	0.73	0.30	0.31	0.17	0.36	0.30	0.32	0.30	0.44	0.36	0.37	0.27
PDM2	0.50	0.42	0.77	0.32	0.33	0.31	0.35	0.34	0.39	0.30	0.37	0.38	0.36	0.27
PDM3	0.53	0.48	0.82	0.27	0.33	0.23	0.30	0.29	0.38	0.37	0.41	0.37	0.35	0.29
PDM4	0.67	0.48	0.85	0.41	0.42	0.29	0.41	0.46	0.47	0.47	0.54	0.53	0.50	0.36
PDM5	0.59	0.50	0.82	0.37	0.40	0.34	0.38	0.43	0.48	0.43	0.55	0.56	0.46	0.36
PDM6	0.59	0.44	0.74	0.42	0.45	0.41	0.40	0.39	0.41	0.52	0.57	0.53	0.48	0.42
CUR1	0.51	0.31	0.34	0.84	0.55	0.50	0.57	0.59	0.41	0.51	0.53	0.58	0.64	0.61
CUR2	0.50	0.31	0.38	0.85	0.57	0.54	0.60	0.59	0.49	0.51	0.56	0.56	0.64	0.61

Table 4.19 contd.

Items	CLT	LF	PDM	CUR	INST	SL	ASS	RD	STAD	SFAP	SFE	PS	SOD	STD
CUR3	0.47	0.33	0.33	0.88	0.58	0.52	0.63	0.58	0.47	0.58	0.57	0.58	0.69	0.68
CUR4	0.50	0.31	0.34	0.88	0.61	0.56	0.58	0.57	0.40	0.53	0.55	0.56	0.66	0.63
CUR5	0.50	0.35	0.38	0.85	0.57	0.56	0.53	0.60	0.43	0.57	0.54	0.56	0.65	0.60
CUR6	0.49	0.35	0.36	0.80	0.48	0.47	0.50	0.52	0.35	0.46	0.46	0.53	0.53	0.52
CUR7	0.46	0.35	0.37	0.90	0.61	0.54	0.59	0.62	0.38	0.57	0.55	0.56	0.67	0.65
CUR8	0.43	0.33	0.36	0.85	0.56	0.53	0.55	0.59	0.36	0.51	0.48	0.50	0.63	0.62
CUR9	0.55	0.38	0.39	0.83	0.60	0.56	0.62	0.57	0.50	0.57	0.58	0.56	0.73	0.67
CUR10	0.57	0.40	0.44	0.85	0.62	0.57	0.58	0.57	0.51	0.61	0.62	0.60	0.70	0.65
CUR11	0.60	0.42	0.46	0.85	0.66	0.58	0.67	0.62	0.51	0.62	0.63	0.59	0.72	0.70
INST1	0.50	0.30	0.42	0.56	0.80	0.50	0.57	0.55	0.44	0.48	0.60	0.54	0.57	0.53
INST2	0.43	0.22	0.33	0.62	0.78	0.60	0.54	0.59	0.42	0.48	0.46	0.49	0.52	0.57
INST3	0.43	0.36	0.36	0.41	0.77	0.64	0.54	0.51	0.39	0.48	0.51	0.44	0.44	0.45
SL1	0.43	0.31	0.36	0.55	0.68	0.83	0.56	0.61	0.38	0.43	0.52	0.50	0.51	0.49
SL2	0.41	0.24	0.37	0.52	0.69	0.87	0.56	0.56	0.38	0.40	0.52	0.48	0.53	0.51
SL3	0.42	0.23	0.35	0.51	0.65	0.88	0.51	0.58	0.35	0.38	0.49	0.47	0.55	0.50
SL4	0.42	0.18	0.32	0.52	0.68	0.90	0.62	0.63	0.37	0.40	0.49	0.46	0.53	0.53
SL5	0.43	0.22	0.30	0.58	0.61	0.90	0.63	0.64	0.37	0.43	0.50	0.51	0.56	0.54
SL6	0.44	0.22	0.29	0.59	0.60	0.90	0.62	0.64	0.44	0.48	0.52	0.52	0.58	0.56
SL7	0.48	0.28	0.29	0.61	0.65	0.85	0.68	0.63	0.41	0.51	0.53	0.52	0.59	0.58
ASS1	0.54	0.30	0.37	0.65	0.65	0.71	0.88	0.67	0.44	0.56	0.61	0.54	0.68	0.66
ASS2	0.51	0.30	0.36	0.57	0.60	0.56	0.90	0.64	0.35	0.49	0.55	0.49	0.60	0.63
ASS3	0.54	0.37	0.44	0.58	0.58	0.52	0.89	0.66	0.47	0.51	0.54	0.55	0.60	0.63
ASS4	0.60	0.39	0.49	0.64	0.68	0.64	0.91	0.74	0.49	0.51	0.61	0.61	0.64	0.65
RD1	0.55	0.38	0.41	0.70	0.70	0.62	0.73	0.88	0.40	0.53	0.60	0.61	0.69	0.68
RD2	0.46	0.31	0.44	0.58	0.63	0.67	0.63	0.92	0.49	0.51	0.54	0.53	0.58	0.58
RD3	0.51	0.33	0.42	0.56	0.59	0.61	0.69	0.91	0.41	0.51	0.55	0.52	0.58	0.59

Table 4.19 Cont.

Items	CLT	LF	PDM	CUR	INST	SL	ASS	RD	STAD	SFAP	SFE	PS	SOD	STD
STAD1	0.49	0.36	0.42	0.37	0.38	0.29	0.44	0.38	0.84	0.57	0.53	0.54	0.47	0.46
STAD2	0.56	0.40	0.51	0.53	0.48	0.37	0.49	0.47	0.85	0.66	0.60	0.54	0.59	0.52
STAD3	0.35	0.24	0.41	0.29	0.35	0.28	0.30	0.30	0.76	0.46	0.45	0.45	0.40	0.36
STAD4	0.42	0.26	0.36	0.40	0.46	0.47	0.32	0.37	0.78	0.57	0.53	0.51	0.40	0.33
STAD5	0.45	0.37	0.35	0.41	0.43	0.33	0.37	0.34	0.71	0.61	0.51	0.50	0.42	0.36
SFAP1	0.62	0.45	0.45	0.54	0.47	0.41	0.47	0.47	0.64	0.89	0.66	0.62	0.52	0.52
SFAP2	0.58	0.43	0.42	0.62	0.53	0.50	0.51	0.50	0.72	0.87	0.66	0.62	0.61	0.56
SFAP3	0.60	0.46	0.50	0.55	0.49	0.44	0.52	0.48	0.60	0.87	0.68	0.61	0.56	0.50
SFAP4	0.57	0.44	0.43	0.48	0.57	0.40	0.51	0.51	0.56	0.80	0.70	0.54	0.48	0.47
SFAP5	0.52	0.28	0.35	0.55	0.55	0.37	0.45	0.48	0.58	0.81	0.58	0.59	0.48	0.47
SFE1	0.48	0.34	0.39	0.44	0.59	0.43	0.49	0.46	0.42	0.61	0.72	0.52	0.45	0.43
SFE2	0.55	0.34	0.48	0.49	0.57	0.52	0.55	0.56	0.55	0.64	0.80	0.57	0.51	0.50
SFE3	0.63	0.36	0.51	0.47	0.48	0.44	0.49	0.54	0.56	0.55	0.76	0.67	0.50	0.51
SFE4	0.59	0.42	0.47	0.56	0.53	0.45	0.56	0.50	0.54	0.61	0.85	0.65	0.57	0.54
SFE5	0.61	0.53	0.53	0.56	0.57	0.48	0.54	0.49	0.59	0.70	0.88	0.69	0.57	0.48
SFE6	0.59	0.37	0.50	0.58	0.45	0.41	0.53	0.47	0.49	0.60	0.77	0.67	0.61	0.59
SFE7	0.65	0.39	0.54	0.54	0.60	0.53	0.51	0.52	0.58	0.66	0.86	0.70	0.58	0.52
PS1	0.63	0.39	0.52	0.55	0.51	0.45	0.56	0.55	0.59	0.66	0.74	0.85	0.60	0.58
PS2	0.65	0.41	0.57	0.58	0.56	0.47	0.57	0.52	0.56	0.69	0.73	0.79	0.60	0.59
PS3	0.62	0.42	0.52	0.56	0.55	0.51	0.50	0.48	0.49	0.52	0.64	0.77	0.54	0.49
PS4	0.56	0.41	0.46	0.54	0.50	0.48	0.53	0.51	0.50	0.52	0.67	0.87	0.57	0.55
PS5	0.54	0.37	0.47	0.48	0.48	0.43	0.42	0.45	0.56	0.51	0.64	0.84	0.54	0.51
PS6	0.54	0.35	0.45	0.50	0.49	0.44	0.45	0.50	0.52	0.53	0.63	0.85	0.49	0.49
PS7	0.53	0.42	0.39	0.59	0.51	0.46	0.54	0.54	0.52	0.58	0.59	0.83	0.59	0.62
PS8	0.58	0.43	0.46	0.53	0.54	0.48	0.54	0.54	0.51	0.58	0.61	0.83	0.56	0.57
PS9	0.57	0.45	0.50	0.59	0.55	0.52	0.49	0.50	0.56	0.64	0.68	0.85	0.55	0.55

Table4.19 Contd.

Items	CLT	LF	PDM	CUR	INST	SL	ASS	RD	STAD	SFAP	SFE	PS	SOD	STD
SOD1	0.36	0.19	0.32	0.51	0.48	0.56	0.53	0.50	0.42	0.41	0.49	0.46	0.71	0.58
SOD2	0.52	0.34	0.43	0.69	0.53	0.52	0.61	0.59	0.50	0.56	0.60	0.57	0.89	0.71
SOD3	0.52	0.34	0.46	0.69	0.54	0.50	0.61	0.57	0.48	0.53	0.58	0.56	0.89	0.72
SOD4	0.48	0.34	0.42	0.69	0.54	0.51	0.58	0.58	0.41	0.50	0.54	0.54	0.86	0.70
SOD5	0.54	0.38	0.44	0.64	0.56	0.54	0.59	0.62	0.51	0.51	0.55	0.58	0.80	0.61
SOD6	0.59	0.40	0.52	0.66	0.59	0.57	0.61	0.60	0.53	0.52	0.55	0.61	0.83	0.69
SOD7	0.49	0.34	0.40	0.62	0.50	0.46	0.53	0.53	0.46	0.52	0.52	0.57	0.83	0.72
SOD8	0.59	0.34	0.50	0.70	0.64	0.60	0.65	0.62	0.48	0.55	0.60	0.55	0.82	0.72
SOD9	0.54	0.31	0.46	0.55	0.51	0.43	0.58	0.55	0.55	0.55	0.59	0.59	0.79	0.72
STD1	0.49	0.33	0.36	0.69	0.58	0.52	0.61	0.58	0.45	0.53	0.56	0.59	0.74	0.87
STD2	0.52	0.29	0.38	0.67	0.57	0.54	0.61	0.63	0.44	0.46	0.53	0.60	0.69	0.85
STD3	0.49	0.29	0.40	0.62	0.51	0.49	0.64	0.55	0.44	0.48	0.54	0.52	0.68	0.81
STD4	0.46	0.28	0.35	0.68	0.56	0.50	0.62	0.58	0.45	0.49	0.53	0.57	0.69	0.87
STD5	0.48	0.22	0.37	0.62	0.62	0.55	0.63	0.57	0.49	0.50	0.56	0.56	0.70	0.84
STD6	0.40	0.19	0.27	0.60	0.54	0.50	0.63	0.58	0.42	0.48	0.53	0.56	0.69	0.85
STD7	0.49	0.27	0.35	0.64	0.59	0.57	0.61	0.59	0.45	0.57	0.54	0.57	0.74	0.88
STD8	0.51	0.36	0.43	0.59	0.60	0.48	0.61	0.61	0.44	0.52	0.55	0.58	0.73	0.86
STD9	0.47	0.29	0.33	0.60	0.57	0.52	0.62	0.61	0.44	0.55	0.56	0.59	0.74	0.91

4.9 Assessment of Higher Order Construct (HOC)

The assessment of higher order construct was conducted after ensuring that all the measurement indicators are valid. Higher order construct also known as hierarchical models has been defined by Becker, Klein, and Wetzels (2012) as a constructs having more than one dimensions and each dimensions captures some fraction of the overall latent variables. According to Wetzels et al. (2009), higher order construct has been encouraged because of its ability to shrink complex model as well as allowing for theoretical thrift.

Four categories of hierarchical model have been identified by Ringle, Sarstedt, and Straub (2012). However, this study utilized the type1 (reflective-reflective) model. According to S. A. Rahman, Amran, Ahmad, and Taghizadeh (2015), dropping or adding any of the dimensions will not change the conceptual meaning of the latent variables in the reflective model.

Furthermore, in partial least square-structural equation modeling (PLS-SEM), three approaches have been identified in dealing with hierarchical model which include the repeated indicator approach, hybrid approach and two stage approach (Becker et al., 2012). This study adopted the repeated indicator approach where the indicators of the first order variables are used in the second order constructs (Akter, D'Ambra, & Ray, 2011; Lohmöller, 1989) and also to verify the adequacy of the measurement as well as the structural properties for the research model (Wold, 1985).

As all the four major constructs in this study are second order construct, the validity was tested by evaluating the average variance extracted (AVE) and the composite reliability (CR). As shown in Table 4.20, the value of the AVE and CR are above the threshold value of 0.5 and 0.7 respectively which means that the second order constructs for this study are

valid. It is also evident Table 4.20 that all the dimensions of distributed leadership, quality administrative and academic process; and institutional effectiveness are significant at $p < 0.001$. Therefore, the multidimensional construct used in this study is justifiable.

Table 4. 20

Assessment of higher order construct validity and reliability

Construct	Dimensions	Loadings	t value	Composite Reliability	Average Variance Extracted
Distributed Leadership	LF	0.815	30.648**	0.898	0.746
	PDM	0.882	61.382**		
	CLT	0.892	73.985**		
Quality Administrative Process	STAD	0.812	35.623**	0.935	0.783
	SFRP	0.88	63.574**		
	SFE	0.921	105.605**		
	P&S	0.921	82.908**		
Quality Academic Process	CUR	0.908	75.537**	0.935	0.742
	INST	0.839	49.544**		
	ASS	0.859	50.523**		
	SL	0.853	48.437**		
	R&D	0.847	49.000**		
Institutional Effectiveness	STD	0.959	154.609**	0.955	0.914
	SOD	0.953	133.961**		

**P < 0.001

4.10 Structural Model Assessment (PLS-SEM)

The structural model according to Hair et al. (2014) deals with dependent relationships connecting the constructs in the hypothetical model. It is a useful representation of interrelationships among constructs. That is, it explain the relationship between latent variables. The relationship between the variables in the proposed hypotheses in this study as indicated in the model was tested through the structural model. The structural model comprising the exogenous variable which is distributed leadership and the endogenous variables comprising the quality administrative process, quality academic process and institutional effectiveness where quality administrative process and quality academic

process serves as the mediators. The structural model was assessed for collinearity issues, relevance and significance of the structural model relationships, level of R^2 , effect sizes and the predictive relevance Q^2 . Bootstrapping which is consistent with W. W. Chin (1998a) was used to generate the t-statistics and the standard errors as it represents a non-parametric approach for estimating the precision of the PLS estimates which allow the researcher to assess the statistical significance of the path coefficients as well as the indirect effects (Hayes, 2012).

4.10.1 Assessing the Structural Model for Collinearity

Assessment of collinearity in structural model followed the same step as used in the evaluation of formative model. Each exogenous variables (predictors constructs) in the model is assessed for collinearity (Tolerance and VIF) and each predictors constructs should meet the threshold value of 0.20 tolerance or higher (> 0.20) and a VIF lower than 5. When the conditions is not meet by predictor constructs, it is suggested that, the predictor construct be removed, merged into a single constructs, or a higher-order constructs be created in other to solved the collinearity problems (Hair et al., 2014).

The latent variable scores was extracted from default reports of PLS calculation results, these scores was then copied and saved into an SPSS 20 file to run linear regression analysis with distributed leadership, quality administrative process and quality academic process as the predictor constructs while institutional effectiveness as the dependent variable. The result in Table 4.6 shows that there is no collinearity issue in this study.

4.10.2 Results of Hypothesis Testing

With the establishment of the measurement model, the next stage is to test the hypotheses formulated for this study through the structural model. The structural model which according to Ee, Halim, and Ramayah (2013); Sang, Lee, and Lee (2010) indicates the causal relationships among the constructs in the model which estimates the R^2 value and the path coefficients that determines the predictive power of the model. Table 4.21 and Figure 4.3 presents the results of the structural model. Distributed leadership when tested directly with institutional effectiveness was positively significant ($\beta = 0.557$, $t = 15.307$, $p < 0.001$) but after the inclusion of the mediating variables, the relationship between distributed leadership and institutional effectiveness became insignificant ($\beta = 0.004$, $t = 0.060$, $p > 0.1$). As the model is ran as a single model, it is therefore, concluded that distributed leadership does not significantly related to institutional effectiveness.

However, distributed leadership is positively and significantly related to quality administrative process ($\beta = 0.752$, $t = 25.532$, $p < 0.001$) and quality academic process ($\beta = 0.613$, $t = 14.338$, $p < 0.001$). Furthermore, both Quality administrative process ($\beta = 0.244$, $t = 2.764$, $p < 0.01$) and quality academic process ($\beta = 0.647$, $t = 10.243$, $p < 0.001$) are positive and significantly related to institutional effectiveness. Thus, H_{A2} , H_{A3} , H_{A4} and H_{A5} were supported while H_{A1} was not supported. Having a closer examination of the model revealed that Quality academic process was the key predictor of institutional effectiveness.

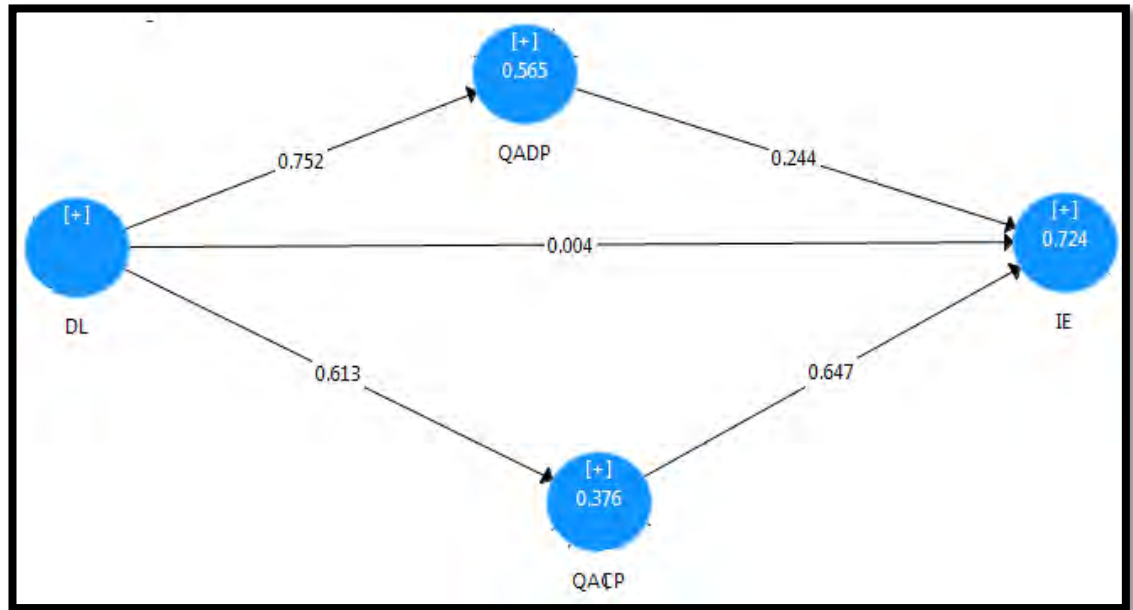


Figure 4.3. Structural model with β value

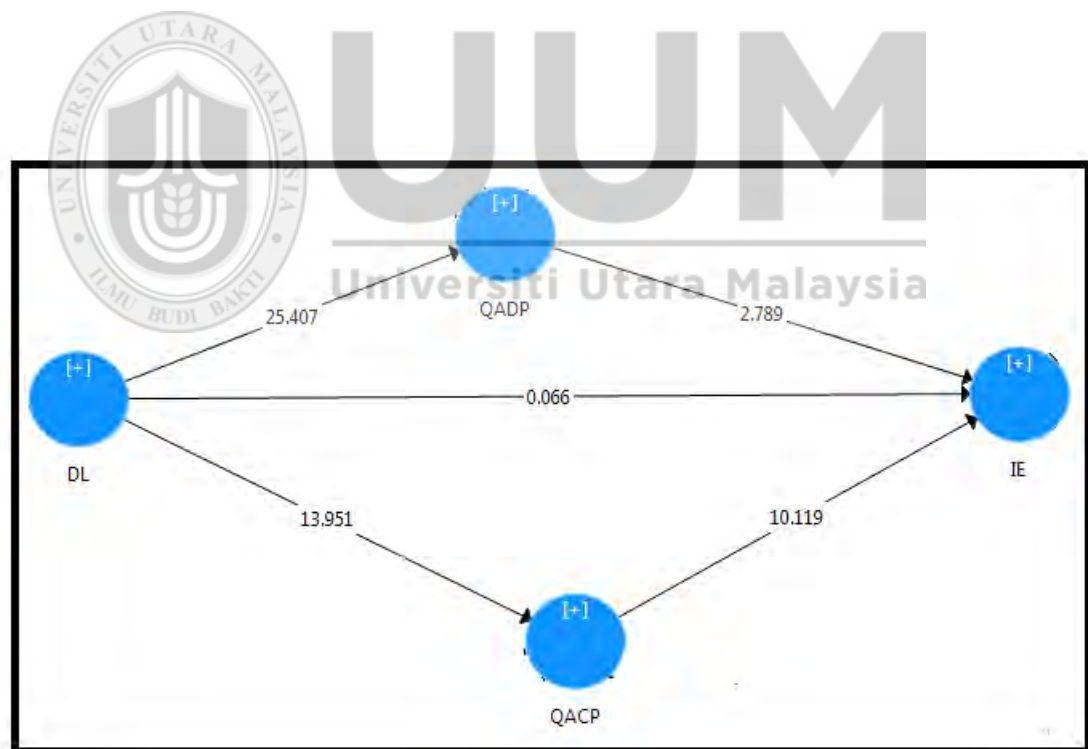


Figure 4.4. Structural model with t value

Table 4.21

Summary of hypothesis testing for direct relationship

Hypothesis	Relationship	Path Coefficient (β)	Standard Error	t value	P value	Decision
H_{A1}	DL -> IE	0.004	0.060	0.066	0.474	Not Supported
H_{A2}	DL -> QADP	0.752	0.029	25.537**	0.000	Supported
H_{A3}	DL -> QACP	0.613	0.043	14.338**	0.000	Supported
H_{A4}	QADP -> IE	0.244	0.088	2.764**	0.003	Supported
H_{A5}	QACP -> IE	0.647	0.063	10.243**	0.000	Supported

** p< 0.01

4.10.3 Testing for Mediation

The mediation analysis was done using bootstrapping approach (Hair et al., 2014; Hayes, 2009; Preacher & Hayes, 2008) to test the mediating role of quality administrative process and quality academic process on the relationship between distributed leadership and institutional effectiveness. This involves two stages: the first stage was to test the direct relationship between distributed leadership and institutional effectiveness without involving the mediating variables. The direct relationship shows that distributed leadership is positive and significantly related to institutional effectiveness ($\beta = 0.753$, $p < 0.01$). The second stage was to test the relationship between distributed leadership and institutional effectiveness with the involvement of the mediating variables. This is illustrated in figure 4.7 to 4.9.

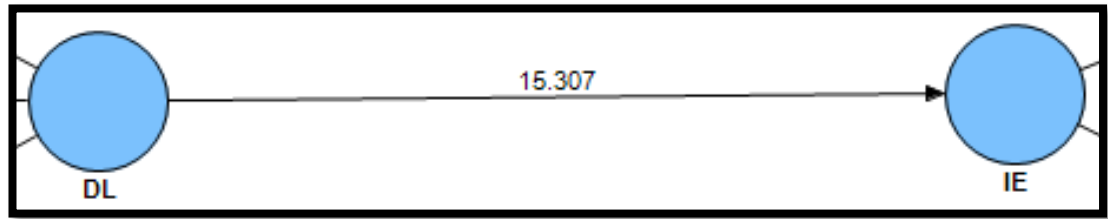


Figure 4.5. t value of the direct relationship between distributed leadership and institutional effectiveness

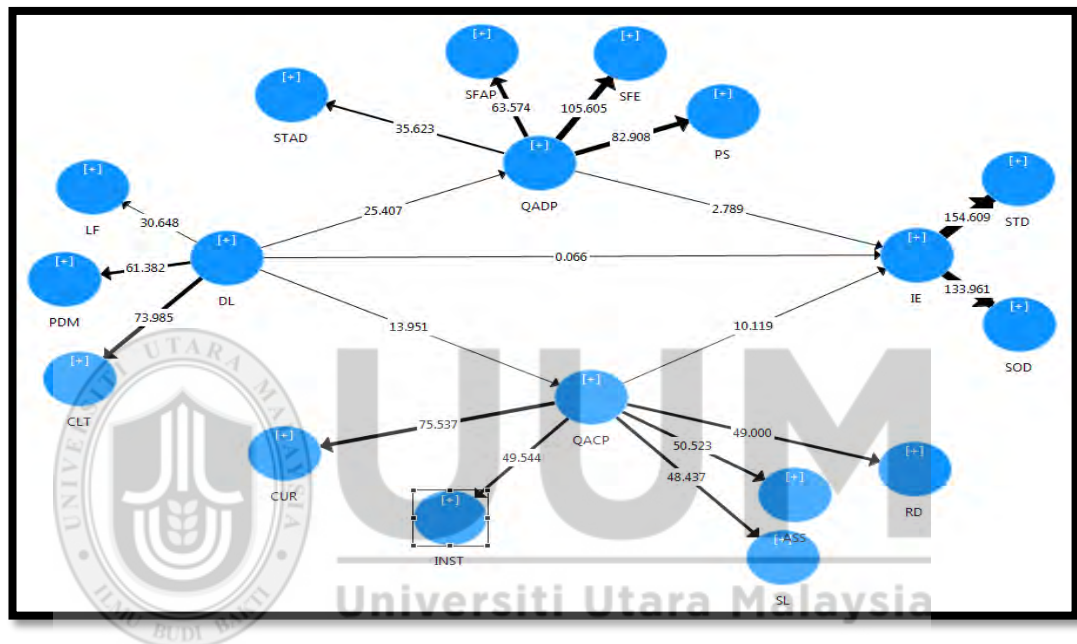


Figure 4.6. The mediating role of quality administrative and academic process

Table 4.22

Summary of hypothesis testing for indirect relationship

Hypotheses	Relationship	Point Estimate	Standard Error	t-value	p-value	Decision
HA6	DL=>QADP=>IE	0.18	0.067	2.698	0.004	Supported
HA7	DL=>QACP=>IE	0.397	0.040	9.843	0.000	Supported

Comparing figure 4.5 and figure 4.6 provide evidence to draw conclusions regarding the mediation hypothesis. However, as shown in Table 4.22 using the bootstrapping approach, HA6 which stated that quality administrative process significantly mediate the

relationship between distrusted leadership and institutional effectiveness was supported (t value= 2.698, $p < 0.01$). Furthermore, H_{A7} stated that quality academic process significantly mediate the relationship between distributed leadership and institutional effectiveness was also supported (t value= 2.698, $p < 0.01$).

4.10.4 Coefficient of Determination (R^2)

One of the common argument for using PLS-SEM according to Ringle et al. (2012) is its good prediction and all model estimations uses the R^2 values to characterize the ability of the model to explain as well as predict the endogenous latent variable (Lei & Chu, 2015). The coefficient of determination represents the exogenous latent variables' combined effects on the endogenous latent variable. It is a measure of the goodness of fit (regression function) against the empirically manifest items obtained with values ranging from 0 to 1.

According to W. W. Chin (1998b), R^2 value for endogenous latent variables are assess as 0.67 (substantial), 0.33 (moderate) and 0.19 (weak). However, acceptability and non-acceptability of the R^2 value varies from one field of study to another. The higher the R^2 value, the bigger the percentage of explained variance (Hair et al., 2014). In this model, as shown in Table 4.23, the R^2 value for institutional effectiveness, quality academic process and quality administrative process are 0.724, 0.376, and 0.565 respectively. This indicated that the research model explains 72.4% of the total variance in institutional effectiveness. That is, distributed leadership, quality academic process and quality administrative process collectively explain 72.4% of the variance of the institutional effectiveness while 27.6% of the variance in Institutional effectiveness is explained by other factors which are not covered in this study. It is also evidence that the amount of

variance in quality administrative process and quality academic process explained by distributed leadership is 56.5% and 37.6% respectively, which are moderate. Thus, this model has predictive accuracy and can be adjudged to be a good model.

Table 4.23

Coefficient of determination (R^2) Table

Latent Variables	R Square (Variance Explained)
Institutional Effectiveness	0.724
Quality Academic Process	0.376
Quality Administrative Process	0.565

4.10.5 Effect Size (f^2)

Apart from determining the R^2 value, the change in R^2 value when a specific exogenous variable is omitted from the model was also examined to know the effect size (f^2) which is the magnitude of the impact of a particular exogenous variable on an endogenous variable (Gim, Desa, & Ramayah, 2015; Hair et al., 2014). Effect size f^2 according to Preacher and Kelley (2011) serves as a practical guide to interpret the practical importance of a specific relationship. This according to Gim et al. (2015) is done by examining the f^2 effect size for each relationship. It indicates the contribution of each exogenous latent variable (distributed leadership, quality administrative process and quality academic process) to the overall prediction of the endogenous construct (Institutional Effectiveness) (W. W. Chin, 1998b). It is calculated by omitting an exogenous construct from the model and re-specifying the structural model to determine the new R^2 on the endogenous construct. The difference between the R^2 when the exogenous construct of interest is included and the new R^2 when it is omitted shows the impact of the exogenous construct in the prediction of the endogenous construct under investigation. This is repeated for all

exogenous constructs in the model to determine their impact. According to Callaghan, Wilson, Henseler, Ringle, and Næs (2007), Effect size (f^2) is expressed as:

$$\text{Effect size: } f^2 = \frac{R_{included}^2 - R_{excluded}^2}{1 - R_{included}^2}$$

Where $R_{included}^2$ is the R^2 value of the endogenous construct when a particular exogenous construct is included and $R_{excluded}^2$ is the value of such endogenous construct when that particular exogenous construct is excluded from the model. According to Cohen (1988) f^2 value is assessed as: 0.02 (small), 0.15 (medium), and 0.35 (large). Table 4.24 shows the effect sizes of the respective exogenous variables of the structural model.

Table 4.24

Effect size for direct effect

Relationship	f^2 effect size	Magnitude
DL→ IE	0.000	None
QACP→IE	0.634	Large
QADP→IE	0.065	Small
DL→QADP	1.298	Large
DL→QACP	0.603	Large

Based on the rule of thumb, distributed leadership has no effect on institutional effectiveness. Although, distributed leadership has large effect on quality administrative process and quality academic process amounting to 129.8% and 60.3% respectively. Also, quality administrative process has a small effect on institutional effectiveness amounting to 6.52% while quality academic process has a large effect on institutional effectiveness amounting to 63.4%. However, a small effect size according to W. W. Chin, Marcolin,

and Newsted (2003); Preacher and Kelley (2011) does not imply that the effect is not important. Since all of the hypothesized relationships were already shown to be statistically significant, all of the relationships here are deemed important and meaningful judging by the effect sizes found (Gim et al., 2015).

As recommended by Preacher and Kelley (2011), the kappa-squared (k^2) effect size were also calculated to determine the indirect effect size. Kappa-squared (k^2) is interpreted by Preacher and Kelley (2011) as the proportion of the maximum possible indirect effect that could have occurred. Therefore, the PROCESS macro (Hayes, 2013) in SPSS 20 was used to assess the k^2 effect size. The k^2 effect size are 0.1783 and 0.4003 for QADP and QACP respectively. The result means that distributed leadership has an indirect effect of 17.83% on institutional effectiveness via quality administrative process. Also, distributed leadership has an indirect effect of 40.03% on institutional effectiveness via quality academic process.

Table 4. 25

Indirect effect of distributed leadership on institutional effectiveness

Construct	Effect	BootSE	BootLLCI	BootULCI	P value
Total	.5786	.0522	.4831	.6852	
QADP	.1783	.0518	.0793	.2791	0.012
QACP	.4003	.0438	.3145	.4899	0.000
(CI)	-.2221	.0805	-.3862	-.0595	

4.10.6 Predictive Capability of the Model (Q^2)

Predictive relevance is a measure used to assess the relative predictive relevance of a predictor construct on an endogenous construct. It helps to determine the relevance of the reflective construct in a structural equation modeling (SEM) model. In this study, Q^2 was

calculated in SmartPLS 3.1.2 using blindfolding procedure. Cross-validated redundancy approach was used in this study to determine the predictive relevancy of the constructs. This is because, according to Hair et al. (2014), cross-validated redundancy approach includes the elements of structural model, path model and predicted eliminated data in its assessment. In table 4.26, the predictive relevance is shown in the column labelled 1-SSE/SSO which means squared prediction error/squared observations. Any value in the column that is more than 0 are said to have predictive relevance. The result in Table 4.19 shows that the Q^2 value for all the three endogenous variables are above zero and therefore, the model is adjudge to have predictive relevance (Henseler, Ringle, & Sinkovics, 2009).

Table 4.26

Predictive capability of the Model

Construct	SSO	SSE	$Q^2 (=1 - \text{SSE/SSO})$	R^2
IE	5,490.000	2,916.330	0.469	0.724
QACP	8,540.000	6,737.393	0.211	0.376
QADP	7,930.000	5,558.735	0.299	0.565

4.10.7 Importance-Performance Matrix Analysis (IPMA)

The Importance-Performance Matrix Analysis (IPMA) was carried out by the researcher in order to extend the result of the PLS-SEM structural model. The IPMA identifies the relative importance of the exogenous constructs in a study by assessing the direct, indirect, and total relationships to the endogenous construct. It also include the actual performance of each constructs in the model using the latent variable scores of the PLS-SEM results. Hair et al. (2014) describe IPMA as a distinctions of total effects (importance) and the average values of latent variable scores (performance) in other to show the significant

areas for the improvement of management activities or the specific focus of the research model. See Table 4.27 and Figure 4.7.

As revealed in this study, quality academic process exhibit both the highest importance and performance towards improving the effectiveness of the university system with 4.02 and 60.34% respectively compared to distributed leadership and quality administrative process with performance index of 58.32 and 56.98% respectively. However, both distributed leadership and quality administrative process reveal a moderate level of importance. As shown in Figure 4.7, even though distributed leadership has no direct significant relationship on institutional effectiveness, it is very important for the improvement of institutional effectiveness having an index value of 3.92. Therefore, there is need to focus on all the three elements (DL, QADP and QACP) as they are very important towards improving the effectiveness of the university system.

Table 4.27

Index Values and Total Effects for the IPMA of IE

Constructs	LV Index Values	LV Performances
DL	3.916	58.315
QACP	4.018	60.359
QADP	3.849	56.976

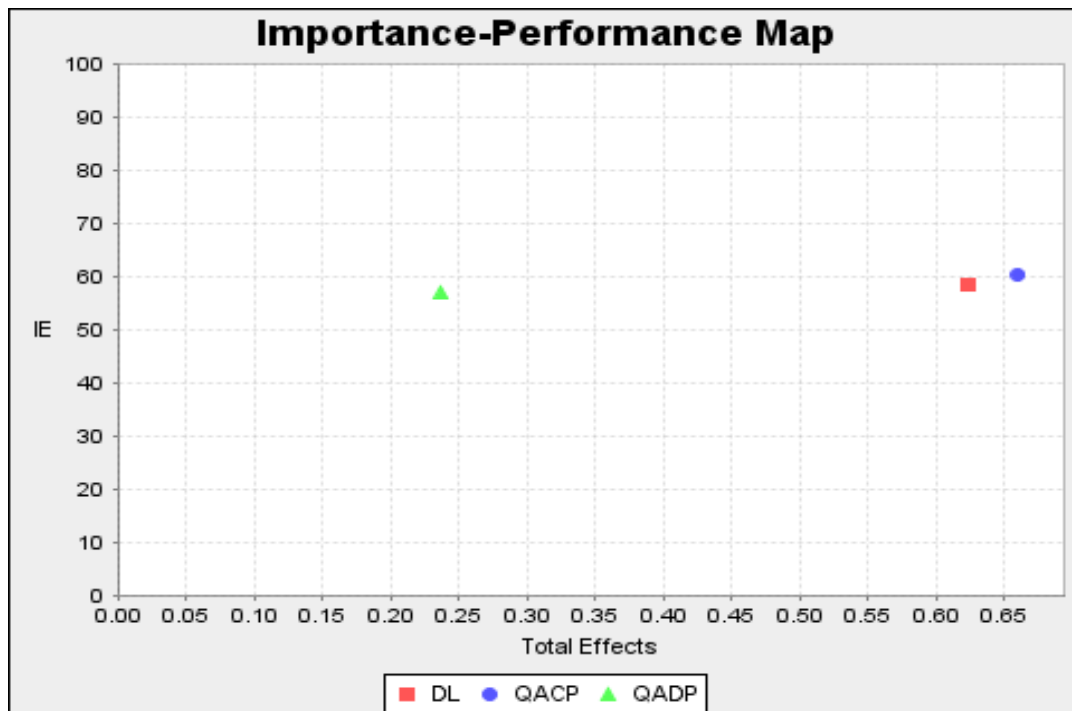


Figure 4.7. IPMA Results of IE as Target Construct

4.11 Summary of Chapter Four

This chapter reports the findings of the quantitative aspect of this study which answer research questions 1 to 3. The findings of this study indicated that there is a moderate level of distributed leadership, quality administrative and academic process and institutional effectiveness. A total of seven hypotheses were formulated to answer research questions 2 and 3. For research question 2, five hypotheses were formulated to test the relationship among the four main construct of this study as shown in the research framework. Out of the five direct relationship that was tested, four of the alternate hypotheses were accepted while one was not accepted. The direct relationship between the independent variable (distributed leadership) and the dependent variable (institutional effectiveness) was not significantly related.

For research question 3, two hypotheses were formulated to determine the mediating role of quality administrative and academic processes on the relationship between distributed leadership and institutional effectiveness. The analysis using bootstrapping approach in smartpls shows that quality administrative process and quality academic process significantly mediate the relationship between distributed leadership and institutional effectiveness. However, before the introduction of the mediating variables, the direct relationship between distributed leadership and institutional effectiveness was positively significant at 0.001 level of significance. Therefore, going by Baron and Kenny rule, when the mediators was introduced and the direct relationship became insignificant shows that the mediators (quality administrative and academic processes) are fully mediating the relationship between distributed leadership and institutional effectiveness. The results of the tested hypothesis were summarized in Table 4. 28.

Table 4.28

Hypotheses summary

Hypotheses	Hypothesized Path	Decision
Direct Relationship		
H_{A1}	DL -> IE	Not accepted
H_{A2}	DL -> QADP	Accepted
H_{A3}	DL -> QACP	Accepted
H_{A4}	QADP -> IE	Accepted
H_{A5}	QACP -> IE	Accepted
Mediating Effect		
H_{A6}	DL=>QADP=>IE	Accepted
H_{A7}	DL=>QACP=>IE	Accepted

CHAPTER FIVE

QUALITATIVE FINDINGS

5.1 Introduction

As the previous chapter answered research questions one to three, this qualitative study was carried out using semi-structure interview to provide information to answer research question four which addressed the issues impeding the effectiveness of public universities in Nigeria. This study therefore would help to provide a better understanding of issues impeding institutional effectiveness in public universities in Nigeria as well as giving an insight of how the effectiveness of public universities in Nigeria can be enhanced. According to Merriam (1998), using interview as a source of information help to explore the past, understand the present as well as predicting the future.

The researcher organized the findings of this qualitative study into themes and sub-themes based on the information gathered from the participants. In the analysis, five themes and 17 sub-themes emerged on the issues impeding the effectiveness of public universities in Nigeria while, three themes and ten sub-themes emerged through the participants' responses on ways to enhance institutional effectiveness. The sub-themes which are the information provided by the respondents were collapsed into themes using theoretical and inductive analysis techniques of thematic analysis respectively (Percy et al., 2015).

In order to identify issues impeding the effectiveness of public universities in Nigeria, two phases were employed by the researcher during the data analysis. The first phase was preparing the data and working on assigning the data units to predetermined themes derived from the quantitative study. In the second stage, the researcher work with the data units and patterns that did not seem to fit the predetermined themes (Percy et al., 2015). In other words, the data unit that fit into leadership issues, academic issues and

administrative issues were identified and in the second stage, two themes emerged as other issues affecting institutional effectiveness. These two issues are funding and contextual factors.

5.2 Demographic Profile of the Participants

This qualitative aspect of the study gathered information from 8 participants with semi-structured interview. The participants are purposively selected in order to provide the relevant information needed for this study. This is because according to Patton (1990), “nothing is more important than making a proper selection of cases. This choice is based on the assumption that when one wants to discover, understand, or gain insight, one needs to select a sample from which one can learn the most” (p. 48). The selected participants are academicians and administrators in either state or federal university and the participants cut across the five geo-political zones of the country as the sixth zone were not captured because of the security situations in that zone. Pseudonyms were used to refer to the participants.

The first participant is Prof. Ami who is a professor and the deputy vice chancellor of one of the federal universities in Nigeria. She has over 28 years of teaching and administrative experience in the university system where she has held many units and departments as a director and head of department. The second participant is Prof. Bam, a professor of educational management and currently the dean of education also in one of the federal universities in Nigeria. He has over 30 years of teaching experience as a university lecturers and an administrator per excellent. By virtue of his rank in the university system, he is a member of the university senate.

Prof. Colli is the third participant who is a professor of biochemistry in one of the federal universities in Nigeria. He has been a university lecturer for over 20 years. He was one

time the head of department of biochemistry department and he has also head many committees within the university system and currently a member of his university senates. The fourth participant is Prof. Dorc is a professor of educational management and currently the head of department of one of the federal universities in Nigeria. She has over 17years of teaching and administrative experience in higher education. She is a member of the senate.

The fifth participant is Prof. Elere, a professor and once the head of department in faculty of social science in one of the state universities in Nigeria. He has over 23 years of teaching and administrative experience. He is also a member of senate in his school. Dr. Fag is the sixth participant, a senior lecturer and the head of department of mechanical engineering in one of the federal universities in Nigeria. He has over 10 years of teaching experience. He is also a member of senate of his universities.

The seventh participant is Mr. Gbodo who is a lecturer I in faculty of Communication science in one of the state universities in Nigeria. He has been a lecturer for over 15 years. He is a member of four university committees both within his faculty and at the university level. While, the last participant is Prof. Has, a professor and a director of unit in one of the state universities in Nigeria. She has been a lecturer for over 15 years and has head many units in the university. She is currently a member of university senate in her school.

5.3 Issues Impeding Universities Effectiveness

This section provides in-depth understanding of the issues impeding the effectiveness of public universities in Nigeria. Base on the thematic analysis using theoretical analysis types of approach, many issues which were indicated with yellow colour as shown in figure 5.1 were identified and however collapsed under five themes namely, academic issues, administrative issues, leadership issues, funding issues and contextual issues.

These themes were discussed and the graphical themes that emerged are shown in figures 5.2 to 5.6.

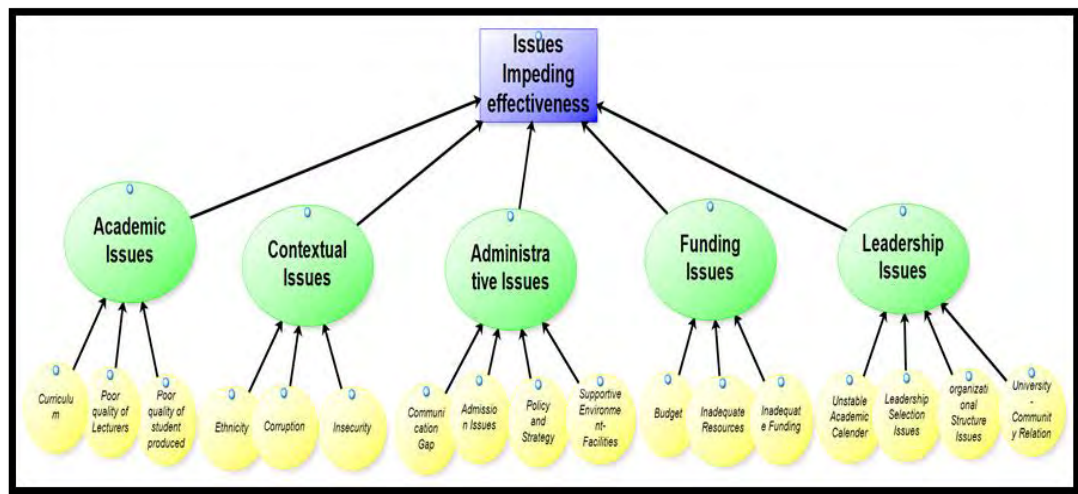


Figure 5.1. Issues impeding universities effectiveness

5.3.1 Academic Issues

Academic issues in this studies relates to educational and research process as identified by Calvo-Mora et al. (2006) which include curriculum, instruction, assessment, service learning and research. However, the responses from the participants indicated that curriculum, poor quality of student produced at the foundational level and the quality of lecturers are the major academic issues impeding institutional effectiveness. These are illustrated in Figure 5.2.

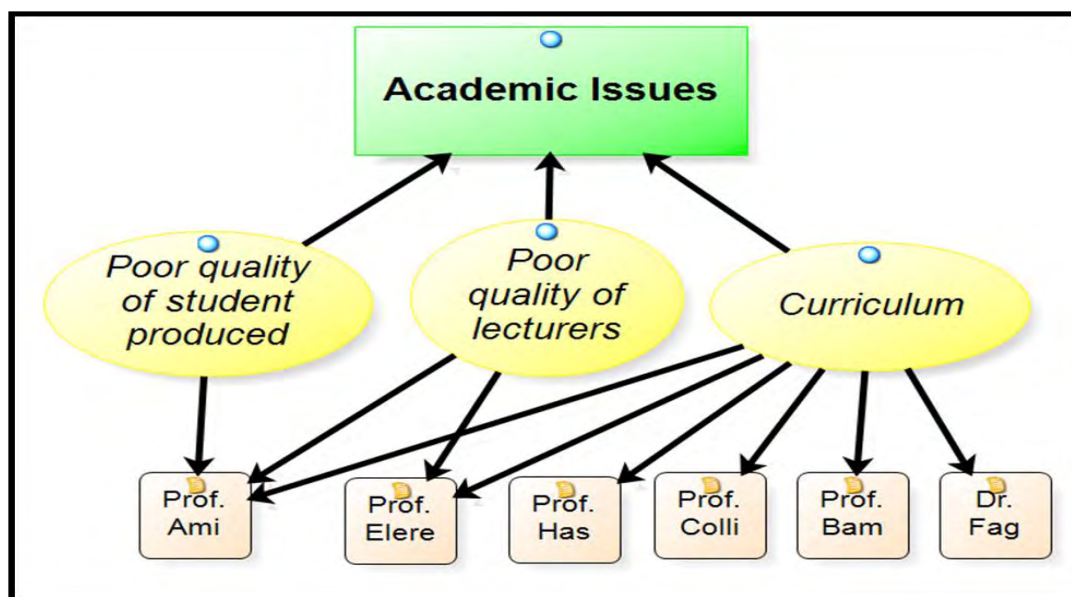


Figure 5.2. Academic issues as a factor impeding universities effectiveness

5.3.1.1 Curriculum

The curriculum is an educational terms through which the pre-determined goals of the teaching and learning process can be achieved within and outside the classrooms. It is a means through which the lecturers achieve their pre-determined objectives in the classrooms. According to Kpee et al. (2012), Nigerian universities are expected to have local content by stressing local values and home based cultural assets while at the same time accommodating and absorbing the Global Knowledge economy to produce and support individuals to become a balanced local citizens. However, the findings from the interview conducted in this study revealed that the inadequacy in the universities curriculum is a major issues in universities effectiveness in Nigeria. As highlighted by Prof. Has: “The Universities are not aligning their curriculum to the needs of the industries for which they are producing students in the various faculties”.

The informant went further:

One of the major issues also lies on curriculum development and implementations. The Nigerian universities curriculum are not review regularly to meet up with the

global trends and if Nigerian universities want to be competitive with other universities in the world, there is need for drastic review of the curriculum. The curriculums are not tailor to reducing the trend of increased unemployment in the country because we are training our graduate for white collar job but not to be self-employed. Even with the introduction of entrepreneurship education all higher education in Nigeria, much has not been achieved because they are not in line with the student course of study (Prof. Has, 24/04/2014).

The above statement was equally supported by Prof. Elere who stated that:

The major problem which the university is facing now is the problem of unemployment of our graduates, we have a lot of graduate outside unable to get employment and that is a big problem and that implies really challenging the university system in terms of the structure of our curriculum (Prof. Elere, , 06/05/2014).

This inadequacy in the university curriculum has resulted into increase graduate unemployment as stated by Prof. Bam:

We are turning out massively more and more graduates, just to join the unemployment market. This is where one can say they are not being effective because they are not training them to be self-employed, the self-employability of the University graduates is so low, because they cannot defend the face-value of their certificate (Prof. Bam, 25/05/2014).

Therefore, deficiency in curriculum design, development and implementation has being identified in this study as an important issues impeding the effectiveness of university education in Nigeria. As revealed in Figure 5. , Six of the participants identified curriculum of the university system as a major factors affecting the effectiveness of public universities in Nigeria which are said not to be adequate to train employable graduate.

5.3.1.2 Poor Quality of Lecturers

As stated in the National Policy on Education (2004) that no nation can rise above the quality of its teachers, the quality of lecturers determine the quality of education. As observed by Prof. Ami, “There is evidence from states that the quality of teachers is not

anything to write home about”. This was also consistent with the observation of Prof. Elere who said:

We have challenge of the facilitators (the lecturers) we have a lot of lecturers that are not well exposed to training, not been able to meet with scholars around the world not able to travel out of their local environment (Prof. Elere, 06/05/2014).

5.3.1.3 Poor Quality of Student Produced at Foundational Level

The poor quality of student produced at foundational level has also been identified as one of the issues impeding the effectiveness of university education in Nigeria. As observed by Prof. Ami:

Talking about quality of students, there is no way we are going to isolate the quality of students at the tertiary level from the quality of students at the foundation level. The primary level, the secondary school level (which is the intermediary between the tertiary and the primary) have their share of blame. What the University can do depends largely on the quality of students that they admit. If the foundation is weak as it is, and everybody has admitted that! Then how much can the University do to be able to ameliorate these deficiencies from the lower levels (Prof. Ami, 12/06/2014).

The ability of the student to cope academically with university education is a result of the student’s foundational knowledge at primary and secondary school. That is why some students are rusticated from the system when they were unable to attain the required CGPA to move to other level in their study.

5.3.2 Administrative Issues

This section explains the administrative issues as identified by the respondents as a factor impeding the effectiveness of public universities in Nigeria. According to seven out of the eight respondents identifies administrative elements as factors impeding the effectiveness of public universities in Nigeria. Factors identified by the respondents include

communication gap among stakeholders, admission issues, deficiency in supportive environment/ facilities as well as poor policy and strategy implementations. The graphic representation are shown in figure 5.3.

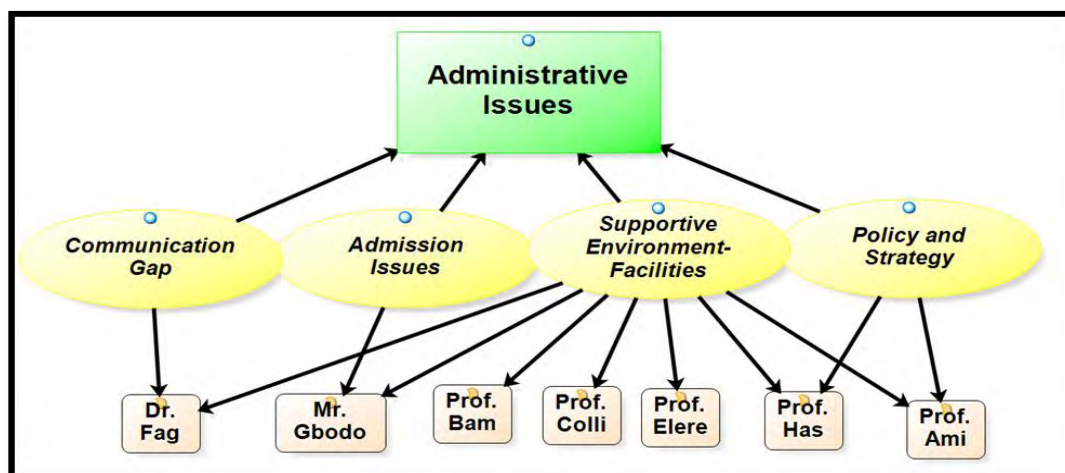


Figure 5.3. Administrative issues as a factor impeding universities effectiveness

5.3.2.1 Communication Gap

Communication gap which is a failure of understanding, usually because of a lack of information, especially between different stakeholders in the educational system. As observed by Dr. Fag, “the extent that other stakeholder are carried along is very minimal”. This can affect the implementation of educational policies when those who are to implement those policies are not properly informed or carried along in the process of policies making. This can bring about poor participation on the part of the subordinates or implementers.

5.3.2.2 Admission Issues

Admission of student into the university system are done in two phases: the first one is the conduct of entry examination by the Joint Admission and Matriculation Board (JAMB) which will determined the cut off mark for admission into the three tiers of higher

education. The second phase is the entry examination called Post Unified Tertiary Matriculation Examination (Post UTME) conducted by the various institutions which are done in order to enhance quality assurance of student into the university system.

According to Mr. Gbodo, “there is no correspondent between the available institutions and numbers of candidate seeking enter to those institutions”. The Post-UTME is conducted to reduce the number of qualified student because of the large number of applicants. Admission of students into the university system in Nigeria especially public universities has posed a great issues as there is a large difference between the number of applicants in relations to the number of students a university are to admit using the quota provided by the National Universities Commission.

Three major factors are considered in the selection of student into the public university system. One is the student on Merit (40% of the quota), Catchment Area (40%) and Education Less Developed (ELD) state (20%). However, as stressed by Mr. Gbodo, “the university are unable to resist the in surge of candidate and they take more than what they can cope with”. The circumstances can result into poor learning where:

The teachers that are supposed to teach a skilled based course which by expert evaluation should not be burden say may be 30 students – 1 teacher is now given three times that number certainly the level and quality of teaching and even evaluation and monitoring necessary to ensure that student acquire those skills is undermined (Mr. Gbodo, 18/06/2014).

Therefore, the issues of selecting the best candidate has been compromised because of the large number of applicant compared to the available quota. For instance over 110,000 students choose a particular university as their choice during the Unified Tertiary Matriculation Examination (UTME) and the said university has less than 11,000 quota.

5.3.2.3 Supportive Environment/Facilities

Supportive environment/facilities encompasses physical facilities, human environment and organizational climate (Akporehe, 2011; Okyere-Kwakye, 2013). The condition under which an individual performs their duties determines its outcomes. The findings in this study identified poor supportive environment/facilities as one of the issues impeding universities' effectiveness. According to Prof. Ami:

..Right from the primary or foundation level down to the tertiary level, there is clear evidence of decay in infrastructure in many schools; classes are being merged at the primary school level to accommodate inflows of children after wide access through Universal Basic Education which is not good for teaching (Prof. Ami, 12/06/2014).

This issue of inadequate facilities was further buttressed by Prof. Elere who said "there are challenges in the university system, from admission we have challenges because a lot of qualified candidates are not admitted in the university system because we have limited facilities in the university system". He further stressed that "we need an environment that is conducive to practice our work and we can imagine now that in the university where we struggle to get electricity, all these things are not like that in other parts of the world".

This was also in line with Mr. Gbodo who said:

When electricity is not available, it frustrates curriculum content delivery because you schedule a lecture and you are unable to deliver well simply because the supporting facilities are unavailable, so, what do you do? You get frustrated and you end up not delivering what is supposed to be given to the students (Mr. Gbodo, 18/06/2014).

Furthermore, Mr. Gbodo illustrates how inadequate facilities are affecting the university's effectiveness when he said:

When you have more than the number required may be what you have 2 hours to take the students on practical course and you are supposed to be 30 or planned for 30 with that 2 hours. It is expected that you should be able to go around each of the student to supervise and guide them on how to use equipment but you are now

dealing with triple number, is either the minutes needed by each of the students would not be available to them which means the planned curriculum cannot be delivered as planned because the population has undermined the real capability of that number too (Mr. Gbodo, 18/06/2014).

The importance of facilities to student learning was further buttressed. According to Mr. Gbodo:

From my experience to be able to deliver on the second leg of the curriculum content delivery, there is need to be a balance between human capability and material availability. No matter how good the lecturer or teacher and even the Lab attendant or technician are, if the equipment are not available to help guide the students to acquire necessary skills of practice, there is little they can do (Mr. Gbodo, 18/06/2014).

There is equally “lack of motivation among staffs or they felt somehow cheated or somehow neglected by the system” (Dr. Fag, 80/06/2014). This was supported by Mr.

Gbodo stated that:

The academic staff are complaining that they are entitled to certain allowances as a result of increase in population not necessarily because the facilities coming to them are not enough, they are saying since there is increase in population, there should be commensurate allowances in work load (Mr. Gbodo, 18/06/2014).

Moreover, One of the identified issues relating to supportive environment/facilities is staff training and development which according to Prof. Has:

Our universities’ leaders are not helping matters in the area of staff training. Staff are not provided with the necessary support or training to improve their efficiency and effectiveness. The money that is supposed to be used for staff training is diverted for other purposes. The conditions under which the lecturers are carrying out their roles are not conducive and as such much cannot be realized in them being productive. For example, no conducive office, poor or no access to internet facilities, inadequate furniture, poor welfare packages and irregular promotion exercise and these factors has demotivated the academic staffs in putting up their best in teaching and research (Prof. Has, 24/04/2014).

Although, Mr. Gbodo also observed that even the limited facilities that were provided, “there has been corresponding observation that these resources are not being managed very well”. Seven out of the eight participant in this study identifies poor supportive

environment and facilities as a factor impeding the effectiveness of public universities in Nigeria.

5.3.2.4 Policy and Strategy

The term Policy is a blueprint of the universities activities which are repetitive/ routine in nature.

Strategy on the other hand is concerned with those organizational decisions which have not been dealt/ faced before in same form. Strategy might be viewed as the value-based (longer term) approach to how a vision (policy goal) can be realized in broad terms e.g. specification and setting up of action directions and various programmes. In very organizational activities and actions, it is the policy that provides an official backing to be followed without any bias by every individuals, groups, department or faculties as applicable to the university system (Adetunji, 2015). The result of the interview conducted for this study identify policy implementation as one of the factors impeding the effectiveness of public universities in Nigeria. One of such issues lies on disjointed efforts between the policy maker and the implementers of such policy. According to Prof. Ami, “if policies are been made at the federal level and is not getting to the training institutions, that is a gap to be corrected”. Prof. Ami went further that:

Gaps between the training institutions, the world of work, the superintending bodies like NUC itself, like Federal Ministry of Education, the Universal Basic Education Commission. I think there is a big gap to be filled between these bodies and the University in a way that the University will be able to responds to new policies, for example I understand that that a new Policy on Education has been published, it has not reach the faculty of education (Prof. Ami, 12/06/2014).

Furthermore, poor policy implementation in the area of internship were identified. Internship which are termed different names in different field of study such as student industrial and work experience scheme (SIWES) in sciences, teaching practice in

education, houseman ship in health sciences are policy been put in place as quality assurance measures for student be get themselves acquainted with the outside world of work but unfortunately, the exercise according to one of the respondents have been compromised. As stressed by Prof. Has:

The practicum that will send our students out to industries or organization for practical experiences are not really monitored to bring out the best in students. That is another way to make the student have practice knowledge, I mean knowledge application in their area of study but both the university system , the lecturers, the students themselves and even the personnel in the organization whose the student are attached with are not taking the exercise seriously (Prof. Has, 24/04/2014).

5.3.3 Leadership Issues

Leadership is the ability to influence the subordinate towards achieving organizational goals. Leadership at both institutional and unit level have been identified in this as one of the factors impeding universities effectiveness in Nigeria. The leadership issues identified in this study include leadership selection, organizational structure, unstable academic calendar and university-community relation (See Figure 5.4).

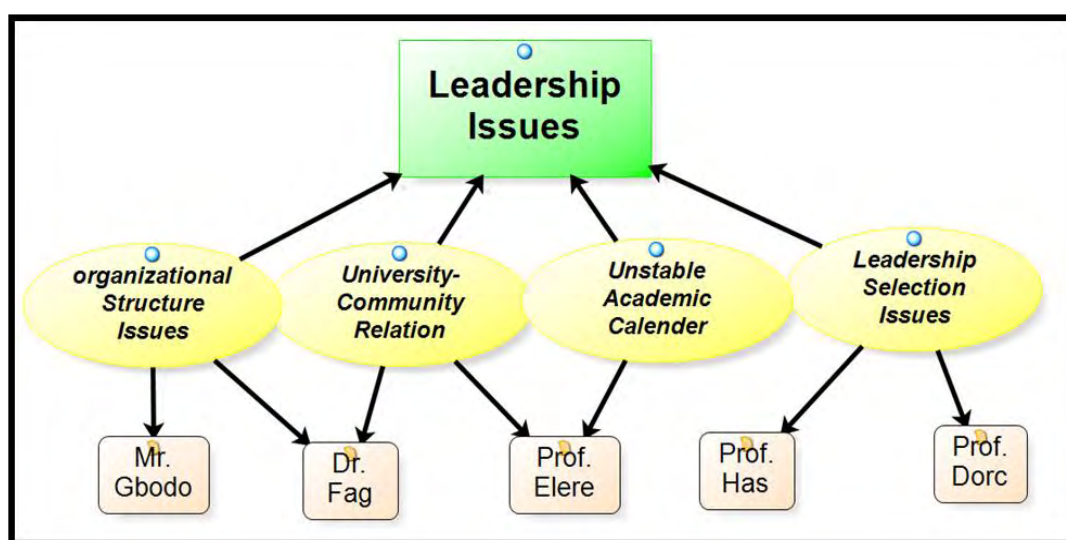


Figure 5.4. Leadership issues as a factor impeding universities effectiveness

5.3.3.1 Organizational Structure Issues

Leadership as it is well known is the ability to influence other in order to achieve organizational goals. Therefore, the organizational structure in any establishment determines the smooth running of such organization. As conflict is inevitable, the structure put in place by the leader determines how conflict can be prevented or managed. As stated by Dr. Fag: “the universities system in Nigeria lack proper organization sometimes you begin to wonder whether each unit are working at different goals... and as such you don’t see a kind of coordinated effort among them”.

According to Prof. Colli, “our mentality that a unit trying to claim that, he is more important than the other unit”. This was also supported by Mr. Gbodo who said: “it has been discovered that unnecessary bigmanism are in place among various units” because “there is low level of co-ordination between different units”. This according to them has obstructed the university system in achieving their stated objectives.

5.3.3.2 Poor University-Community Relation

Maintaining good relationship with the community where an institutions is located is one of the priorities of the university administrators. The university needs to get the community involved in some of the things going on in the school and the community on the other hand need to contribute their own support to the effectiveness of the school. However, according to Prof. Elere:

We also have the problem of even the town and gown relationship whereby the town doesn’t even know what the gown is doing and the gown does not relate with the town and in such situation there is a problem (Prof. Elere, 06/05/2014).

This was also supported by Dr. Fag when he said “the extent that other stakeholder are carried along is very minimal”. These according to them has obstruct the effectiveness of university education in Nigeria.

5.3.3.3 Unstable Academic Calendar

Unstable academic calendar is the inability of the university system to meet up with the timeframe of their activities due to frequent labour disputes, cultism and social vices which lead to series closure of school. Some of these strike was as a result of poor governance within the university system. Unstable academic calendar in the university system has been identified by the participants as one of the leadership factors impeding the effectiveness of public universities in Nigeria. As identified by Prof. Elere:

crisis in the academic calendar which has made a university system like mockery of what the university system is to be, where the university system will go on strike and the academic activities will suffer for months and a times year (Prof. Elere, 06/05/2014).

Prof. Elere explained further that “when we have strike all over the place, we are certainly going to have a kind of deteriorating quality of education”. Therefore, public universities cannot be effective if there is a continuous closure of school.

5.3.3.4 Leadership Selection Issues

Leadership as the ability of a leader to influence his/her subordinate is an important factor in achieving organizational goals. Therefore, the audacity of selecting the right candidate as a university leader becomes paramount. However, malpractices in leadership selection has been identified as one of the factors inhibiting the effectiveness of public universities in Nigeria. According to Prof. Dorc :

Some of them because you may see someone that is very effective to become a vice chancellor but because he is not a native of this town so they will pick someone who may not be as effective as that person (Prof. Dorc, 13/05/2014)

This was further buttressed by Prof. Has who said: “Other problems include picking the wrong candidates to head the universities because of his connection or to favour his ethnic group which may not be the best for the educational system”. Therefore, the inability of putting the right candidate to head the university system is a threat to university effectiveness.

5.3.4 Funding Issues

Funding is seen as the life wire of any establishment as no organization can succeed without funding, be it business or public oriented. Funding has been identified by six out of the eight respondents in this study as the major challenge affecting universities effectiveness. Issues relating to funding as identified by the participants include low budget, inadequate funding and inadequate resources (See Figure 5.5).

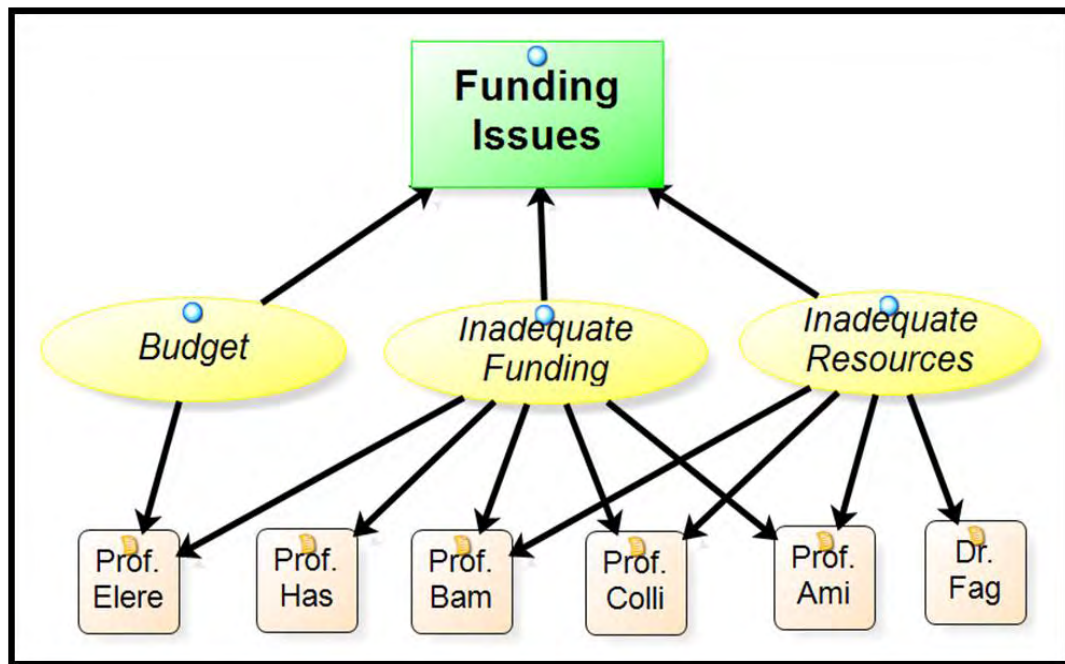


Figure 5.5 Funding as an impediment to universities effectiveness

5.3.4.1 Low Budget

Inadequate or low budget is the inability of the government to allocate a higher percentage of either the state or the country's budget to education. As recommended by UNESCO, 26% of a country's budget should be allocated to education. Inadequate budget has been identified by the participants in this study as one of the issues impeding the effectiveness of public universities in Nigeria. According to Prof. Elere:

Well, one of the major challenge that are facing the university system presently in Nigeria is allocation of government funding which more often than not are inadequate, and in a situation we have inadequate funding, that means many things will have to suffer (Prof. Elere, 06/05/2014).

This was further buttressed by Prof. Colli who said:

..because of poor allocation, it's affecting many areas, it's affecting even curriculum innovation, it is affecting curriculum development. Having no money to move around, before you want to bring innovation to the curriculum you need to send people around the world (Prof. Colli, 07/07/2014).

Therefore, the university system can achieve little or no improvement in a situation of dwindling allocation of funds into the system.

5.3.4.2 Inadequate funding

Funding has been identified as an important factor in the success of any establishment. For university education to achieve its goals, funding is paramount in keeping the school running. Funding of public university education in Nigeria and other part of the world has always been the sole-responsibility of the government as investment in education is seen as a social service. However, because of the role of university education in human capital development, both public and private organization try to contribute their own quota towards university education.

Funding has been identified in this study as one of the issues hindering the success of public universities in Nigeria. According to Prof. Elere : “the major challenges that are facing the university system presently in Nigeria are funding which more often than not are inadequate, and in a situation we have inadequate funding, that means many things will have to suffer”. This was also buttressed by Prof. Has who said:

One of the major issues lies on funding, the government allocations to the educational system is below the 26% of the budget as suggested by UNESCO and thus are not enough. More classrooms need to be build, more furniture need to be provided for instance a classrooms that is built for 200 students are being occupied by 500 students, you ca not expect a better instructions to take place there and as such affect the quality of university products (Prof. Has, 24/04/2014).

This was also supported by Prof. Colli who said that:

Because the funding is poor, it is affecting many areas, it is affecting even curriculum innovation, and it is affecting curriculum development. Having no money to move around and if you want to bring innovation to the curriculum you need to send people around the world (Prof. Colli, 07/07/2014).

Realizing the extent of inadequate funding in public universities in Nigeria, Prof. Ami also stressed that "...know that the funding is just not adequate and the Universities are just struggling to make ends meet and to achieve their objectives within this limitations". Therefore, inadequate funding both from the government as well as private sector as identified by five of the informants for this study, has limit the effectiveness of public universities in Nigeria.

5.3.4.3 Inadequate Resources

Resources in university education can be both human, material and financial resources. The inadequate funding also resulted to insufficient human and material resources. For instance, the human resources include both academic and non-academic staffs in the university system while the physical and material resources include the building, equipment, facilities owned by the institutions. The interview conducted for this study revealed that inadequate or decaying resources is one of the factors impeding the effectiveness of public universities in Nigeria. As stated by Prof. Ami:

Right from the primary or foundation level down to the tertiary level, there is clear evidence of decay in infrastructure in many schools, classes are being merged at the primary school level to accommodate inflows of children after widely access through Universal Basic Education which is not good for teaching (Prof. Ami, 12/06/2014).

Four of the eight informants interviewed for this study lamented on the inadequacy of resources as an issues confronting them in carrying out their duties which directly or indirectly obstruct the effectiveness of the university system.

5.3.5 Contextual Issues

Contextual factors in terms of ethnicity corruption and insecurity has been identified by the respondents as one of the factors affecting universities effectiveness. The graphical illustration of the respondents as regards those factor are shown in Figure 5.6.

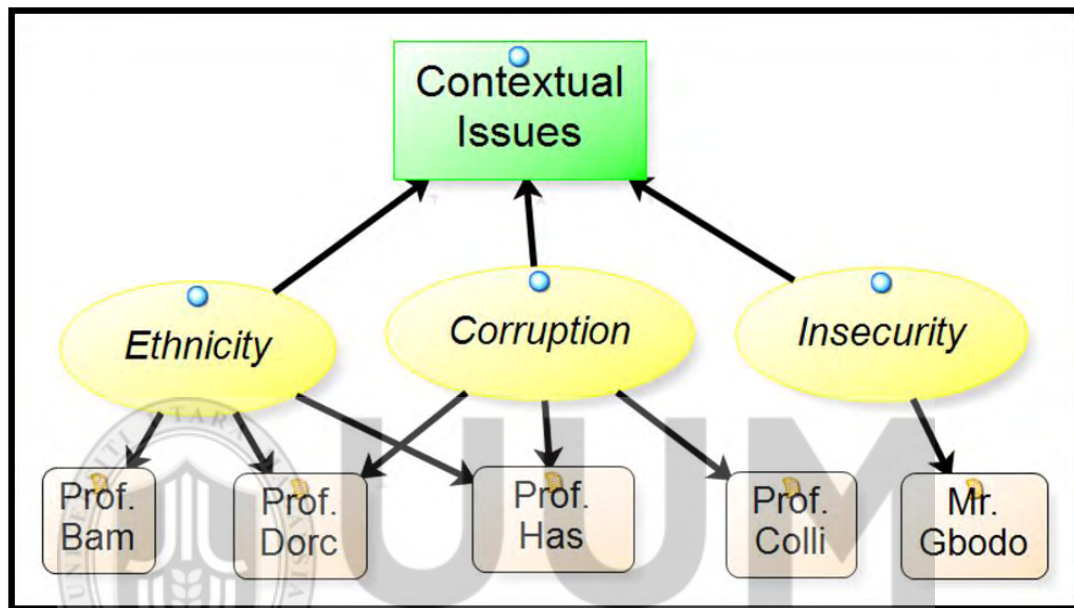


Figure 5.6. Contextual issues as an impediment to universities effectiveness

5.3.5.1 Ethnicity

Ethnicity which is belong to or associated with group of people or a particular race who have a culture that is different from the main culture of a country. Nigeria is a large country with over 300 ethnic groups (Okpu, 1997) and that is reflected in university environment. Giving ethnicity priority over merit in admission and recruitment processes because a candidate is from a particular region has been identified as a factor inhibiting institutional effectiveness which Prof. Bam called social environmental influences especially in university leadership selection.

This was buttressed by Prof. Dorc

Some of them because you may see someone that is very effective to become a vice chancellor but because he is not a native of this town so they will pick someone who may not be as effective as that person (Prof. Dorc, 13/05/2014).

Furthermore, Prof. Has seen it as politics which hinders university effectiveness.

According to her:

Politicization of appointment and promotion in the university system is a major issues that need to be look into as this does not encourage merit and hardworking among staffs which has a bad effect on the system and the society at large (Prof. Has, 24/04/2014).

5.3.5.2 Corruption

The nuisance of corruption dogging the Nigerian polity has gradually pervaded the university system in such a way that different corrupt practices are committed by university lecturers, administrators and even the students (R. D. Uche, 2014). Recently, out of 183 countries, Nigeria was rank as the worlds' 40th most corrupt country by the transparency international. According to the group, after the police, political parties as well as the legislatures; the educational system is perceived to be the most corrupt. This was supported by Prof. Colli who stressed that:

...there is corruption in Nigeria, corruption among the leaders. I was just discussing with my colleagues the rate of corruptions at all levels in the university where the vice chancellors are corrupt, deans are corrupt, HODs are corrupt, lecturers ordinarily are corrupt even students (Prof. Colli, 07/07/2014).

This argument on corruption as it affect the university system was also buttressed by

Prof. Dorc who said:

The culture of corruptions among the university management is not helping matters as the little available budgets for facilities and staff welfares are being diverted for personal use. Also, student bribe their way in order to pass their exams and so many atrocities committed by other university staff has affected seriousness

on the part of students when they know that they can pass their courses without much effort and because of the large number of applicant some staff demand bribe for admission (Prof. Dorc, 13/05/2014).

Therefore, as revealed in figure 5.7, three of the informants asserted the danger of corruption to universities effectiveness.

5.3.5.3 Insecurity

Insecurity among Nigerian universities have also being identified as a factor that is really affecting the growth and even the peace of the Nigeria Universities (Ololube, Onyekwere, Kpolovie, & Agabi, 2012). This was reinforced by Mr. Gbodo who said:

The general insecurity we have in Nigeria which from my observation has contributed to skewed distribution of students seeking admission across the country. Before now perhaps maybe in the 60s and 70s, students travel, student gain admission across the country, the east from the north from the south west they criss cross university to get admission that to some extent ensure some level of even distribution of students in a way that 1 or 2 or 3 university is not overpressure in terms of those seeking admission that is how and because of insecurity people are not confident in leaving their wards to far places so everybody tends to look for universities within its own locality (Mr. Gbodo, 18/06/2014).

Inadequate securities on universities campus resulted into some students cheating in the examination and threatens lecturers when caught; secret cult members indulging in arm robbery, assassination and rape in which both the staffs and their families as well as majority of the students live in perpetual fear and as such, pose a big challenge to universities 'administrators which affect the effectiveness of the universities in achieving its goals (Asiyai, 2013).

5.4 Ways of Enhancing Universities Effectiveness

In order to answer the research question four for this study, the researcher transcribed the recorded views of the participants on issues hindering the effectiveness of public universities in Nigeria. However, emphasis has now been moved in this section to identify feasible way out to issues inhibiting university effectiveness. The cross section of the respondents gave diverse views on how effectiveness can be enhanced in public universities in Nigeria.

The various ways of enhancing institutional effectiveness as suggested by the respondents were equally arranged in themes. Although, these section does not apply theoretical analysis in its thematic analysis but rather inductive analysis was adopted as no predetermined idea of ways of improving university effectiveness was guided by the interview analysis. The findings from the interview revealed many ways in which institutional effectiveness can be enhanced which was subsequently collapsed into three themes namely: institutional reform, increased funding and policy reform. Figures 5.7 is the graphical representation of ways in which institutional effectiveness can be enhanced as opined by the participants.

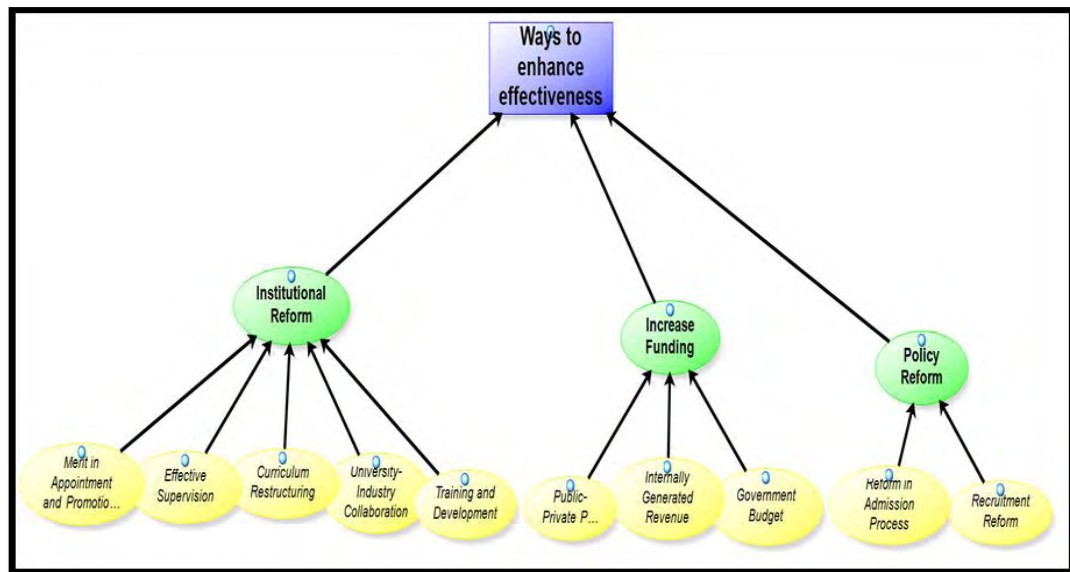


Figure 5.7. Ways of enhancing universities effectiveness

5.4.1 Institutional Reform

An institutional reform is an action or process of improving an unsatisfactory practices within the university system. The result of analysis of the interview conducted for this study identify institutional reform as one of the ways to address the identified problems confronting the university system. The participants highlight curriculum restructuring, staff training and development, effective supervision, university-industry collaboration and merits in admission and promotion process as a way forward in enhancing institutional effectiveness (see Figure 5.8).

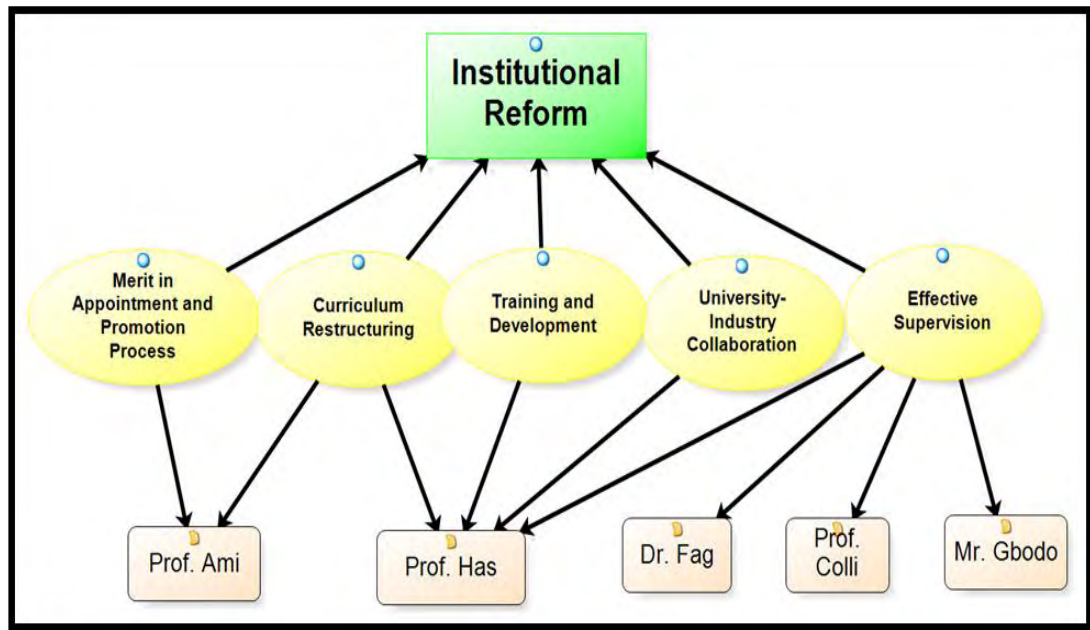


Figure 5.8. Institutional reform as a strategy for enhancing universities effectiveness

5.4.1.1 Merit in Appointment and Promotion

Merit in appointment and promotion has been identified as a way of improving the effectiveness of the university system. This is because the quality of lecturers as well as the student absorbed into the university system really matters in the quality of graduate that will be produced. According to Prof. Ami, “we need to look into the quality of teachers being employed at all levels, particularly at the foundation level”. Prof. Ami further said, “if the promotion of staff are not based on merit, this can reduced the productivity of committed staff” and as such, in order to encourage commitment, productivity and staff effectiveness which will result into institutional effectiveness; the promotion of staffs should be based on merit.

5.4.1.2 Curriculum Restructuring

The curriculum according to Tyler (1949, 2010), is defined as all learning experiences which a learner is expose to under the supervision of the lecturers. Therefore, the

curriculum is a means by which the lecturers realize his ideals or objectives in his classroom. According to the participants, if the university system want to catch up with the global demand of higher education, there is need for curriculum restructuring.

According to Prof. Ami:

there is no way National Universities Commission can exonerate itself, the kind of curriculum we are using at this moment needs to be radically amended in a way that it can fit to modern challenges especially on science and technology (Prof. Ami, 12/06/2014).

This was further buttressed by Prof. Has who said:

Total restructuring of the curriculum to match the need of the industries or the employers as well as developing them to be self-employ after graduation. This will help to reduce the problem of unemployment in the country which resulted to various social vices in the country (Prof. Has, 24/04/2014).

5.4.1.3 Training and Development

Lecturers training and development has been identified as paramount to the success or effectiveness of any university. As stated in the National Policy on Education (2004) that no nation can rise above the quality of it teachers. According to Prof. Has:

Mentoring is nothing to write home about in the university system as even the suppose mentors are not making themselves available and even the mentees are not even ready to be mentored. That is another problem that has effect on the classroom instructional practices which affect the universities' effectiveness, the school manager need to enhance the mentoring process in the university system (Prof. Has, 24/04/2014).

Furthermore, as identified by the informant that most school management do no really shown interest in their staff training and development as they manipulate the accreditation process by hiring ad hoc staff during accreditation. It was therefore suggested by Prof. Has that, "in order to encourage staff training and development, there is need for national university commission to include that as part of their measures in university

accreditation”. The NUC should always ask for the list and evidence of staff training and mentoring programme as this has a great influence on institutional effectiveness.

5.4.1.4 University-Industry Collaboration

Collaboration between the industries and the university system have been identified as critical for students’ skill development, knowledge acquisition and adoption as well as enhancement of entrepreneurial skills (Guimón, 2013). The collaborations effort could also help the university system in acquitting themselves with the skills needed by industries in different field of study and thus focus student training in such direction.

According to Prof. Has, “the Centre for Industry-University Collaboration should be worked upon to enhance graduate having a prerequisite experience on their area of specialization”. The SIWES unit in every university should take up the challenge of addressing the increased graduate unemployment through solid partnership in the training of the students through internship as well as placement after graduation.

5.4.1.5 Effective Supervision

Effective supervision has been acknowledge as one of the management elements in achieving organizational goals. The findings from the interview conducted identified effective supervision of resources in terms of human, material and financials resources as a determinant of institutional effectiveness in the university system. As highlighted by Dr.

Fag:

I think the government has much to do to put the university management on their toes to make sure when policy are made they follow it and when money are made available for any policy this funds should be utilized towards attaining the goals of which the government make fund available (Dr. Fag, 80/06/2014).

According to Dr. Fag:

a broader game in terms of collaboration of stakeholders and of the fact to the government being the provider of funding for this system being the largest provider of funding for this system, they have to intensify their monitoring capacity so that the universities system can achieve their objective of providing the world class graduate and contributing to the society in a more better way (Dr. Fag, 80/06/2014)

This was further supported by Mr. Gbodo who said “government need to increase its supervisory role that after making facility available, it must develop a system of monitoring to ensure that what was allocated was actually utilized for that purpose”. The informant went further stating that “i think there is need for change of attitude among both the academics and non-academics in order to produce high level man power needed”.

This was buttressed by Prof. Has who said:

The attitude of the lecturers as well as the students need is also a matter of concern. The management needs to put measures of supervising lecturers’ activities both within and outside classrooms. Some of us are in the academic profession but are not ready to meet up with our expectations and therefore, the universities have a role to play here (Prof. Has, 24/04/2014).

Therefore, to enhance the effectiveness of public universities in Nigeria, effective supervision of the usage of resources available in terms of human, material and financial resources as well as effective implementation of policies will be a welcome development to the university system.

5.4.2 Increase Funding

Increased funding both from the government and private sector has been identified by the participants as a measure towards enhancing universities effectiveness in Nigeria. According to them, improvement in government budget, internally generated revenue by the school and public private partnership will be a welcome development towards institutional effectiveness. (See Figure 5.9).

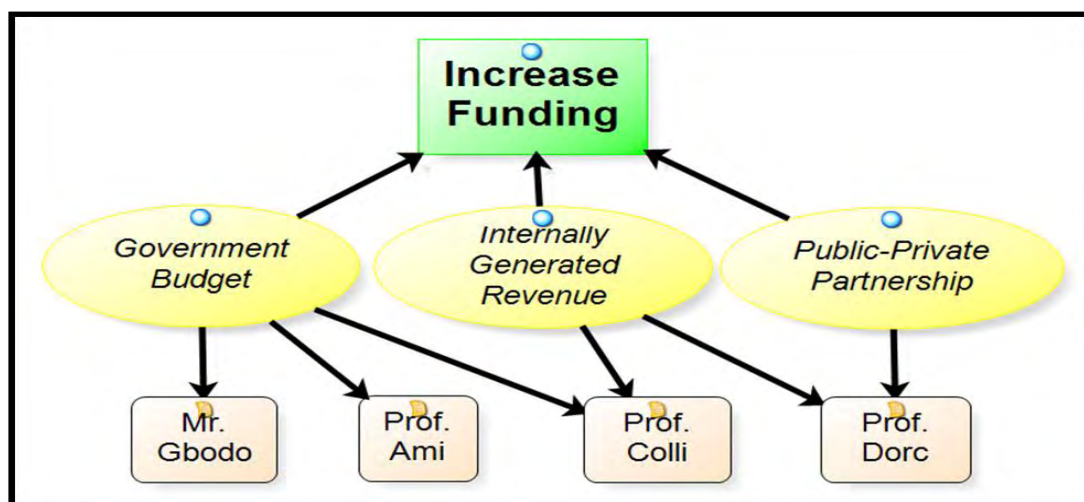


Figure 5.9. Increase funding as a strategy for enhancing universities effectiveness

5.4.2.1 Government Budget

The qualitative findings in this study also revealed that one of the major factors impeding university effectiveness is funding and as a result, the informant recommended improvement in government allocation to educational system through their budget. According to Prof. Ami, “the government needs to show more interest in education by funding education at all levels adequately at least mere adequately if it can be put that way, they need to do more in short”.

This was also supported by Prof. Colli who said:

And will government be ready to increase the funding to meet at least basic minimum standard in the university and stop unnecessary politicizing of universities where by you start establishing universities every year even when those ones on ground cannot stand (Prof. Colli, 07/07/2014).

However, according to Mr. Gbodo, “there has been observation that in spite of all these governments has been responding to agitations for increase in allocation to the universities and there has been some reasonable and considerable response of government to these”. The government could still do better by meeting up to the UNESCO standard 26% of government budget should be spend on the education sector.

5.4.2.2 Internally Generated Revenue

Internally generated revenue (IGR) has been identified as a ways of improving the devastating government funding of university education in Nigeria. As pointed out by Prof. Colli, “most classified universities in the world are privately own universities where by the consumer pay for the services rendered. So, do we have the government that is ready to take the risk by increasing fees in the universities”. The only alternative to provide the needed resources into the university system in order to have a global competitive capability is through a considerable increase in tuition fees.

Furthermore, Prof. Dorc equally suggested that “the universities can help themselves by introducing some money raising ventures, like internally generated funds like creating shops, selling agricultural produce, many things they can do to help”. Therefore, IGR was identified as a measure of funding the university system in this era of economy looms.

5.4.2.3 Public Private Partnership

The university system is a social good that is set up for human and societal development. Thus, it is perceived as both public and private or individual goods. Therefore, as government is investing in education; the private sector needs to also be committed towards investing in university education for the societal common future. Such contribution could include sponsoring research chair and provision of necessary facilities. Therefore, as suggested by one of the participants, there should be cooperative involvement among public and private sectors towards enhancing university education. According to Prof. Dorc, “The private enterprise should be involved in the provision and maintenance of school buildings and facilities”. This will go a long way in reducing inadequate and decay of facilities in the university system.

5.4.3 Policy Reform

Changes in government and institutional policies have been identified by the participants towards universities effectiveness. Such policies according to them include student admission and staff recruitment (See figure 5.10).

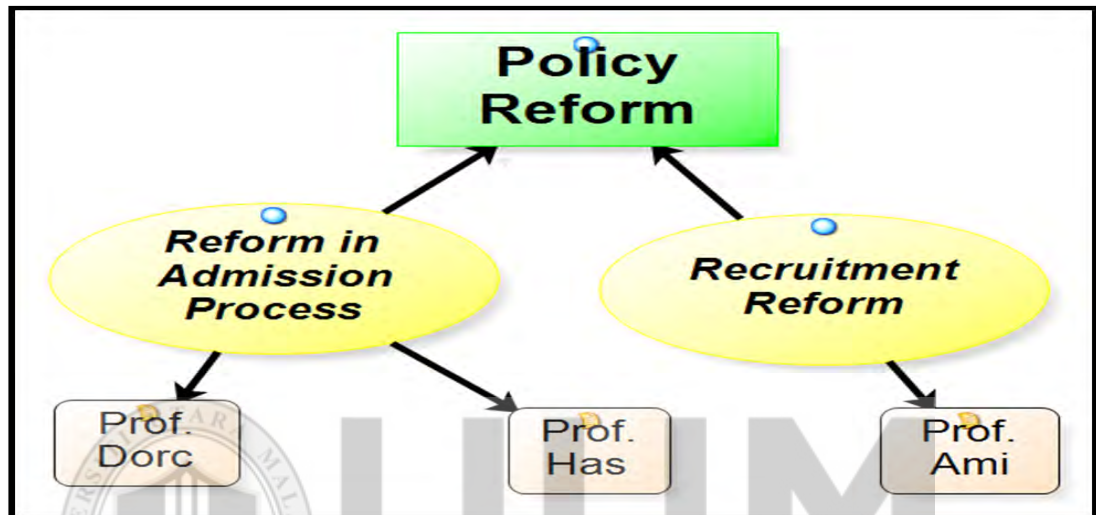


Figure 5.10. Policy reform as a strategy for enhancing universities effectiveness

5.4.3.1 Reform in Admission Process

Improving the unsatisfactory admission process within the university system has been identified as a way to enhance university effectiveness. According to Prof. Has:

Some policies have also not favour merit in the university system which has a negative impact on the quality of the university system as well as the society at large. For instance, 40% of the applicants to the university system for undergraduate program are only for merit why the remaining 60% are base out of merit. Although, the catchment area and education less-develop state is important to be considered for equity but the proportion of merit is very low and it is better to increase it to at least 50% (Prof. Has, 24/04/2014)

Furthermore, Prof. Dorc also suggested that “the quota system can also be increased so that more students can be admitted into the university”.

5.4.3.2 Recruitment Reform

Reform in the recruitment process was also suggested as a way of enhancing the effectiveness of public universities in Nigeria. According to Prof. Ami:

The manner of recruitment into the teaching profession needs to be seriously corrected, just picking relations or politicians and so on to man our classrooms are not good for the system. And this goes on even into the tertiary levels, so that's one of the things the government needs to do, they need to show political will to reform education. If you want to be one of the world big economy in the year 2020, government must take serious attention to the quality of teachers in the classrooms, because there is no way we can transform the society without good teachers in the classrooms (Prof. Ami, 12/06/2014).

Furthermore, Prof. Ami also suggested that: “we need to look into the quality of teachers being employed at all levels, particularly at the foundation level”. This goes with a saying that we cannot give what we don't have and as such, the quality of lecture presented by a lecturer is a reflection of his attributes.

5.5 Summary of Chapter Five

This chapter addresses the research question four which investigates the issues impeding the effectiveness of public universities in Nigeria using generic qualitative inquiry approach. The qualitative result generated through the interview that was conducted identified academic issues, administrative issues, leadership issues, funding issues and contextual issues as factors impeding institutional effectiveness. Some suggestions were made towards enhancing institutional effectiveness. Therefore, the discussion of both quantitative and qualitative findings are discussed in the next chapter.

CHAPTER SIX

DISCUSSION AND CONCLUSION

6.1 Introduction

This chapter discusses the findings as well as summarizes the results of the study based on its research questions. As this study adopted a mixed method approach, the first three research questions were answered through the quantitative data collected while the fourth research questions was answered with the information gathered through the interview as discussed in chapter five. This chapter recapitulates what the present study aims to achieve and discussion were made based on the research questions this study tends to answer. The implications of the findings were discussed and the limitations for this current study were also outlined. Conclusively, the study offers some suggestions for future research.

6.2 Recapitulations of the Research Objectives

This study was carried out to investigate the relationship between distributed leadership, quality administrative and academic processes and institutional effectiveness in public universities in Nigeria. The study also went further to determine the mediating role of quality administrative and academic processes on the relationship between distributed leadership and institutional effectiveness. In order to achieve the objectives of this study, four research questions were raised and answered:

- i. What is the level of distributed leadership, quality administrative and academic processes and institutional effectiveness?
- ii. What is the relationship between distributed leadership, quality administrative process, quality academic process and institutional effectiveness?

- iii. Does quality administrative and academic processes mediate the relationship between distributed leadership and institutional effectiveness?
- iv. What are the issues impeding the effectiveness of public universities in Nigeria?

The first three research questions were addressed using quantitative approach where four different set of questionnaires were administered to lecturers: distributed leadership survey, quality administrative process questionnaire, quality academic process questionnaire and institutional effectiveness questionnaire. The survey sampled lecturers from both state and federal universities in five of the six geopolitical zones in Nigeria.

In order to answer the questions raised in this study, an extensive review of literature was carried out as reported in chapter two. The theoretical framework employed by this study described the direct relationship between the independent variable (distributed leadership) and the dependent variable (institutional effectiveness). It went further to describe how the dependent variable (distributed leadership) is related to the mediating variables (quality administrative process and quality academic process) and how the mediating variables (quality administrative process and quality academic process) relate to the dependent variable (institutional effectiveness). Additionally, the study determine the mediating role of quality administrative and academic process on the relationship between the independent variable and the dependent variable. Based on the theoretical frame work, seven hypotheses were formulated and tested. The study however proposed and found that the effectiveness of public universities in Nigeria can better be enhanced through the mediating role of the quality administrative and academic processes.

On the other hand, the study through a qualitative approach investigate the issues impeding the effectiveness of public universities in Nigeria. Eight academic and administrative leaders were interview using a generic qualitative approach method.

The framework for this study was supported by distributed leadership theory, activity theory and resource base view. According to the activity theory, human behavior is positioned within a social framework which stimulates actions. These actions are mediated by the rules within the university and the division of labour within the school which affect the ways the people behave. Using activity theory, three mutual relationships are said to exist between the subject, the object (objective) and the university community or society. However, the relationship between the subject and the community is mediated by rules while the relationship between the subject and the object is mediated by the tools. Also, division of labour mediates the relationship between the object and the community. According to this theory, the tool is referred to anything used in the transformation process of the object into the outcome which can be seen as the quality administrative process in this study. The activities are not isolated unit but rather a ties in crossing hierarchies and networks which are influenced by other activities. In this study, tool is assumed as the quality administrative and academic processes within the university system, the subject is the leadership team, the object is the purpose of the task, while the desired outcomes is the effectiveness of public universities. Therefore, activity theory helps in this study to describe how different outcomes are influenced by the interaction between various features within the university settings. Also, using activity theory as an underpinning theory, the language used in the theory has helped in understanding the factors that shape institutional effectiveness. The division of labour among members of staff through distributed leadership which are directed towards quality administrative and academic processes will positively enhance the effectiveness of the university system.

In this study, the tool is assumed as the quality administrative and academic processes, the object is the purpose of the task, while the desired outcome is the effectiveness of public universities. Furthermore, activity theory helps this study to examine how different

outcomes are influenced by the interaction between various features (administrative and academic processes) within the university settings.

Also, using activity theory as an underpinning theory, the language used in the theory has helped in understanding the factors that shape institutional effectiveness. The theory helps to explore and understand the interactions which bring about the outcomes that are related to the factor list (activities).

Furthermore, this study were also based on micro-foundation perspective of the resource base view which Janney and Dess (2006) opined that the effectiveness of an organization is determined by its resources in form of asset, routine, processes, skills, attributes, knowledge and information controlled by the organization. Which means that quality administrative and academic processes are major determinant of university effectiveness.

In order to answer the research questions raised in this study, distributed leadership was examined using three dimensions (leadership functions in terms of support and supervision, participative decision making and cooperation within the leadership team) adopted from (Hulpia et al., 2009; Hulpia et al., 2011); the quality administrative process have four dimensions (student admission process, staff recruitment process, supportive environment/facilities as well as policy and strategy); the quality academic process has five dimensions (curriculum, instruction, assessment, service learning and, research and development); while institutional effectiveness using the goal and strategic approach has two dimensions (student and societal development). Subsequent to the descriptive and multivariate analysis as well as the result of the hypotheses testing cum interview conducted, the following are the summary of the key findings:

Firstly, there is a moderate level of distributed leadership, quality administrative and academic processes as well as institutional effectiveness of public universities in Nigeria.

Secondly, the outcome of this study implied that distributed leadership is very paramount to institutional effectiveness but they don't have a direct relationship. That is, distributed leadership practices in the university system relate to other factors to enhance universities effectiveness.

Thirdly, a university where leadership are appropriately distributed will experience quality administrative and academic processes.

Fourthly, universities whose administrative process are based on quality are likely to produce quality graduate and also positively influence the society at large.

Fifthly, the universities whose academic process as outlined in this study is effectively carried out will result in better student improvement and societal development, and

Lastly, factors such as leadership issues, quality administrative issues, quality academic issues, funding issues and contextual issues are the major factors impeding public universities effectiveness in Nigeria. Some suggestions were put forward by the participants towards enhancing universities effectiveness among which are increased funding, policy and institutional reforms.

6.3 Discussion of Research Findings

This section discusses the findings in line with the research questions raised in this study. The discussion begins with the levels of distributed leadership, quality administrative and academic processes and institutional effectiveness. Furthermore, the relationship between

distributed leadership, quality administrative and academic processes and; institutional effectiveness were investigated. The mediating effect of quality administrative and academic processes on the relationship between distributed leadership and institutional effectiveness were also discussed in detail. Furthermore, the issues affecting universities effectiveness and the way forward on how such issues identified can be addressed were also suggested by the respondents for the interview. The subheadings of the discussion part are structured in line with the four research questions raised in this study.

6.3.1 Research Question One: What is the level of distributed leadership, quality administrative and academic processes and institutional effectiveness?

In order to answer the first research questions, a descriptive analysis was carried out. A factor analysis on the four constructs in this study was run based on their dimensions as the four constructs are second order constructs. The findings of the study in line with the four major construct are explain in the subsequent sections.

6.3.1.1 Distributed Leadership

The first construct (distributed leadership) has three dimensions namely: leadership functions in terms of support and supervision; participative decision making and cooperation among the leadership team were analyzed and the result shows that distributed leadership is being moderately practiced among public universities in Nigeria with a mean value of 3.8977 which fall within the range of 2.68 and 4.34 using 6 point scale. The outcome of this study is consistent with previous studies (A. Harris, 2008; Rabindarang et al., 2014; Rosnarizah & Hussein, 2015; Wahab, Hamid, Zainal, & Rafik, 2013). However, participative decision making practice is the most visible distributed leadership approach in public universities in Nigeria with a mean value of 4.01 while

leadership functions and cooperation among the leadership team has mean value of 3.77 and 3.92 respectively.

Rosnarizah and Zulkifli (2009) in their exploratory study in Malaysia shows that 74% of the teachers who respond to the questionnaire indicated that distributed leadership is practiced in their various schools. The findings of this study also support other study on distributed leadership in different types of school. For instance technical and vocational school (Rabindarang et al., 2014); national primary school (Wahab et al., 2013); secondary school (Hulpia et al., 2009; Rosnarizah & Zulkifli, 2009); universities (Bolden et al, 2008). Therefore, it can be concluded that Nigerian universities has a positive view on the distributed leadership strategy being practice in Nigerian universities. However, more improvements are needed in terms of leadership functions and cooperation within the leadership team. This might be a reason while some universities leaders does not carry along some other members in the execution of some school project which was discussed in the problem statement and literature reviewed. As part of the answer for research question one, the level of distributed leadership in public universities in Nigeria is moderate.

6.3.1.2 Quality Administrative Process

Regarding the second construct which is also a second order construct, quality administrative process has four dimensions in this study. These dimensions are student admission process, staff recruitment process, supportive facilities/environment and policy and strategy in which each has an average mean of 3.83, 3.50, 3.63 and 4.07 respectively and the overall average mean is 3.76. Policy and strategy has the highest mean score while staff recruitment process has the least mean value which is a little above the median score

of 3.0. This justified a moderate quality administrative process in public universities in Nigeria. Therefore, the lecturers in the sampled universities adjudge the presence of quality administrative process in the school to be moderate. However, as revealed in the result of the study, staff recruitment is still not carried out appropriately in some of the sampled public universities. These maybe as a result of the admission policy enacted by the university regulatory body (National Universities Commission) which only give 40% preference to merit on student admission (Okoroma, 2008) . Evaluating these admissions policies, previous studies have found significant differences in academic performance between students admitted on merit and those admitted on other criteria (Adeyemi, 2001; Adeyemi & Nelson, 2004). Therefore, the level of quality administrative process in public universities in Nigeria is moderate.

6.3.1.3 Quality Academic Process

The third construct of this study is quality academic process which is the second mediating variable in this study with five dimensions, namely: curriculum, instruction, service learning, assessment as well as research and development with mean value of 4.17, 3.61, 3.86, 4.03 and 4.00 respectively. The overall average mean is 3.93. This is also evident that quality academic process are moderately implemented in Nigerian public universities. The result of this study is also consistent with Zwain (2012) that examined the level of total quality management in Iraq higher education institutions. The result shows that public universities have been moderately applying quality administrative and academic process in their schools.

The findings of this study regarding the mediator variable is also similar to the study conducted by Psomas et al. (2011). Psomas et al. (2011) examined the level of process

management adoption in certified manufacturing companies and using exploratory factor analysis, two factors were extracted from process management which the study termed supporting quality tools and core process management practices similar to administrative process and academic process used in this study respectively. The finding of their study reveals a high degree of core process management as against the supporting quality tools which is also evident in this study as the respondent of this study also reveal that there is high level of quality academic process over quality administrative process.

6.3.1.4 Institutional Effectiveness

Institutional effectiveness is the dependent variable in this study. It is also a multi-dimensional construct with two dimensions. The effectiveness of public universities in this study was examined using goals and strategic constituent approach. Therefore, the student development and societal development were examined to measure how effective the public universities are. This outcome of this study reveals that the university system is moderately effective as the overall mean value of the construct is 4.177. Moreover, student development and societal development has a mean value of 4.261 and 4.093 respectively. This shows that the public universities perform better in the area of student development than achieving the societal goals. The outcomes of this study which reveals a moderate quality of university graduate as against the findings of National Universities Commission (2012a) in which Nigerian graduate were scored low regarding labour market expectations in Nigerian. One of the reasons could have been that their study examined employers' perceptions while this study looks into the perceptions of the lecturers. Another factor could also be the fact that private universities are excluded in this study while they turned out thousands of graduate every year. However, the

performances of public universities in Nigeria were not at a high level and thus, there is an urgent need to improve their performance.

Conclusively, to answer the research question one, this study shows that there is moderate level of distributed leadership, quality administrative and academic processes and institutional effectiveness in Nigerian public universities.

6.3.2 Research Question Two: What is the relationship between distributed leadership, quality administrative and academic processes and institutional effectiveness?

In answering the second research question, five hypotheses were formulated and tested. Bootstrapping was ran in SmartPLS 3.1.2 to determine the direct relationship between the major constructs of the study.

6.3.2.1 H_{A1}: There is a significant positive relationship between Distributed Leadership and Institutional effectiveness

The first hypothesis in this study was to determine if the direct relationship between distributed leadership and institutional effectiveness was significantly positive. When the researcher tested direct relationship between distributed leadership and institutional effectiveness without the inclusion of the mediating variables, the result shows that there is positive and significant relationship between distributed leadership and institutional effectiveness, which was also in line with many previous studies (Davis, 2009; Lee, 2013; Obadara, 2013b; Papademetriou, 2012).

However, when the mediators in this study were included, the relationship was still positive but no longer significant. As this study is testing the whole model as a whole, it can therefore be concluded that distributed leadership has no direct relationship with

institutional effectiveness. The finding of this study is also consistent with some few previous studies that found out that distributed leadership is not directly related to institutional effectiveness. For instance, the study of leadership influence on students' achievement in some selected schools in Netherlands was carried out by Bruggencate et al. (2012) which reveal that there is no direct relationship between school leadership and students' outcomes. The findings of this study is also in line with Terrell (2010) who studied teachers and principal perceptions of the relationship between the dimensions of distributed leadership and student achievement in urban elementary schools. The findings of the study revealed that there is no significant relationship between distributed leadership and student achievement.

Furthermore, Lambert-Knowles (2013) investigated the relationship between distributed leadership and student achievement in mathematics and reading among grade 11 students. The findings of the study indicated that no direct link was found on the relationship between distributed leadership behaviour and students' reading achievement. However, as found on the effect size of distributed leadership on institutional effectiveness which is close to 0, it was rightly said by Preacher and Kelly (2011) that a small effect does not mean that the variable is not important; distributed leadership as shown on the importance-performance map indicated that, it is an important element that contribute to the enhancement of institutional effectiveness. Though, the contribution as revealed in this study is indirect contribution which was buttressed by Fitzgerald and Gunter (2006) that distributed leadership gives opportunity to build professional learning communities where lecturers and student learning can help the school improvement.

In more recent works, concentrating on the imminent of management in university system, Hamel (2012) stated that there is need to have second thoughts on both management

structures and leadership processes in the organization in a way that are better fitted to complex and uncertain environments; globalization; connectivity and knowledge-societies. The conventional academic leadership draw attention to the learning procedure input by giving attention to teaching while the modern days leaders according to Richard DuFour (2002) concentrate on learning through changing their concentration and that of the university community from purpose to outcomes as well as from inputs to result.

Furthermore, in the study funded by Spencer foundation about changes that occurred in public schools leadership and its effect on student academic success in Canada and United State of America (USA), it was discovered that the major force that leads to a long time change was the sustainability of leadership (Christison & Lindahl, 2009). This was in support of Marzano et al. (2005) that asserted that school effectiveness increases or decreases student changes of success and that what lead to school effectiveness is in large part, its leaders. That is, what leaders do in schools ultimately influences the success that student record which are indirect efforts. Therefore, the direct relationship between distributed leadership and institutional effectiveness are not significant.

6.3.2.2 H_{A2}: There is a significant positive relationship between Distributed Leadership and Quality Administrative Process

The second hypothesis which stated that there is positive and significant relationship between distributed leadership and quality administrative process is accepted and is congruent with previous studies (Crowther, Kaagan, Ferguson, & Hann, 2002; Hallinger & Heck, 1998; Koopman, 2006; Spillane & Camburn, 2006). The findings of this study is also supporting the result of Koopman (2006) who studied elementary teachers' perception about principal leadership style and school climate in North Dakota public school district, United States. The outcome of the study revealed that there is a positive

and significant relationship between principal leadership behavior and collegial and disengaged teacher behavior (school climate).

The effect size of this study reveals that distributed leadership has a large effect on quality administrative process amounting to 129.8%. This is also evident in the coefficient of determination (R^2) of quality administrative process which shows that distributed leadership can explain 56.5% of the amount of variance in quality administrative process. Moreover, the importance of distributed leadership was also buttressed by Wallach (2010) who examined the effect of distributed leadership on decision making in high school conversions. The study adopted a mixed-method drawing from leadership distribution and organizational learning theories to analyze the relationship between distributed leadership and decision making towards successful school reform.

The findings of this study suggested that teachers' disparate sense making can lead to suspicion as well as competition across the school system thereby resulting to misaligned forms of leadership distribution. Therefore, for quality administrative process to be implemented in the university system, distributed leadership needs to be effectively practiced as this was expressed by Spillane and Camburn (2006) that leaders are expected to nurture an environment where individual members in the school system are given the opportunity to contribute significantly to the success of the organization.

Moreover, Seldin (1990) argued that quality teaching can be enhanced by university leaders by providing necessary equipment and facilities, and classroom supplies when needed. It is also essential for the university administrators to understand when to boost lecturer's morale and correct necessary environmental shortcomings. He however concluded that outstanding teaching can only be encouraged when suitable rewards are provided to the lecturers. For there to be improvement in the university teaching

programmes, Felder and Brent (1999) stressed that at each stages of the enhancement exercise, there must be teamwork and cooperation among the lecturers who will put it into action and the leaders who are expected to make available the needed resources. It is therefore imperatives for the university leaders in their various capacities to make available incentives for lecturers in terms of salary supplements, equipment, travel grants, as well as promotions with the intention of improving teaching and learning in the school.

6.3.2.3 H_{A3}: There is a significant positive relationship between Distributed Leadership and Quality Academic Process

In investigating the relationship between distributed leadership and quality academic process, the result of the analyses using structural equation model reveal that distributed leadership is positive and significantly related to quality academic process. The findings of this study were in line with previous studies (A. Harris, 2004, 2007). In education generally, leadership has been perceived by policy makers and stakeholders as a key role player in improving the quality of educational institutions (OECD, 2011; Wallace et al., 2011). The university system towards quality management as outlined by experts such as Deming, Juran, and Feigenbaum to improve instruction and service on college and university campuses around the world, higher education leaders have "borrowed" ideas from the corporate world inform of strategic planning and other types of planning, programming, and budgeting systems (PPBS). The adoption of a customer-focused management approach, however, calls for the "participation of all members" of a college or university, and as such presents a unique challenge to leaders who wish to transform their institutions.

A precise definition of leadership in a total quality management environment may be difficult to formulate, but its importance and presence would be hard to ignore (Aljodea,

2012). According to Durant and Wilson (1993) propositions; in order to implement TQM, there appears to be a need to identify and analyze the leaders' attitudes, perceptions, and descriptions of organizational processes, influence of leaders' perceptions and leadership style on success or failure in operational areas. MacBeath and Dempster (2008) suggested some principles that brings about leadership for active learning which include: leadership distribution, addressing learning, formation of favourable learning environment; establishing exchange of ideas concerning learning as well as leadership in the school, and ascertaining common perception towards accountability. It is this multifarious connections of leadership roles that bring about leaders competence and his accomplishment towards the university system (Rhodes & Brundrett, 2010).

Ebel (1991) realized the importance of leadership while he says; leadership is the key to excellence. The aim of management must be to help people to perform and improve their job. Leaders focus on improving the process, inform the management of potential problems and act to correct problems. Leadership also means that structural changes in the organization in terms of culture and actions must occur first from the uppermost of the organization. This is justified in the direct effect analysis of distributed leadership to quality academic process which reveals in this study that distributed leadership has a large effect on quality academic process amounting to 60.3%.

As suggested by Scholtes and Hacquebord (1988), two areas of prominence for leaders is identified: they should review Deming's methods and also, leadership studies should concentrate on differences. It was also pointed out by Bolden et al. (2009); Owlia and Aspinwall (1997) that inspirational leadership who is value driven from the top is required to successfully execute quality processes in higher education.

Furthermore, Banta et al. (1996) was of the opinion that an effective assessment requires an environment characterized by effective leadership. Even though the meaning of service learning incorporate civic learning, the students learning outcomes has remained the core emphasis of large number of service learning courses (Howard, 2001). Therefore, in order to improve quality academic process in the university system, distributed leadership has been identified in this study as an important determinant. This was also revealed in the coefficient of determinant (R^2) obtained in this study where 37.6% of variance in quality academic process is explained by distributed leadership.

6.3.2.4 H_{A4}: There is a significant positive relationship between Quality Administrative Process and Institutional Effectiveness

The result of the analysis carried out in this study reveals a significant positive relationship between quality administrative process and institutional effectiveness. Therefore, the fourth hypothesis which stated that quality administrative process is positive and significantly related to institutional effectiveness is supported. This is in line with several previous researches (Ooi et al., 2007; Roberts, 2009; Uline & Tschannen-Moran, 2008; Uline et al., 2009; Yusuf et al., 2007).

The finding of this study has also revealed that quality administrative has a small effect on institutional effect amounting to 7%. However, as revealed in the importance-performance matrix analysis; quality administrative process is very important in enhancing the effectiveness of public universities in Nigeria. It has an important index value of 3.849 and performance index of 56.98%. In order words, the more the quality administrative process is implemented, the higher the institutional effectiveness. This was consistent with the study carried out by Cardoso et al. (2011) who intends to find out the relationship among teacher-student collaboration, self-confidence, student-student

interaction and its influence on students' academic performance. The sample for the study comprise of 2000 Portuguese high school students and it was revealed in the study that teacher-student and student-student interaction has a direct and positively influences the performance of the learners, which in turn has direct and positive influences on their academic attainment. Supporting prior researches, this study suggested that an appropriate pedagogical interaction and effective learning environment should be enhanced to improve students' learning outcomes.

Moreover, as suggested by Sule and Ugoji (2013), a recruitment processes and procedures which help in attracting and retaining the best workers in an organization influence organizational health, which could be ascertained by looking into staffs' contribution to institutional goals and job satisfaction of the workers. Therefore, workers must be well managed by the institution for efficiency, effectiveness and high productivity in the organization.

Furthermore, in an effort of measuring the effectiveness of an institution, Ottih (2002) opined that one of the indicators of the system approach is the capability of the institution to obtain limited and valued resources and these cannot be acquired when there are influences on processes and procedures of recruitment. When the best applicant is recognized and positioned on the job, they stay and provide the utmost best in the institution, thereby helping the institution to achieve its predetermined goals.

As stated by Nightingale and O'Neil (1994), for quality learning to take place in the school, the some condition is required to be fulfilled which include: the student to emotionally and intellectually prepared to conform to the learning undertakings required; the students have to see the reason to learn; student obviously link up old knowledge to new one; student being active in the course of learning; and the school climate should be

supportive and conducive for learning. The study of Kgaile and Morrison (2006) that examined the variables that influence school effectiveness in South Africa also perceived staff involvement and interconnectivity as a major factors contributing to university's effectiveness in south Africa.

The findings of the qualitative study reveal that administrative process is one of the determine factors to the effectiveness of public universities. The result shows that communication, student admission process, supportive environment/facilities as well as policy and strategy are some of the issues confronting the effectiveness of public universities in Nigeria. According to one of the respondents: Right from the primary school to the tertiary level, there is clear evidence of decay in infrastructure in many schools, classes are being merged at the primary school level to accommodate inflows of students which is detrimental the success of any universities (Prof. Ami, 12/06/2014).

Therefore, for university to be effective, factors that reflect quality administrative process in terms of student and staff recruitment, supportive environment /facilities as well as policy and strategy should be properly put in place as this directly affect institutional effectiveness.

6.3.2.5 HA5: There is a significant positive relationship between Quality Academic Process and Institutional Effectiveness

The outcome of this study revealed that quality academic process has a positive and significant relationship with institutional effectiveness. This study has confirmed early findings that examined the relationship between various components of quality academic process institutional effectiveness by postulating that quality academic process is applicable not only in the developed countries but also in the developing countries like

Nigeria. Therefore, the significant relationship between quality academic process and institutional effectiveness in public universities in Nigeria is consistent with previous studies on similar relationship including instruction, service learning, curriculum and assessment as it relates to institutional effectiveness (Cheng, 2000, 2005; Conway et al., 2009; Jimaa, 2011; Mehrotra, 2004; Prajogo & Brown, 2004; Prajogo & Sohal, 2006); A. A. Rahman et al. (2013).

Moreover, as suggested by the effect size, quality academic process has a large effect on the effectiveness of public universities in Nigeria amounting to 63.41%. The influence of quality academic process on institutional effectiveness was further buttressed by the outcomes of the importance-performance matrix analysis which identifies quality academic process as the most importance (4.02) and performing (60.36%) elements in determining and improving the effectiveness of the university system. Therefore, the findings of these studies suggested that quality academic process components are indispensable for university education to accomplish its goals towards student and societal development. In other words, the higher the implementation of quality academic process in a university, the better their effectiveness in terms of the quality of graduate they produced as well as their total contribution to the society.

Furthermore, as argue by Rautopuro and Vaisanen (2001), it is indisputable that quality teaching enhances student learning as well as inspiring improvement in both the general competences and specialist knowledge demanded by the society and working life of this modern days. Therefore, if students perceived teaching as pertinent towards the achievement of their goals, they will always be contented and therefore motivated to study harder. According to Stefani (2004), evaluation of learners' learning is very essential particularly in this varying world of university education because of the changing needs

of the stakeholders' expectation of their graduates. Because of this, it becomes necessary for all staffs to be involved in enhancing student learning most especially new recruited lecturers to allow them to comprehend the basic student evaluation principles which according to Stefani (1998) will assist them in their assessment process towards student learning.

Additionally, in Mehrotra (2004), practical proofs have shown that the quality tenet assist the schools to: reaffirm the purpose, functions and responsibilities of the institutions; work out inclusive leadership training for lecturers at every levels; enhance schools as a "way of life."; design staff enhancement program that will deal with the staff opinion and confidence in the school; draw up all-embracing child-development initiatives that traverse all category of schools; employ research as well as professional support information to drive the institutional practice and policy. In a study carried out by A. A. Rahman et al. (2013) employees training for managerial skills and process assist to enhance the effectiveness of the establishment as well as knowledge attainment, knowledge protection and knowledge application which interact with the training and expertise of employees managerial process to increase the effectiveness of the organization.

Prajogo and Brown (2004) conducted an empirical study within Australian organizations to investigate the relationship between TQM practices and quality performance, and the results indicated a strong and positive relationship. The result is also in line with (Brah, Tee, & Rao, 2002) that studied the relationship between TQM constructs and organization performance by measuring quality performance of Singapore companies. They found out that TQM implementation in any organization brings about quality performance and have positive correlation.

This current study also support the findings of Jimaa (2011) who concluded in his study that the manner in which students are being assessed have a wide influence towards the students' learning and; the amount of assessment of problem solving and critical thinking skills is recognize to have a positive influence on the outcomes of quality learning. He therefore saw assessment as a way of assisting learners to learn; a means of formulating decision about teaching and a means of reporting on student progress. However, student assessment has to do with the quality of learning as well as the quality of teaching. That is, effective assessment can also serve as an avenue to showcase where a department or programme is doing well and this assists lecturers to see how their course is applied to the overall programme. This therefore has a profound influence on what and how the students study; how effectively they have studied as well as how much they study. Therefore, assessment has been regarded as the cornerstone of institutional effectiveness and it is the ground work for the improvement of the curriculum and school accountability (Preszler, 2011).

The important of quality academic process towards the effectiveness of university education was further buttressed by Tucker (2010) who studied the effect of service learning on the social, personal as well as the learning outcomes of the student. The study revealed that community commitment, academic learning, social and personal improvement are some of the major advantage student derived through service learning oriented courses.

The findings of the qualitative study is also in line with the result of this hypothesis testing which revealed that quality academic process is paramount for institutional effectiveness. The findings revealed that curriculum is one of the determining factors of the quality of graduate produced by the university system. The result of the interview conducted shows

that poor curriculum design and implementation are one of the major factors affecting the effectiveness of public universities in Nigeria. As buttressed by one of the interviewee, one of the major problem the university is facing now is the problem of unemployment of university graduate as the curriculum design and implementation if not focused on graduate being trained to be self-employed.

Therefore, any educational institutions that want to play an important role in this period of globalization which has ginger the calls from every educational stakeholders calling for the university system to be effective must handle it academic process with all seriousness and make it a paramount process that can see the system through in their journey towards effectiveness.

6.3.3 Research Question Three: Does Quality Administrative and Academic Processes mediate the relationship between Distributed Leadership and Institutional Effectiveness?

To answer this research question, two hypotheses were formulated and tested. Bootstrapping approach was used as suggested by Hayes, Preacher, and Myers (2011) in testing the mediating variable for this study.

6.3.3.1 H_{A6}: Quality Administrative Process mediate the relationship between distributed leadership and institutional effectiveness

The first mediating hypothesis stated that: quality administrative process significantly mediates the relationship between distributed leadership and institutional effectiveness. Partial least square structural equation modelling through bootstrapping approach was used to test the hypothesis. In the direct relationship, distributed leadership exhibit a strong and positive relationship with institutional effectiveness. Therefore, the mediating

role was examined through the bootstrapping approach for indirect effect of quality administrative process. The outcome of the result shows that quality administrative process significantly mediate the relationship between distributed leadership and institutional effectiveness. Therefore, it can be reaffirm that distributed leadership can enhance quality administrative process and indirectly improve the effectiveness of public universities.

Despite the fact that many studies have found direct relationship between distributed leadership and institutional effectiveness (Davis, 2009; Papademetriou, 2012), there are also evidences in other studies that school leadership can have a significant indirect impact on student learning outcomes (Bell et al., 2003; Hallinger & Heck, 2010; Leithwood & Jantzi, 2006; Robinson et al., 2008).

Many international research studies have observed little or no significant direct effect of leadership practices on student achievement and; leadership practices have been statistically proven to have a significant effect on school learning environment's component (Leithwood et al., 2004). This was expanded in the study carried out by Cardoso et al. (2011) that revealed a significant positive relationship between school learning environment and student achievement in Portuguese high school. This shows that distributed leadership enhance institutional effectiveness through quality administrative process.

As revealed in the indirect effect size of quality administrative process in this current study, the kappa-square effect size is 0.1783 which means that distributed leadership has an indirect effect on institutional effectiveness through quality administrative process which according to Cohen (1988) are said to be moderate. The findings also support D. Braun et al. (2008) who studied the relationship among essential leadership preparation

practices, principal leadership behavior, school learning environment and student achievement in Rhode island middle and elementary schools. The findings of the study shows that school learning environment has an indirect relationship between leadership behavior and student achievement. The result shows that leadership behavior has a significant positive relationship on school learning environment and the school learning environment also have a strong relationship with student achievement.

Moreover, according to Stein and Spillane (2005); Hallinger and Heck (2010), there is evidence that there is no direct relationship between leaders' practices and student achievement but an indirect influence through school learning environmental factors like school culture, teacher quality, parental involvement which were observed to have a great influence on student achievement.

Therefore, as argued by Marzano (2003) that the social, economic and political setting where the schools operate has a powerful influence on student development and the influence of school –level practices cannot be underrated as the quality of the teachers and other elements were acknowledged by Darling-Hammond (2007) to have a significant effect on student achievement. This was further buttressed by scholars that distributed leadership in schools provide a sustainable means of enhancing the types of learning focused climate which brings about high-performing school (Day et al., 2006; Ronald H. Heck & Hallinger, 2009; Leithwood, Anderson, et al., 2010); this study therefore identified quality administrative processes cum student admission, staff recruitment, supportive facilities/environment as well as school policy and strategy as one of the mediator between distributed leadership and institutional effectiveness.

6.3.3.2 H_{A7}: Quality Academic Process significantly mediate the relationship between Distributed Leadership and Institutional Effectiveness

The second mediator for this study is quality academic process which is also a second-order construct with four dimensions. As the initial findings of the relationship between distributed leadership and institutional effectiveness are positive and significant; the inclusion of quality academic process diminishes the relationship observed between the variables and it becomes insignificant. However, evaluating the mediating role of quality academic process using bootstrapping approach in PLS-SEM, the test shows that quality academic process as a mediating variable is significant. Thus, providing supportive evidence that quality academic process significantly mediate the relationship between distributed leadership and institutional effectiveness. The most obvious findings that emerge from this study is that distributed leadership does not affect the institutional effectiveness directly, and as such, it goes through the mediating variable. This implies that the more distributed leadership is practiced, the higher the level of implementation of quality academic process which subsequently improve the effectiveness of the universities.

According to Southworth (2009), leadership influence can be seen in three dimensions: direct effects, indirect effects and reciprocal effects. Direct effects is when the actions of the school leaders directly influence the school outcomes; indirect effects is when leaders influence the school outcomes indirectly by means of other variable while reciprocal effects is a situation where by the school leaders influence the subordinates/lecturers and lecturers affect the leaders and through these procedures the school results are influenced (Drummond & Halsey, 2013; Ronald H Heck & Hallinger, 1999, 2005). Therefore, whatever the universities' leaders want to see occurring in the school system; actually depend on others implementing them.

However, all these three dimensions can be perceived in the universities' leadership work but indirect effects are the enormous and most frequent of all because leaders cannot perform his duty without others and through others (Southworth, 2009). Effective leaders exercise their work directly by means of their indirect impact which is achieved via series of processes and strategies (Southworth, 2013). In a study conducted by Arjomandi et al. (2009), the curriculum of the program, students' assessment, service learning and staff professional training are the core activities that could influence the output of the university system. This was also evident in the study conducted by Leithwood and Jantzi (2006) that found no significant relationship on leadership and student achievement but leadership practices was found to be significantly related to teachers' classroom practices.

It is also evident in the indirect effect size through quality academic process which indicated that distributed leadership has an indirect effect of 40% on institutional effectiveness through quality academic process which according to the rule of thumb are adjudged to be large (Preacher & Kelley, 2011; Wen & Fan, 2015). Since a considerable amount of the effects of leadership on learners' outcomes are facilitated by the school condition (Leithwood & Jantzi, 1999), it is an essential challenge that research on leadership should recognize those adaptable conditions that a direct influence on students learning as well as inquiring the nature and potency of their relationship with the leaders (Goodnow & Wayman, 2009).

This was also supported by Robinson et al. (2008) who investigate the virtual relative influence of distinct leadership behavior on the non-academic and academic outcomes of the students. The study make a contrast between instructional and transformational leadership using five leadership measurements that is: determining goals and expectations; purposeful resourcing; coordinating and assessing teaching as well as the

curriculum; making sure that the school environment is orderly and supportive as well as encouraging and participating in teachers' development which the outcome of the result suggested that the higher the leaders concentrate their work, relationships, and learning on the essential functions of learning and teaching; the better their impacts on the student outcomes. However, this study concluded that leadership practice and research should be more connected to the evidence of effective teaching as well as teachers' effective learning.

According to Hallinger and Heck (1996, 2010); Ronald H. Heck and Hallinger (2009), several studies that were carried out to examine how the student outcome is influenced or affected by the school leaders have revealed an unconvincing or weak outcomes while studies that take into consideration a mediating or moderating variables incline to testify a significant effect. A study conducted by Timperley (2005) in New Zealand to explore the distributed leadership influence on school improvement revealed that the effect of distributed leadership on school effectiveness varied consistently with the approach of leadership distribution and it was also asserted that for leadership to achieve a desired improvement in teaching, lecturers must be supported to provide student with a valuable instructions.

In summary, it can be concluded that for distributed leadership to have an impact on institutional effectiveness, quality administrative and academic process must be implemented in the school system. Therefore, distributed leadership, quality administrative and academic process must be implemented concurrently to enhance public universities' effectiveness in Nigeria. This study therefore, propose and test a structural model that clearly enunciates the role of distributed leadership, quality administrative and academic process on institutional effectiveness which has receive partial consideration in

previous research. Therefore, quality administrative and academic processes play a bridge role to bound distributed leadership and institutional effectiveness in Nigerian public universities context. According to Hitt et al. (2012), due to the recent global competitive environment, there is need for organizations as well as the universities to be ground breaking and innovative in their activities. This indicates that universities in Nigeria and globally should be up and doing to discover existing opportunities in order to produce graduates and services that will meet the taste of its external community (Alvarez & Barney, 2007).

6.3.4 Research Question Four: What are the issues impeding Institutional Effectiveness?

The issues impeding the effectiveness of public universities in Nigeria as identifies by the respondents are classified under five themes using theoretical analysis approach of thematic analysis. These are academic issues, administrative issues, leadership issues, contextual issues and funding issues.

6.3.4.1 Academic Issues

Academic issues have been identified as one of the issues impeding the effectiveness of public universities in Nigeria. The result of the interview conducted reveal that curriculum, poor quality of teachers as well as poor quality of student produced at foundational level are the major issues identified by the participants which were grouped by the researcher as academic issues. Most of the participants interviewed blamed the university curriculum as a factor contributing to unemployment among universities graduate. To them, the curriculum is not developing the students to be employers of labour but rather a job seeker with little or no practical knowledge. The findings of this study is

in line with previous studies (Kpee et al., 2012; Okonkwo, Ubani, & Ubachukwu). The introduction of entrepreneurship education in all higher institutions of learning as a way of reducing graduate unemployment in Nigeria is a welcome development. However, the students in various faculties were not trained in alliance with their course of study and much has not been achieved as a result of incompetent teachers to groom the students (Olorundare & Kayode, 2014).

Furthermore, poor quality of students produced at foundational level has also been identified as a major concern (Francis, 2015), as little or nothing can be done by the university to improve such student's intellectual abilities, the student either dropout of the university system or graduate with lower grade and has nothing to show as university graduate.

As stated in the National Policy on Education (2004), no nation can rise above the quality of his teachers. The results of the interview identify Poor quality of lecturers as one of the impediment to universities effectiveness. The lecturers are the hub of the university system and they are the major determinant of the quality of education in the university system because they diffuse the policy of the university system into actions and practices (Voss, Gruber, & Szmigin, 2007). Poor teaching force will definitely produce a poor quality of graduate with half-baked education which according to Olasehinde-Williams (2012), when the processes are compromised, the end product will be of low quality.

A university system with inadequate number of lecturers who are well-informed, inspiring and are fully prepared to be accountable in their responsibilities cannot attained good quality of education and as such inhibit a challenge to the university system in meeting the challenges of the ever changing world (Asiyai, 2013; Ekundayo & Ajayi, 2009). This is also in line with resource base view which stipulated that the effectiveness of an

organization is predicted by the quality of its human resources like lecturers and as such, quality academic process is positive and significantly related to the effectiveness of the university system.

6.3.4.2 Administrative Issues

From the expression of the participants for this study, it is observed that communication gap, admission issues, inadequate supportive environment/facilities as well as poor policy implementations are categorized by the researcher as administrative issues affecting public universities' effectiveness. As reviewed in the thematic analysis of this study, seven out of the eight participants identified deficiency in supportive environment /facilities as a major factors affecting universities effectiveness. This is because no matter how lecturers are determined to be effective, if the resources like classrooms, teaching aids and conducive environment are not made available, there is little such lecturer can do.

As pointed out by one of the respondents, a lot of intended practical classes are converted to theoretical class because of inadequate facilities. This finding is consistent with the need assessment survey carried out by the NUC, the study reveals that over 60% of Nigerian students has no adequate access to workshops, classrooms, good laboratories, lecturer halls and modern libraries (Okebukola, 2005). According to Adeboyeje (2003), the increase in disruption, crises and hostility within the university system will bring about low level of standard and quality of graduate.

Aside poor building and facilities, the poor training and mentoring in the university system is also an issue. University staff, most especially academic staffs who are not continuously retrained to exposed them to new discoveries and modern methods will later become irrelevant to the organization (Adeogun, 2006). These training and retraining is

very important in this technological era especially with the use of modern technologies for teaching and research.

6.3.4.3 Leadership Issues

Poor leadership has also been identified in this study as a major factors affecting the effectiveness of public university education in Nigeria. The result of the semi-structured interview conducted revealed that poor leadership in the university which bring about unstable academic calendar as a result of frequent labour dispute and closure of the school; poor organizational structure; poor university-community relationship and leadership selection malpractices. This findings of this study is consistent with Asiyai (2006) who identified the frequent closure of the school to the poor funding and poor condition of service for university staff and dispiritedness attitude of some of the university leaders. Furthermore, the inability of some universities' leader to maintain good relationship with its environ prevent the community towards contributing their quota to the effectiveness of the universities. As stressed by one of the interviewee, the community is not aware of the happenings in the university and the university is not with the community.

A university where a candidate are being appointed to head a school without proper selection processes will bring about selecting the wrong candidate who has no zeal and morality to lead such university and as such; inhibit the university in achieving its pre-determined goals (Mathieu & Babiak, 2015). Poor organizational structure can also emerged in such university where the leader are not competent enough. In a study exploring the challenges of middle leadership in Vietnamese university, Dung (2014) using interpretive research paradigm interview 10 mid-level leaders about their leadership experience and perceptions of the challenges facing Vietnamese university. The outcome of the study using thematic analysis as data coding framework revealed that lack of

collaboration across the university's unit and lack of autonomy- in terms of financial and staffing decisions are the major challenges facing the university.

6.3.4.4 Funding Issues

Funding are identified as the drivers of sustainability in any organization. The findings of this study revealed low government budget, inadequate funding and resources as a major challenge impeding the effectiveness of university education in Nigeria. The government in their own effort are trying but have not meet up with the allocation of 26% of the federal budget to the educational sector (Ekundayo & Ajayi, 2009). The Financial constraints in the university system will bring about difficult working conditions for both academic and non-academic staffs in the school and as a result inhibit the university system in accomplishing academic excellence (Nir & Zilberstein-Levy, 2006). This poor funding has bring about inadequate resources in the university system which inversely affect the effectiveness of the university system in producing the needed workforce for the country. According to Ekundayo and Ajayi (2009), inadequate funding in the university system has led to inadequate resources, continues strike and closure of the school, unconducive staff working environment and poor curriculum implementation and innovation, which affect university effectiveness.

6.3.4.5 Contextual Factors

The contextual factors is one of the determinants of organizational outcome (Huitt, 2003). The prevalent issue of insecurity, corruption and ethnicity is identified by the respondents as a factor inhibiting the effectiveness of public universities in Nigeria. The prevalent kidnapping, cultism and book haram has brought the Nigerian higher education under siege (Onoyase & Onoyase, 2005). According to Asiyai (2013), some students openly

cheat in the examination and when caught will threaten to kill such lecturers if he/she make any case regarding his conduct. Many academic staffs are being lost to several killings and the book haram insurgent has targeted the school system in their operations. For instance, about 420 Chibok students in the North Eastern part of Nigeria were abducted in April 2014 by the so called insurgents and the where about of those students up till now, are unknown. These negatively affect the university role in producing the future leader of the society.

Aside insecurity is corruption and ethnicity. According to one of the interviewee who lamented at the rate of corruption in the university system by stressing that right from the vice chancellor to the students, a lot of them are corrupt. This is also evidence in the recent ranking of corrupt countries by the transparency international. According to them, Nigerian were ranked 40th among 183 countries in the world and they stress further that aside the police, political parties and the legislature; the educational system is the next in the corrupt ladder. This was equally highlighted by R. D. Uche (2014) who said the nuisance of corruption dogging the political system gradually pervaded the university system where all the university administrators and even the students are involved in different corrupt practices. The prevalent sentiment of ethnicity in appointment and promotions has also prone a challenge to the university system because the right person are not allowed to occupy the vacant position. That is why there are mismanagement of resources in the university system (Seo, 2013).

6.3.5 Ways of Enhancing Institutional Effectiveness

The thematic analysis of the semi-structured interview conducted using the inductive analysis approach, revealed that institutional reform, increase funding and policy reform

are suggested by the interviewees towards enhancing the effectiveness of public universities in Nigeria.

6.3.5.1 Institutional Reform

According to the participants interviewed for this study, merit in appointment and promotion, effective supervision, curriculum restructuring, effective university-industry collaboration as well as staff training and development were identified on how institutional reforms can enhance the effectiveness of public universities in Nigeria.

The outcome of this study is in line with Kpee et al. (2012) who suggested that Nigeria universities curriculum should have local content and home based cultural assets while accommodating and absorbing the global knowledge economy as well as technology that will not alter the local content in order to produce and support the development of individuals and the society as balanced local citizen.

In other words, the university curriculum should be structure to develop the student intellect so as to be in tune with unique self, local and global environment. As argued by Matlay and Rae (2007), employability is curriculum issue. For instance, the introduction of entrepreneurship education into all higher institution of learning is a welcome development but it can be effective when every students in their different field of study can be trained and exposed to various entrepreneurial activities in their respective field rather than teaching everybody theories that may not work in many field.

Furthermore, according to Barrett and Breyer (2014), in order to meet the increasing demands of teaching and learning in schools due to the undercurrent negative environment faced by the staff such as satisfaction, poverty, instruction and salary, the university leaders are expected to find innovative ways through which academic performance can

be improved, developed, nurtured and effective lecturers retained (Rick DuFour & Mattos, 2013). When lecturers working environment are conducive, it boost their morale towards enhancing their productivity which results into institutional effectiveness.

Moreover, effective university-industry collaboration was equally suggested as this will help the student in their process of service learning. All parties involved in the process of student internship should be up and doing so that the purpose of sending student out for internship will be achieved. It was observed that both lecturers and even the trainers are not taking internship training serious and as such many students see it as a process of whiling away time. The lecturers should be reimburse in order to carryout effective supervision and the trainer where the student is doing their internship should be involved in the student evaluation process so as to encourage all parties involved to be serious with the scheme.

As student training is important, so also the staff retraining is paramount to the effectiveness of any university system. Training and mentoring for new and early career staffs will improve his/her productivity which will also enhance university effectiveness.

According to Ekwevugbe (2014), the deficiency in the quality of lecturers can be improved through training as well as mentoring for newly employed staff.

Furthermore, effective supervision was also suggested to awake every members of the university community to work towards achieving the university goals. According to one of the respondents, the university management needs to put in place, measures of supervising lecturers' activities both within and outside the classrooms. The university management should set up internal quality assurance and monitoring of lecture unit to enhance quality instruction delivery.

6.3.5.2 Increase Funding

Other measures suggested by the participant are increased funding in terms of public private partnership, improvement in internally generated revenue and increase in government budget. As suggested by UNESCO, the federal government should increase its funding on education by meeting up the recommended 26% spending on education which will help in revitalizing the university system. Funding is the bedrock of any organization and for the university system to meet up with the society expectations, they need to be properly funded. Aside the government funding, the university management should devise means of generating funds to carry out their activities. As noticed, no good education comes without cost. The tuition fees in the Nigerian university system is too small compared to every other part of the world. A bit increase in tuition fees can be another source of revenue to the school in order to provide needed facilities to the students.

Furthermore, there is massive burden on the university system to remain the leading edge in this era of evolution in new knowledge. The required resources to meet up with this task becomes challenging and public-private partnership are therefore encouraged (Hagen, 2002). For instance, the university system as the main knowledge producer are seen as the facilitator for developing process for dissemination of new knowledge in the society. The private sector can partner with the university system in sponsoring a chair. This will help the university system to be globalized. They can also get involved in the provision of facilities to the school as well as training of the undergraduate student to gain practical knowledge in their course of study.

6.3.5.3 Policy Reform

Policy reforms in terms of admission and recruitment processes were identified by the participant as one of the way to address the issues impeding university effectiveness in Nigerian public universities. There is general impression according to Ekwevugbe (2014) that policies are formulated to ensure proper functioning of the university system and as such there is the need to manage the outcomes of policies that have been initiated in order to get the best out of the policy.

As suggested by the participants, there is need to review the criterial for admission into the university system by giving more chances to merit. The current 40% merit for admission of student into the university system should be reviewed by at least increasing merit to 50%. This will give room for more competent student to be admitted into the university system. Furthermore, the manner of recruitment into the university system should be closely monitored as the teaching staff in any university are supposed to be among the best produced from universities who are competent and knowledgeable in their subject area. Politics and nepotism should be reduced if not totally eradicated in the appointment of staff into the university system. According to Akinmusuru (2009), the low quality of graduates in Nigerian universities can be credited to little attention given to teaching effectiveness and as such institutional policies in the university system are not made towards making student learning a precedence. what assure quality teaching in the university system is the skills, knowledge and attitudes possess by a lecturer as well as being zealous of their work and also execute leadership role (Ololube, 2005). As such, every policy by the university system should be tailored towards appointing and retaining quality personnel into the system.

6.4 Implications of the Study

The conceptual framework as presented in this study comprises both direct and indirect relationship employed in investigating the effect of distributed leadership. The presence of direct influence or relationship implies that the strength of distributed leadership is significantly related to the effectiveness of public universities in terms of student and societal development. An indirect relationship of distributed leadership implies that a selected or all of the effect of distributed leadership on institutional effectiveness operates through a third or more variables which quality administrative and academic process is considered the mediator in this study. Therefore, as suggested by Hallinger (2010), the specification of the conceptual framework has both practical, theoretical and methodological implications. In order to carry out reliable and usable empirical investigation, clear description of the nature of relationship that existed between the variables under study as shown in the conceptual model is paramount for clarity of intellectual discourse.

6.4.1 Theoretical Implication

The findings from this study contribute to the empirical research on the relationship between distributed leadership and institutional effectiveness of university education in Nigeria. The study supports that distributed leadership are positively associated with institutional effectiveness. However, for distributed leadership to have impact on the effectiveness of public universities, quality administrative process and quality academic process must be effectively implemented. Therefore, this research work tries to enrich the reviewed literature as well as contribute to school improvement studies, globally and especially in developing nations like Nigeria. As suggested by L. L. Wright (2008), the means of assessing leadership and school effectiveness should go beyond learner

achievement, this study attempted to cover this gap by examining institutional effectiveness using goals and strategy approaches through student and societal development. This study has also addressed the gap identified by Middlehurst (2012), Abdullah (2006), and Krishnan (2013) who suggested that further study should be conducted to clarify the relationship between distributed leadership and institutional effectiveness.

This study reveals the recurrent discussion in leadership literature regarding the form of paths that reveal how distributed leadership is linked to institutional effectiveness (Hallinger & Heck, 2011; Leithwood, Patten, & Jantzi, 2010). As revealed in the proposed model in this study, improved effectiveness of university education is achieved by leadership distribution, in part, through quality administrative and academic processes. Therefore, this study test for the mediation effect on the relationship between distributed leadership and institutional effectiveness.

This current study has also substantially enriched the understanding of the role of distributed leadership in enhancing institutional effectiveness. In addition, this study combining various measures that capture the multi-dimensionality of all the four main constructs of this study (distributed leadership, quality administrative process, quality academic process and institutional effectiveness) will serve as substantial contributions to educational leadership and performance management literature.

To the researcher's knowledge, this study is the first of it kinds as empirical study to explore the mediating role of quality administrative process and quality academic process on the relationship between distributed leadership and institutional effectiveness in university context. This study combines several studies that include distributed leadership theory, activity theory and contingency theory in other to explain the relationship between

distributed leadership, quality administrative process, quality academic process and institutional effectiveness.

The distributed leadership theory assumes a positive relationship between distributed leadership and institutional effectiveness. Furthermore, the activity theory as suggested by Gronn (2002) in his distributed leadership theory, also reveal a positive relationship between distributed leadership on the mediating variables (QADP and QACP). Finally, the contingency theory through the EFQM model assumes that the process management (administrative and academic process) have close association with institutional effectiveness. Therefore, if quality administrative and academic process are tactically fit into the university context and holistically applied rather than disjointed; the findings of this study is evidence to support the premise of resource base view and contingency theory.

Therefore, the integrated approach of distributed leadership theory, activity theory and contingency theory through the EFQM model when co-opted in distributed leadership, quality administrative process and quality academic process will enhance institutional effectiveness.

6.4.2 Practical Implications

This mixed method research examined the relationships between distributed leadership, quality administrative and academic processes and institutional effectiveness as well as the issues confronting the effectiveness of public universities. In the university settings, there are four major prevailing actors which are the practitioners, the policy makers in government, the university system itself and the employees. Thus, the practical

implication will be directed to these players. Therefore, several implications for practice are discussed:

First, from distributed leadership perspectives, this study supports the view that distributed leadership towards university effectiveness is exceedingly contextualized and therefore, the leadership distribution practiced applied in a university at any point in time must be linked to the effectiveness of the university. Universities' leaderships must be prepared to acclimatize their policies and strategies to the ever changing circumstances at different stages of the institutional effectiveness efforts (Hallinger, 2003).

Furthermore, this research further proposes a wide-ranging outlook on how distributed leadership can enhance institutional effectiveness. Even though as revealed in this study that distributed leadership enhances the effectiveness of the universities, leaderships must be responsive to the contextual characteristics such as curriculum standard, instructions and assessment, service learning, school norms (supportive environment) and organizational processes which are used in this study as quality administrative and academic processes which can serves as an both opportunity and constraints for the universities leader towards enhancing the effectiveness of the school.

This study reiterate the prominence of distributed leadership as a catalyst to institutional effectiveness which suggest to the policy makers that one single person cannot work to improve the school and therefore distributed leadership practices should be encourage in the university system as the presence of an extensive collection of leaders within the university system could bring about expanded possibilities for restructuring the university organizational processes which directly impact their institutional effectiveness.

Even though distributed leadership has been seen as a driver for change in the universities' effectiveness effort, this effort may not bring about the desired outcomes if the administrative and academic processes are ignored. Focusing on one without attending to the others may not likely bring about sustainable institutional effectiveness. Therefore, the policy makers should come up with policies to enhance better functioning of the administrative processes and institutional effectiveness. For instance, the admission quota system should be reviewed to cater for more qualified students rather than catchment area and education less developed state. The recruitment processes as well should also be meritoriously carried out in order to produce the best man power for the societal development.

In terms of policy and practice, precise description of the nature of distributed leadership effect (direct or indirect or both) on the institutional effectiveness is paramount in order to inform practitioners towards targets and tactics that are most likely to have a better impact on the effectiveness of the universities. Policy makers who intend to improve university's effectiveness may need to thoroughly examine both the administrative and academic processes as well as the leadership practices in public universities. In this era of globalization where the university are held accountable for societal development through the quality of graduate they produced, it becomes imperatives for the policy makers to create courses that will incorporate complex and multi-dimensional activities to develop the universities leaders at every level of the organization on how to identify the staff strength, provide opportunities for lecturers in taking up a leadership roles in their areas of expertise, as well as building a collegial communities that will embrace a shared vision, utilizing data to improve instruction and relying on the academic staffs to effectively assume a decision-making roles.

The findings of this study using the resource base view implies that every members of university staffs should assess themselves by examining the resources they possess in terms of skills, knowledge, competences, capabilities that make them valuable to their universities more than their colleagues. Individual staff must also make the university aware that they possess such skills, knowledge and competencies so that the staff may not be the first person to let go if times get tough as the university will like to keep such staff for a very long time because of his/her worth to the system. Also, it is high time, every members of staff in the university system to stop blaming the management for the university ineffectiveness as their roles in the school have an effect on the outcomes of the university system.

Of the three dimensions of leadership role towards instructional management (Ng, 2015), the creation and promotion of a positive school learning climate was found to have the greatest impact on school achievement. This dimension requires the university leaders to be deeply involved in creating an environment that nurtures high expectations and standards for both staff and students (Mortimore, 1993; Purkey & Smith, 1983).

6.4.3 Methodological Contribution

This study apart from it theoretical and practical contributions, some methodological contributions were also identified:

Most of institutional effectiveness literature or study uses student achievement in terms of their academic performance in their final year exam or overall grade as a measure of the effectiveness of the school, most especially in Nigerian context (Abdulkareem, 1988; Ogunbemi, 2012) which has increase the rate of examination malpractices among the management of the schools at secondary school level. This study went further using the

goal and strategic constituency approach in measuring the effectiveness of public universities in Nigeria in terms of student development and societal development which are the major goals of any public universities in Nigeria and globally.

This study also builds on previous study in terms of the measurement for the mediating variable of this study. Calvo-Mora et al. (2006) examines process management using three dimensions (administrative process, educational process and research process. However, the research process was not significant. Therefore, this study went further to combine the educational process and research process into academic process and it contribute to knowledge by examining each of the process as a second order variable.

This study will also be contributing to methodology as the four main constructs in this study are second orders which are not very common in literature. Therefore, this study will be a reference point to research examining a construct of higher order using partial least square structural equation modeling.

Even though, many study applied qualitative study, the method of qualitative design applied for this study which is generic inquiry qualitative method is also very important as it is not commonly found in educational leadership or performance management research. As previous study have suggested for mixed method in examining school effectiveness, this study will also be contributing to previous knowledge in terms of the methodology applied in this study.

The variables in this study were adapted from various sources at different environment. Therefore, the validity and reliability of the measures was extensively carried out using different statistical techniques as discussed in the methodology. The final instrument

therefore offers researchers in Nigeria and globally a valid and reliable instrument on the variables examined in this study.

Several studies have examined the relationship among the variables of this study (Davis, 2009; Hallinger & Heck, 2010; A. Harris, 2008; Hulpia et al., 2012; Krishnan, 2013; Krumov, Larsen, & Hristova, 2013; Larson & Smith, 2013) but no study has ever examined them in totality like this study in terms of the multidimensional of the constructs and the mediating variables that are second order constructs.

6.5 Future Research

Despite the fact that this research work contribute rigorous empirical evidence to the existing leadership and effectiveness of higher education which provides implications to both the practitioners, administrators, government agencies as well as the academicians/researcher. However, some limitations do exist which may also create research options for future researchers.

Firstly, this study examined the four major construct in this study as a second order constructs which examined the impact or how each construct are related to one another rather than how the dimensions of each construct relates to other constructs. However, further study could be carried out to examine the impact or relationship among the dimensions of constructs in this study. For instance, the dimensions of distributed leadership as studied by Hulpia et al (2009) could be linked to other variable of this study.

Secondly, the relationship between institutional effectiveness and the mediating variable (quality administrative and academic process) which Psomas et al. (2011) referred to as the supporting quality tools and core process respectively were limited to resource base

view and activity theory. However, the quality administrative process (supporting quality tools) are regarded as input in system theory. Therefore, further study could also applied system theory to examine the relationship among the constructs as revealed in the model of this study.

Even though the findings of Chua (2004) revealed that quality in higher education is perceived by the lecturers in terms of the totality of the educational system which is different from other stakeholders who either perceived the input and processes or processes and output as the yard stick for quality in university education. This study using only the lecturers or internal members of the university community as the respondents for this study; future study could considered other stakeholders in their study in order to provide a basis for quality and policy improvement plans carried out by public universities and the National Universities Commission.

The research design for this study was a cross-sectional type. The improvement and assessment of quality process develops over time and its effect are actually valued in the long term (Goetsch & Davis, 2014). Therefore, further study on these variables should be carried out following a longitudinal approach for the research design.

This study was carried out among public universities and there are more numbers of private universities in Nigeria who are graduating a large number of students every year (). It is hoped that further study will be carried out to include private universities in their study as well as making comparicism between public and private universities or among federal, state or private universities. Further study can also be carried out in other countries of the world.

Lastly, as revealed in the outcome of the qualitative study where funding has been identified as one of the major determinant of institutional effectiveness, further study could also be carried out to examined the impact of funding and other contextual factors highlighted by Huitt (2003) on the effectiveness of the university system.

6.6 Conclusion

As revealed in the effect size of mediator variables which is the ratio of the indirect effect in disparity to the direct effect and total effect as well as the statistical significance of the mediation. The indirect effect of distributed leadership on institutional effectiveness constitutes a significant 57.86 % of its total effect on institutional effectiveness. That is, roughly 17.83% of the total effect of distributed leadership on institutional effectiveness is mediated by administrative processes while 40.03% is mediated by quality academic processes. The R^2 mediation effect size indicate that the mediated effects are moderate and large (0.1783.; 0.4003) and are statistically significant. Through bootstrapping, the confidence intervals ensure correct inference of the indirect effects. The findings from bootstrapping tests indicated that the indirect effect of distributed leadership on institutional effectiveness through quality administrative and academic processes is statistically significant. Therefore, it can be concluded that quality administrative and academic processes mediate the relationship between distributed leadership and institutional effectiveness.

Based on the findings of this study, the following conclusions were drawn:

1. The findings of this study revealed that distributed leadership may be important and positively related to the effectiveness of public universities. However, the processes (academic and administrative) through which the leadership in the

university carried out their functions are more paramount to university's effectiveness.

2. Leadership in the university system is beyond just the HODs, Deans, Vice Chancellors or the management board. Therefore, the role of all employees in the school system has a significant role towards institutional effectiveness
3. The result of the quantitative study suggested that quality administrative and academic processes mediate the relationship between distributed leadership and institutional effectiveness.
4. Many universities solely rely on personnel that are formally appointed to carry out leadership functions. The expertise and decision making in such universities are centralized on selected few which hinders the opportunity to fully distribute leadership effectively. However, the idea of levelling the university does not mean that there is no one in charge. Rather, it transforms the role of the head as the orchestrator in evolving values that embrace distributed leadership. Although, the head should be able to know the staffs' expertise in order to identify which task should such staff be given.
5. The interview conducted also revealed some issues impeding the effectiveness of public universities in Nigeria which include academic issues, administrative issues, leadership issues, funding issues and contextual factors. However, suggestions were made towards addressing those issues which include increased funding, institutional and policy reforms.
6. Conclusively, this study support the ideas that highly effective universities are achieved when there is shared vision, values and goals in the school, which will guide the lecturers in making instructional decisions in a collaborative effort where staffs with expertise assume a leadership role.

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