# CHAPTER ONE

# INTRODUCTION

## 1.1 Background to the study

Nigeria is unarguably the most populous country in Africa constituting about one-fifth of the entire population of Africa (Salisu, 2000).The country operates a mixed economy in which essential services are provided through private and public initiatives except for few monopolistic services like the national defense, port management, immigration and admissions into the country's tertiary institutions. At present, some of the erstwhile monopolies are being operated through concession and public-private-partnership (PPP) arrangements.

In spite of the huge potentials of Nigeria in terms of huge market (population), natural and human resources, Nigerians are still considered paradoxically poor(Oshewolo, 2010; Okumadewa, 2010).The causes of the high poverty level are multifaceted but it has been linked to the state of public service delivery (Rasul and Roggery, 2016). The World Bank (2017) ranked Nigeria 33 on the Governance Quality Index (GQI) which is among the lowest in the world. An important indicator of governance quality in Nigeria and anywhere in the world is the public service delivery. Therefore, by implication, the poor ranking on the governance quality index is partially or substantially a reflection of poor public service delivery.

There have been concerted efforts to improve public service delivery in Nigeria. More recent of the initiative to improve the public/civil service delivery is the SERVICOM. SERVICOM is an initiative of the Federal Government of Nigeria to address the recommendations of the research report on public service delivery in Nigeria. According to the report, service delivery to Nigerians was very poor in all ramifications

(SERVICOM, 2004) necessitating a paradigm shift in service delivery through training and effective monitoring.

An important approach/innovation that has been adopted to improve efficiency in governance in many parts of the world is the introduction of electronic governance (e-Governance). Electronic governance (e-Governance) refers to the use of the Information and Communication Technology in public management and by extension, public service delivery (Chatfield and Alhujran, 2009). It involves the use of Information Communication Technology (ICT) in conducting government's businesses (Saxena, 2005). According to Awoleye, Oluwaranti, Siyanbola, and Adagunodo (2008), e-Governance include the use of Information Communication Technologies (ICTs) to carry out information exchange with the citizens, businesses and among various government arms including the judiciary, the executive and legislature.

The use of E-governance among many countries of the world is premised on its perceived capabilities to facilitate efficient service delivery to the public. The primary benefits of e-Governance include efficiency and its capabilities to reduce corruption through automation. InfoDev and The Center for Democracy and Technology (2002) stated that e-Governance has the potential to reducing income disparities between countries as well as promote tourism among other national benefits (Awoleye 2008).

E-governance is a concept that is multi dimensional. Awoleye (2008) identified some of components of e-Governance as including "e-Administration (Improving Government Processes), e-Citizen (Connecting Citizens), e-Society (Building external Interactions) and e-Applications (Government-to-Citizen or Government-to-Customer (G2C), Government-to-Business (G2B) and Government-to-Government (G2G) and Government-to-Employees (G2E)".The sum total of these e-governance components would ideally shape the public experience of public service delivery in any country including Nigeria.

The e-Administration refers to the conduct of government processes like accounting, budgeting, internal communications, planning and host of other administrative processes electronically. The primary goal of e-Administration is to ensure efficiency in administrative processes. The e-Citizens involves connecting citizens in such a way that the positives of social interactions are optimized. This may involve the creation of e-forum and online communities where citizens can interact and discuss on public matters. A good example of this is online phone-in programme on public debate. The e-Society refers to creating the capabilities for seamless external interactions with various components (institutions) of the society while the e-Application involves creating a paperless application process (Bhatnagar, 2004).

Chatfield & Alhujran ( 2009), distinct from Awoyele (2008) viewed e-Governance (a term they referred to as e-Government) from the perspective of stages of development of information technology (IT) capabilities. They identified four stages of governance IT capabilities. Owning a functional official website to provide information service on government activities to the general public is labelled as being stage one of the IT capabilities. This stage is viewed in terms of one-way communication in a typical top-down information flow from the government to the general public. E-governance is adjudged to be in the stage two when two-way interactions are enabled. Two-way interactions are conceived in terms of the capability to download forms, fill the form and upload the same to a portal, making of email enquiries, enabling of feedback mechanism like live chat etc. The stage three involves capabilities for secured online payment of taxes, levies, dues, license renewal fees etc. The stage four referred to as e-Democracy stage involves e-voting capabilities as well as electronic consultations and policy making.

The United Nations e-government global survey report (UN global e-government readiness Report, 2004) identified five stages of e-governance development worldwide. These stages include (i) emergence presence (ii) enhanced presence (iii) interactive

presence (iv) transactional presence and (v) networked (or fully integrated) presence. The stage one (emergence presence), according to the UN, refers to the identified first stage in which a country makes commitments to become a player in e-governance. Just like (Chatfield & Alhujran, 2009a) and (Adeyemo, 2011a), The UN described this stage as a stage where presence on the web is limited and usually static (i.e. non-interactive). At this stage, the goal is to pass information to various government, government agencies or parastatals' publics in a one-way mode.

The stage two is described as the 'enhanced presence' stage. At this stage, noticeable changes can be seen particularly in the area of contents and how they are updated. Notwithstanding, the information flow at this stage is still characteristically directional from government to its publics. Unlike the stage one and stage two, a level of interactivity is introduced while services are broadened. At the stage three, the number of government parastatals connected also increased dramatically. The transactional presence stage ( stage four) usually have a fully developed two-way interactivity between the citizens and the government or between the government and external bodies.

At the stage five, all government agencies, parastatals or departments become fully integrated into the e-Governance. This stage is the one referred to by Adeyemo (2011) as the fourth stage. The G2G, G2C, G2B and G2E mentioned earlier are fully integrated. At this stage paper work are only to serve as backup while electronic records are used in real time in conducting government businesses.

The driving force behind e-Governance all over the world is the unprecedented growth in ICT (Gopalsamy, 2009; Garson, 2006). In fact, it can be rightly said that without the development in the ICT sector, e-Governance would have been impossible. This emphasizes the role of ICT as lifeblood of e-Governance. For example, a common ICT like the e-mail has redefined communications among government agencies and parastatals. It has revolutionized the speed with which messages are shared; how

messages are stored for future retrieval; and the capabilities to reach millions of people instantaneously and sometimes at no cost.

Nigeria appears to have all the necessary indices that necessitate e-Governance in her public sector. The service delivery among public and civil servants is adjudged below expectation (Ohiole and Ojo, 2015; Darma and Ali, 2014;Ibietan, 2013), corruption is not only pervasive but also endemic (Lawal, 2013;Salisu, 2000) and the internet penetration in the country is growing at a very fast pace (Poushter, 2016). These indices, *prima facie,* necessitate new tools or approaches that could improve public service delivery.

The realization of the potential of ICT and by extension, e-Governance towards empowering the citizenry and improving public service delivery in this digital age, led to the formulation of the national policy on Information Technology in 2001 by the General Olusegun Obasanjo-led Federal Government of Nigeria (Awoleye 2008). The policy details the roadmap for achieving ICT capabilities in the country by 2005 (Diso, 2005).Sequel to the above, a formal focus on e-Governance as a means of improving public service delivery could be said to have existed for at least one and half decades and its appraisal is necessary with a view to understanding its impact on public service delivery in the country. To this end, this study is billed to assess e-Governance and Public service delivery using the Joint Admission and Matriculation Board (JAMB) as a case study.

The choice of JAMB as the organization that this study focused on is premised on series of reforms that have taken place in the agency particularly in the area of deepened e-Service delivery. The JAMB was established by the Act No. 2 of 1978 and empowered to conduct matriculation examinations into the nation's universities (JAMB, 2017). The scope of operation of the board was expanded through the amendment of the decree No. 2 in 1988 to include conducts of examinations into polytechnics and colleges of education in the country.

In the area of e-Applications, JAMB has made tremendous progress. The students' application process, the conduct of the matriculation examinations, the marking and the release of the examination results have been computerized. It is no longer impossible for students to see their Unified Tertiary Matriculation Examination (UTME) results in a matter of hours after sitting for their respective examinations. This was not possible in the past when the examination was paper-pencil rather than computer-based. The paper-pencil mode of conducting the examination was reportedly characterized by massive irregularities and inefficiency (Sanni and Mohammad, 2015; Alabi, Issa and Oyekunle, 2012) necessitating a paradigm shift. This paradigm shift in the conduct of the matriculation has had its own fair share of pros and cons but general improvement over the traditional paper-pencil mode has been reported.

Another area of improvement in the JAMB electronic activities is the easy access to various services offered by JAMB. Prominent among these services is the issue of JAMB brochure. The JAMB official brochure is a collection of courses offered in various institutions of learning (registered with the National University Commission) in Nigeria and their respective requirements in terms pre-qualifications and JAMB courses combinations. The brochure also provides information on recommended textbooks and writing materials. In the past candidates find it difficult to know and assess the correct subject combinations for a particular course of study, topics to study for a particular subject and a host of other course selection related activities. With recent advancement in technology, candidates can easily assess that information online or from a compact disk (CD) provided at the point of registration.

The adoption of e-governance by JAMB also has tendency to reduce information asymmetry that fraudsters often capitalize on to defraud unsuspecting candidates. Information asymmetry refers to information gap between JAMB and prospective candidates. The fraud associated with the information asymmetry manifests in the sales

of fake registration forms to candidates. The shift from the paper for to electronic form appears to have reduced to the barest minimum if not totally eliminate the possibility. Besides, with open-access information on authorized places where candidates could purchase the form, incidence of fake forms appears to have drastically reduced.

An important service that JAMB often renders to the admission aspirants is change of course/institution. This service occurs when a candidate voluntarily changes his/her mind about his/her choice of institution having submitted an admission registration form or compelled to do so by circumstance which may relate to not meeting the score requirements of earlier chosen course and/or institution. Previously, this service requires that a candidate purchased a form, fill and do a physical submission at designated JAMB office. Complaints of missing forms, mishandling of forms resulting in names being wrongly spelt etc. were often reported. With the adoption of e-application, candidates can now easily process the change of course/institution form in the comfort of their home by registration on the JAMB portal and online convenient payment with the use of Automated Teller Machine (ATM).

Moreover, the printing of examination slip, the checking of results that often involved long distant travelling with its associated risks, checking of admission status, printing of admission letters can now be easily done in the confine of a candidates' room on the JAMB portal. This eliminates unnecessary travelling, queuing and exposure of adolescence that dominate candidacy of JAMB examination to undue risks. This was not so in the past when all these services are enjoyed only by visiting a designated JAMB office.

Without doubt, progress has been made by JAMB in the area of e-Application as a component of e-Service (e-Governance). The adoption of e-Governance in the internal operations of the organization, however, remains unclear to the public and, as well, not yet empirically studied (to the best of the knowledge of the researcher having reviewed

the extant literature relevant the subject matter). This creates a vacuum in knowledge which this study intends to fill.

## 1.2 Statement of the problem

In developing countries (Nigeria inclusive), governments control much of the economic resources and consequently play a key role in service delivery to the general public (Darma and Ali, 2014). The quality of service delivery by government employees constitutes an important measure of welfare of the people in these countries.

Public service delivery in Nigeria is characterized by inefficiency (Ibietan, 2013; Nweze, 2010). In a study conducted by Darma and Ali (2014), clear differences were identified between expectation of service delivery from public servants, officially, and the perception of the service quality actually delivered.

In order to ensure that the Nigerian public sector agencies are efficient in achieving government's policy objectives, it has become imperative to investigate the nature of E-governance and Service Delivery in the country. This is particularly important since in the Nigerian public service, the issue of poor quality of service delivery, poor service culture, cases of poor employee engagement and cases of  negative customer experience that has hindered public service delivery in the country have been reported (Mapira, 2013).

Many other factors have been identified as the immediate and remote causes of the public service inefficiency. These factors include nepotism, red tapism and poor monitoring mechanisms. Some authors like Oluwu (2002), Arowolo (2012) and Soludo (2012) have identified the structure of government as the primary cause of the inefficiency. This school of thought argued that in a situation where the government is practically centralized as opposed to the federalism provided in the constitution, effective monitoring becomes tasking leading to inefficient service delivery.

Services such as education, health, agriculture, water and sanitation, power, housing and urban development, justice, defense are prerogatives of the government in Nigeria due to the large resources it controlled and relatively less developed private sector. Of particular interest in these array of public sector services is education. Education is unarguably the bedrock of any society and quality of human resource is often cited as crucially linked to the development potential of a nation state like Nigeria (Sharif and Abdullah, 2013).

The realization of the importance of education to national development prompted the Federal Government of Nigeria (FGN) to intervene in education directly through funding, establishment of schools, provision of research grants; and indirectly through monitoring, control and regulations. JAMB is one of the agencies of FGN with the mandate to regulate admissions into the nation's tertiary institutions believed to be the bedrock of developing the nation's human resource. In order to ensure that those admitted to study in the nation's citadel of learning are qualified with capability to optimize the quality of the nation's stock of human capital, service delivery by JAMB has to be efficient.

Attempts at ensuring that JAMB service delivery is efficient have culminated in the reforms that have obviously shaped its mode of operation. An important aspect of this reform is the adoption of e-Governance particularly in the area of e-Application as stated earlier. Although the progress of JAMB in the area of e-Application is noticeable, how JAMB has fared in the other aspects of e-Governance is unclear requiring an empirical assessment

Traditionally, JAMB had conducted her examinations using the paper-pencil test (PPT) model. This mode of examination is reportedly characterized by inefficiency and inaccuracy (Retnawati, 2015). Although the alternative computer-based test (CBT) has its own challenges, these challenges are primarily of the technology failure (Oduntan, Ojuawo, & Oduntan, 2015; Abubakar & Adebayo, 2014;Joshua & Ikiroma, 2012) which can be rectified easily with state of the art facilities. This is unlike the problem of the PPT that is shrouded in design (Retnawati, 2015).

The inefficiency of the JAMB PPT examination was evident in the wide-scale examination mal-practices that often characterized the conduct of the examination in the past(Oyedeji, 2016).   As part of the efforts to curb the widespread examination malpractices, JAMB introduced a  customized answer sheet in 1994 on which candidate's examination numbers and subject types are preprinted (Ojerinde, 2015). The examination system was further improved in 1998 involving reshuffling of question types and candidates seat numbers such that candidates sitting in close proximity cannot copy from one another.

Although the newly-introduced measures reportedly curbed the mass cheating in the examination to some extent (Ojerinde, 2015), inefficiency in grading, corrupt collaborations at the examination centers with officials to undermine the system were still pervasive necessitating a new model for the examinations. Within the period that JAMB introduced the innovation, authors (Omobola, 1995; Isreal, 1996) reported cases of missing results, candidates having wrong types given to them as against the type printed on their answer sheets leading to frustrations.

Apart from the cheating, the release of results could take months with candidates waiting. This usually put some candidates' life plans on hold as they await the 'verdict' of JAMB to determine their next courses of action. The waiting of thousands of candidates constitutes economic loss to the nation. The mass cheating and the inefficiency in the JAMB requires a paradigm shift in strategies towards repositioning the agency for better performance. To this end, the idea of a combined exam of PPT and CBT was formed. Later, the CBT examination mode was fully-adopted by JAMB. This birthed the adoption of e-Governance (at least e-Application element of e-Governance).

It is important to understand how JAMB's service delivery has fared in the use of e-Governance. For instance, the use of technology by JAMB in interacting with other government agencies like NYSC, NUC etc. otherwise referred to as Government to

Government (G2G) which is important for efficient service delivery remains unclear. Likewise, the use of technology in its internal workings among employees (G2E) are also not open to the public and yet to be empirically assessed.

Besides, e-Governance is often misconstrued as just the presence of government agencies or institutions on a static website online (Ohiole and Ojo, 2015). In as much as government's or its agencies' presence on the internet via websites (static) is a good step towards e-Governance, it is grossly misleading to refer to mere possession of websites as a definition of e-Governance. This study will assess the JAMB's position as regards e-Governance and Public service delivery.

## 1.3 Objectives of the Study

The broad objective of this study is to examine the impact of e-Governance on public service delivery using JAMB as the case study. The specific objectives are to:

1. Determine the effect of e-Governance on service culture in the Joint Admission and Matriculation Board (JAMB).
2. Examine the relationship between e-Governance and service quality in the Joint Admission and Matriculation Board (JAMB).
3. Investigate the effect of e-Governance on employee engagement in the Joint Admission and Matriculation Board (JAMB).
4. Explore the relationship between e-Governance and customer experience in the Joint Admission and Matriculation Board (JAMB).

## 1.4 Research Questions

1. How does e-Governance have significant effect on the service culture in the Joint Admission and Matriculation Board (JAMB)?
2. What is the relationship between e- Governance and service quality in the Joint Admission and Matriculation Board (JAMB)?

3. How does e-Governance have significant effect on employee engagement in the Joint Admission and Matriculation Board (JAMB)?

4. What is the relationship between e- Governance and the customer experience in the Joint Admission and Matriculation Board (JAMB)?

## 1.5 Research Hypotheses

The study hypotheses are stated in null form and presented below:

$H_{01}$:  e-Governance has no significant effect on the service culture in the Joint Admission and Matriculation Board (JAMB).

$H_{02}$: There is no significant relationship between e-Governance and service quality in the Joint Admission and Matriculation Board (JAMB).

$H_{03}$: e-Governance has no significant effect on employee engagement in the Joint Admission and Matriculation Board (JAMB).

$H_{04}$: There is no significant relationship between e-Governance and the customer experience in the Joint Admission and Matriculation Board (JAMB).

## 1.6 Significance of the Study

*Theoretical Significance*

This study will advance conceptualization of e-Governance within the Nigeria context and in Nigeria public domain. The study will draw on the existing literature on e-Governance from local and international sources and contribute to scholarly literatures that examine the impact of e-Governance on public service delivery in Nigeria. The study is considered significant theoretically because it is novelty in considering all aspects of e-Governance in public institution in Nigeria context as against focus on e-Application that dominate the Nigeria literature on e-Governance. This provides opportunity for holistic assessment of e-Governance in public institution in Nigeria which contributes to the extant literature on e-Governance and public service delivery.

*Empirical Significance*

Focusing on the Joint and Matriculation Board (JAMB)'s e-governance initiative, this study will contribute to the empirical record of public institutions in Nigeria in terms of e-Governance initiatives, adoption and challenges encountered towards attaining full-scale e-Governance in Nigeria's public service. The results could form part of the record in time on the progress of JAMB in the area of e-Governance and administration.

*Practical contribution or Significance to Policy Makers and other Stakeholders*

Results of this study could become an important non-partisan or external overview of JAMB e-Governance initiatives which ultimately help it towards improving performance. JAMB is created and empowered to serve the public. Understanding its initiatives through public eye is important towards performance improvement. On this basis, the study is considered significant.

Besides, admission of qualified students into the nation's tertiary institutions is a viable preliminary step that government could take towards optimizing its stock of human capital. For instance, when the right candidates with requisite basic knowledge are admitted to study a programme that is beneficial to national development, aggregate knowledge and performance level could be raised. Studies have found significant relationship between quality of admission process and academic performance (Bolapeju, Adeyemi, and Ogbodo, 2014; Joe, Kpolovie, Osonwa, and Iderima, 2014; Emaikwu, 2012; Salahdeen and Murtala, 2005).

General improvement in academic performance of students (who eventually become tomorrow's labour force and administrators) has tendency to increase national productivity. By implication, a better admission process through e-Governance, JAMB could effectively raise national productivity. Understanding the e-Governance initiatives of JAMB and how they affect service delivery in the area of admission management which could help identify key issues towards improving public service delivery by JAMB.

Furthermore, the study could provide a basis for further studies on the subject matter. The academia and non-academic researchers interested in public administration (particularly the e-Governance paradigm), will gain insight into the e-Governance initiatives of JAMB, understand the dynamics of its acceptability among employees and how they were perceived by its key publics (e.g. students). This has tendency to shape research focus plausibly in the future

## 1.7 **Scope of the Study**

This study is conducted to appraise the e-governance initiatives in the Joint Admission and Matriculation Board (JAMB) and their perceived impact on the board's public service delivery from the year 2008 to 2017. The E-Governance in JAMB is arguably an initiative that had occurred over the years and could be seen as a cumulative phenomenon. This study will therefore trace the historical development of e-Governance of JAMB.

Specifically, this study focuses on e-Governance initiatives and service delivery of JAMB in the last ten years given that it was within this period the national policy on Information Technology was launched by the democratically elected government led by the General Olusegun Obasanjo. In terms of the study population, the focus is on the employees of JAMB across the South-Eastern States, Nigeria.

## 1.8 Definition of Terms

In order to avoid ambiguity, key terms used in the study are defined operationally below:

**G2G** (Government to Government): This model aims at providing internet services among government organization at various levels of inter-government relations.

**G2E** (Government to Employees): This model of e-governance seeks to improve on the transparency, efficiency and effectiveness of the interactions between the government and its employees through the application of ICTs.

**G2B** (Government to Business): This model of e-governance employs the procurement and/ or delivery of goods and services between the government and the private sector via the use of ICT.

**G2C** (Government to Citizen): This type of e-government is geared towards creating links and communication channels between the government and the citizen. G2C aims at establishing an efficient flow of interaction between the government and the citizen which is the whole essence of adopting e-governance.

**E-Governance:** This refers to the use of Information Communication Technology (ICT) in government to run governmental activities including public service delivery.

**E-Government:** Refers to government that embraces e-Governance.

**Employee Service Delivery**: Refers to services rendered to members of the public by government employees as part of public service.

**Computer Based Test (CBT)**: This refers to an examination conducted electronically through a computer connected to a network.

**Paper Pencil Test (PPT)**: Refers to the traditional examination done with a physical pen and paper in a non-virtual environment involving a printout of examination papers and/or answer sheets.

**Examination Malpractice:** Means conduct during examination by candidate that contravene examination regulations and done with the intention to receive better results than deserved.

**Biometric Capture System (BCS)**: This refers to biometric data capture system. It involves capturing of fingerprints as a means of verifying a candidate's claim as being eligible to write JAMB examination and curb incidence of impersonation during examination

**Service Culture:** refers to a culture within an organization where customer satisfaction is top priority. No business can stay in business without customers. How you treat or mistreat them determines how long your door stay open and bad service is a one way ticket to business failure.

**Customer Experience:** Means the entirety of the interactions a customer has with an organisation and its products. it is the sum-totality of how customers engage with the organization and brand, not just in a snapshot in time, but throughout the entire arc of being a customer.

**Employee Engagement**: This refers to a workplace approach resulting in the right conditions for all members of an organization to give their best each day, committed to their organizational goals and valves, motivated to contribute to organizational success, with an enhance sense of their well-being.

**Service Quality**: Means an assessment of how well a delivered service conforms to the client's expectations. Service business operators often assess the service quality provided to their customers in order to improve their service, to quickly identify problems and to better assess client satisfaction.

# CHAPTER TWO

## REVIEW OF RELATED LITERATURE

According to C. Selltiz in his book "Research Methods in Social Relations" "one of the simplest ways of economizing effort in an inquiry is to review and build upon the work already done by others". The rationale behind this assertions lies in the fact that reviewing works done by others will give the researcher a clear direction on how to approach his research work so as to achieve maximum result. These works already done by others include books, journal, newspaper articles and official documents relevant to the study.

For better research work and clearer understanding, the review of related literature will centre on the following major subheadings:

- ❖ Conceptual Review
- ❖ E-Governance
- ❖ Public Service Delivery.
- ❖ Service Culture
- ❖ Quality of Service
- ❖ Employee Engagement
- ❖ Customer Experience
- ❖ E-Governance and public Service Delivery in Nigeria: The nexus
- ❖ Empirical Review
- ❖ Gap in Literature
- ❖ Theoretical Framework

❖ Public Sector Process Rebuilding (PPR) maturity model

❖ Application of the Model to the study

## 2.1.0  Conceptual framework

## 2.1.1  E-Governance

The extant literature on e-governance shows that there are different meanings and scope of the concept. While some viewed it  as  being a semblance of e-commerce focused on government customers excluding the e-democracy aspect(Clift, 2003), others construed it as a virtual reality with interface that provides medium for governance in a multidimensional form (Torres, Pina, & Royo, 2005). Many others have different or related meaning for the concept.

Chatfield & Alhujran, (2009) defined e-Governance as the "rapidly emerging global phenomenon of the use of information and communication technology (ICT) as the new way forward in public administration". Naz (2009) defined it as "the application of Information and Communication Technology (ICT) to the government processes to bring Simple, Moral, Accountable, Responsive, and Transparent (SMART) governance". Basu, (2004) viewed e-governance (e-Government) as;  "the use of information technology to free movement of information to overcome the physical bounds of traditional paper and physical based systems' to 'the use of technology to enhance the access to and delivery of government services to benefit citizens, business partners and employees".

According to Sithole & Vander Waldt (2016), E-governance, which also means electronic governance generally, refers to the use of information and communication technology (ICT) in order to provide different government services. It enables the exchange of different kinds of communication besides ensuring effective communication of different kinds of transactions. At the same time, it enables the integration of different

stand-alone systems and services between the government and the customers and government and businesses (Karim, 2002).

E-governance refers to the usage of information communication technologies for carrying out different public services (Okafor, Fatile & Ejalonibu, 2014). This mainly refers to the application of the internet so as to make sure that different kinds of services are offered in a manner that is convenient, cost effective and customer oriented. E-governance also refers to the adoption of IT for enhancing working of the government. It is mainly aimed at the achievement of moral, simple, responsive, accountable and transparent governance (Abasilim & Edet, 2015; Okafor, Fatile & Ejalonibu, 2014). According to Karim (2015), E-governance is a major tool, which is being adopted in order to ensure that there is a highly effective and efficient public service delivery.

Terms that are often confused for e-Governance include e-Administration and e-Government. Although many authors have adopted only one of the 'terms' in describing the concept of the use of ICT in governance, distinctions between what the terms represents are often not clear. To forestall the ambiguity surrounding the concept, the UN United Nations Division for Public Economics and Public Administration, American Society for Public Administration publication, May 2002 benchmarked the conflicting concepts of e-Government, e-Administration and E-governance as presented in the Table 1below.

**Table 1**: concepts of e-Government, e-Administration and E-governance

| E-government | E-administration | E-governance |
|---|---|---|
| Policy coordination and implementation; delivery of services online | Internal and public-sector management component | Facilitation of interactions between citizens, government organizations and elected offices including governing and policy-making process. |
| Developing citizen-centric programme | Strategic planning in transitioning to electronic delivery of services | How technology (particularly the web) is transforming governing process |
| Promoting and enhancing citizen participation | Quantifying cost-effectiveness of electronic service delivery | E-federalism: the changing relationship among the levels of government; and E-democracy, enhancing citizen participation online voting, issue of ethic, security and privacy |
| Perfecting online service delivery through analysis and evaluation, measuring efficiency and benchmarking against other forms of service delivery. | Benchmarking and performance measurement | Legislative and policy-making environment framework; policy initiatives governments are taking: the regulatory framework, implications of initiatives like recognizing the legality of |

| | | e-signatures, greater citizen participation in policy making environment (e-democracy). |
|---|---|---|
| Country indexing (performance measurement benchmarking) portal analysis, website analysis | Human resource management issues like training and recruitment, deployment of staff and maximizing existing resources. | International implications; lowering of borders through information exchanges- impacts and consequences; international standards and best practices; information management and e-government |

*Source: United Nations DPEPA, ASPA 'Benchmarking e-government: a global perspective—assessing the UN Member States' United Nations Division for Public Economics and Public Administration, American Society for Public Administration publication, May 2002 at p 54.*Source, In Basu (2004).

A cursory assessment of the comparative assessment of the e-administration, e-government and e-governance shows that e-governance depicts the maturity stage of electronic service delivery of governments and/or its agencies. The e-governance mirrors a true virtual government where key activities of governance are done electronically. It also appears from the comparison that e-government and e-administration are concerned with putting in place the necessaries e-governance while e-governance covers the e-readiness, full e-service delivery as well as continuous improvement on the e-service.

Arifoglu (2004) compared traditional government to electronic government (i.e. e-Government). He observed that in the traditional government, public body stands

between citizens and information (data system) but in e-Government, there is direct interaction with the data system by both the public body and the citizen (see Table 2). This type of interaction requires a dynamic system that can facilitate co-generation of data, co-creation of information and co-sharing of information .Efficient co-generation, co-creation and co-sharing capabilities are, at present, embedded in the web 2.0 technology(Mangold &Faulds, 2009; Nath, Iyer and Singh, 2011). It can therefore be inferred that full e-Government, at present, requires the web 2.0 infrastructure.

*Figure 1:* Traditional Versus Electronic Governments
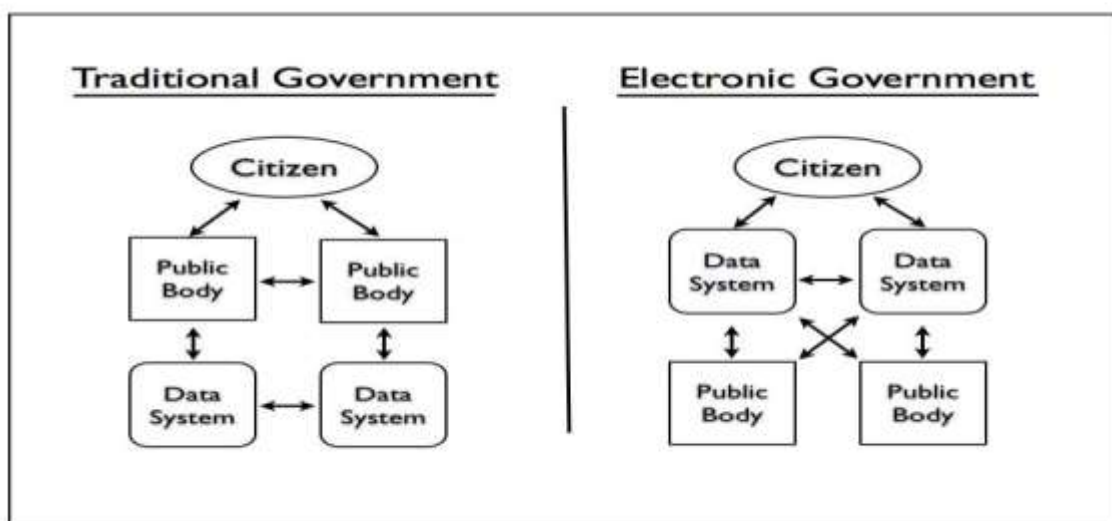


Source:  Arifoğlu (2004, p.99*)*

Al-Omari (2006) identified three important aspects of e-government initiatives. He termed these initiatives as "improving government processes, connecting citizens and building interactions with and within civil society".  The improvement in government processes is construed as encompassing; cutting process costs, managing process performance, making strategic connections in government and creating empowerment within the government architecture. This is a preparatory action to prepare the ground for effective e-governance. To this end, Griffin, Trevorrow, & Halpin (2007)warned that e-governance should emphasize improvement in service delivery to the citizens rather than automation.  This is because mere automation may still be prone to existing inefficiency

in service delivery necessitating a critical assessment of existing infrastructure, framework and processes with a view to removing inefficiency towards e-readiness.

The connection to citizen focuses on the relationship between the government and the citizen. This relationship may be e-democracy (e.g. electronic voting, electronic contributions to policy formulation, electronic plebiscite) or as semblance of e-commerce (customers consuming public services. In short, this is a citizen-centric e-governance focus. The aim is to establish two-way communication between government and/or its frontiers and the citizen. It entails listening to the citizens towards improving public service.

The 'building interactions with and within the civil society' emphasizes the G2G aspect of e-governance. The aim is to achieve seamless integrations among agencies of government, civil society organisations and with other institutions. It encompasses a broader remit like working better with business, developing communities and building partnerships within the country.

## 2.1.2 Origin of E- Governance

E-governance concept originated at the beginning of 21st century, mostly as a copy of e-commerce into public sector. All intentions were directed towards the presence of the public services on the Internet. In the early years of its development, e-governance follows the evolutionary e-business evolving model, which in particular means that in the early days of e-governance evolvement, primary focus of the e-services was simple appearance of graphic user interfaces with no interactions.

The term is used in a loose manner to describe the legacy of any kind of use of information and communication technology within the public sector. For those who see it as some form of extension of e-commerce to the domain of the government, it represents the use of Internet to deliver information and services by the government (Bhatnagar,

2007). The Department of Economic and Social Affairs of the United Nations defines e-governance as utilizing the internet and the world-wide-web for delivering government information and services to citizens (United Nations, 2008). General definition describes e-governance as the use of information and communication technologies (ICT) to transform government by making it more accessible, effective and accountable.

E-governance refers to the use of information technologies (such as the Internet, the World Wide Web, and mobile computing) by government agencies that can transform their relationship with citizens, businesses, different areas of government, and other governments. These technologies help deliver government services to citizens, improve interactions with businesses and industries, and provide access to information (Moon, 2002). E-governance can be defined as the use of emerging information and communication technologies to facilitate the processes of government and public administration (Drucker, 2001). This definition focuses on the use of ICT to assist in the administration or management of government.

Basu (2004) states that "e-governance refers to the use by government agencies of information technologies that have the ability to transform relations with citizens, businesses and other arms of government". In terms of actually using these technologies following are some ends, better delivery of government services to citizens, improved interactions with businesses and industries, citizen empowerment through access to information, or more efficient government management. Benefits resulting from these activities could be less corruption, increased transparency, greater convenience, revenue growth and cost reductions.

According to Chatfield (2009), e-governance refers to the use of information and communication technologies, particularly the internet, to deliver government information and services. E-governance is understood as the use of ICT to promote more efficient and cost effective government, facilitate more convenient government services, allow greater government access to information, and make government more accountable to the citizens (World Bank, 1992).

The aim of e-governance is to allow the public to initiate a request for a particular government service without going to a government office or having direct contact with a government employee. The service is delivered through government web sites (Brannen, 2001). E-governance comprises of an alignment of ICT infrastructures, institutional reform, business processes and service content towards provision of high-quality and value added services to the citizens and businesses.

The scope of e-governance services extend from posting generally requested information on a website to providing and processing online requests such as electronic payment of taxes or other fees. The main rationale of e-governance initiatives is to put together services focused on citizens needs (Moon, 2002). E-governance involves novel forms of delivering and tailoring information and services, connecting communities and businesses locally and globally and reforming us towards digital democracy. E-governance offers flexible and convenient access to public information and services with the view of providing citizens an improved service (Moon, 2002).

### 2.1.3  Benefits of e-governance

The benefits of e-governance on public service delivery are numerous. For instance, it has played a huge role in ensuring that Nigeria is an Information Technology (IT) capable nation in Africa besides being one of the major players in information society. At the same time, it has ensured the use of IT for educational purposes besides resulting into the creation of wealth for different people in Nigeria. Besides, it has contributed to the eradication of poverty in Nigeria. The other notable benefits include the creation of different job opportunities for the people in Nigeria, enhancing the level of governance, health as well as agriculture (Fatile, 2012).

### 2.1.4 Goals of E-Governance

 The goals of e-Governance vary considerably among governments worldwide. Rightfully, the goals of e-governance are determined locally based on the political leadership of each government. The aim is to reorient governments to treat citizens as

customers of government services and improve the day-to-day management of financial and budgetary systems. Governments are embracing other such various forms of e-Governance that: add channels of interaction among governments, businesses and citizens; improve the ability for government institutions to communicate, collaborate and otherwise work more efficiently and effectively with each other; streamline acquisition and procurement processes; reduce opportunities for corruption; and, increase the ability to capture revenue. Many of these e-Governance programs are structural elements of economic development and public sector reforms to address human development issues in developing countries (Schware and Deane 2003).

It is now growing more common for governments to use websites to enable visitors to go online to get government information, file and pay taxes, register automobiles, access vital records, communicate with government officials, and participate in decision-making. Through e-governance, governments are expected to improve performance and outcomes. Governments expect to achieve such gains as:

❖ Online data collection to reduce data entry costs and automate error checking;

❖ Reduce the communication costs with citizens;

❖ Greater sharing of data within government and between governments and other such stakeholders as NGO's, international agencies, and private sector firms;

❖ Reduce government publication and distribution costs through online publication (OECD, 2003).

## 2.1.5 Components of E-Governance

There are various components of e-governance based on the use of ICT to facilitate relationships between government and other key stakeholders. These types of relationships are with citizens (G2C – Government-to-Citizen), business (G2B – Government-to-Business), other governments (G2G – Government-to-Government), and employees (G2E – Government-to-Employees).

### 2.1.5.1 Government-to-Citizen E-governance

Government-to-Citizen e-governance focuses on making information accessible to citizens online. This is referred to as a citizen-centric e-Governance when governments take further steps to provide online services organized around citizen needs.

### 2.1.5.2 Government-to-Business

Government-to-Business e-governance focuses on strategies using ICTs to facilitate government interactions with the private sector to procure goods and services and to coordinate transactions from private companies. One approach is known as electronic procurement (e-procurement). Because of the large number of purchases that governments make from the private sector, there is a need to develop faster and more cost-effective routines to handle the typical procedures for procurement.

### 2.1.5.3 Government-to-Employee

Government-to-Employee e-governance focuses on relationships within government among employees to coordinate internal operations and improve the internal efficiency of business processes.

### 2.1.5.4 Government-to-Government

Government-to-Government focuses on providing services to governments through intergovernmental relations. This includes activities to coordinate stakeholders from the national, state/provincial, and local government as in the case of humanitarian or crisis response.

### 2.1.6 Stages in E-governance

E-government does not just occur or become materialized all of a sudden. It evolves over time through a number of stages. There is divergence in the literature on these stages with many authors having different nomenclatures for the stages or having unequal number of

stages. For instance, Howard identified three stages of e-governance. The stages include (i) publish, (ii) interact and (iii) transact. Howard (2001) described the 'publish stage' as the stage involving one-way communication of government activities and dissemination of government information through an online platform. The interact stage enables citizens to have simple interactions with the government electronically through applications like email and chat. The transaction stage is deemed a stage where the government's online presence has the capabilities for transactions like e-purchasing, e-payment among other e-commerce capabilities.

Chandler and Emmanuel (2002) decomposed e-governance development into four stages including (i) information, (ii) interaction, (iii) transaction and (iv) integration. The information stage of Chandler and Emmanuel align with the publish stage of the Howard (2002). The two studies viewed stage one as a one-way information dissemination to members of the public through an online platform usually a static website(s). The interaction stage, according to Chandler and Emmanuel also align with the stage two (interact) of the Howard. At the 'interaction' stage, simple interactions between the government or its agencies and the public exists. The Chandler and Emmanuel's third stage (i.e. transaction) has the same description like that of Howard (transact). They both signify a capability for two-way interactions between government and citizens online as well as e-commerce capabilities. Chandler and Emmanuel, however, has the fourth stage dubbed; 'integration'. The integration stage captures the integration or seamless interactions among government agencies and parastatals and among government, the private organisations and the general public.

Layne and Lee (2001) divided the stages of e-governance development into four stages including (i) cataloguing, (ii) transaction, (iii) vertical integration and (iv) horizontal integration. The stage one and two of Layne and Lee are semblances of the stage one and two discussed in Howard (2001) and Chandler & Emmanuel (2002). The stage three(vertical integration)equates with the Chandler and Emmanuel (2002)'s integration stage (stage IV) which captures integrations among government agencies and with

private organisations. The interactions, however, is at the lower momentum. The horizontal integration (stage IV) captures the integration of e-services and e-activities of the government agencies and other relevant stakeholders at a higher interaction level or momentum.

The foregoing shows that the stages of e-governance revolves around having a one-way online communication media through which government information is disseminated to the members of the public, the two-way interaction with increased level of activities and fully integrated systems that creates a semblance of virtual government. Notwithstanding, there are obvious divergence from this simple summary. To narrow down the convergences in conceptualization of stages of e-governance or e-government, the United Nations Division for Public Economics and Public Administration, American Society for Public Administration (UN DPEPA, 2002) attempted to harmonise the stages in the development of e-government across the world. The harmonisation attempt resulted in five stages (adopted in this study) including emergence presence, enhanced presence, interactive presence, transactional presence and networked (or highly integrated) presence. Theses stages are briefly explained below:

### 2.1.6.1 Emergence presence

As the name indicates, during the emergence presence, government makes its online presence with a web page which might include an official website, and links to ministries or departments. Information is majorly inactive and there is little or no interaction with citizens.

### 2.1.6.2 Enhanced presence

More information is provided by government on public policy and governance and makes them easily accessible to citizens, links are made to record information such as newsletters, documents, reports, laws etc.

### 2.1.6.3 Interactive presence

Governments provide online services like downloadable forms for applications and an interactive portal with services to ease its use by citizens is being put in place.

## 2.1.6.4 Transactional presence

Here, there is now two-way contact between 'citizens and government'. It includes options for paying taxes, applying for ID cards or passports and other functions similar to G2C interactions.

## 2.1.6.5 Networked (or fully integrated) presence

This is the most sophisticated level of e-government implementation. It integrates all e-government service dimensions (i.e. G2G, G2C and G2B). At this stage, government through technology becomes proactive in connecting with and answering to citizens' needs.


## 2.1.7 Historical Progression of E-Governance in Nigeria

Records from the Nigerian Federal Office of Statistics (FOS) show the first computer sold in Nigeria was to the Nigerian Ports Authority (NPA) by ICL in 1948 (UNU, 2004) during the British colonial administration in Nigeria. However, the first digital computer appeared in Nigeria in 1962 (UNU, 2004). The diffusion and use of ICT products in the country seem to have an elitist dimension (Anandarajan, Igbaria & Anakwe, 2002), because people working for large multinationals, local banks, and government agencies appear to use ICT products more than do other members of the population. Nationwide, the use, adoption, accessibility, and availability of ICT products and infrastructure in Nigeria are very poor despite the early starting date.

During the late 1970s, the Nigerian government promulgated an indigenization decree that set apart business categories for Nigerians only. The computer business was one such area. IBM, one of the three main computer vendors in Nigeria during this period, elected to leave the country. The indigenization decree stimulated an influx of several indigenous firms into the computer business. This was good for the country because of the increased computer purchases during that period. From 1975 to 1977, the country recorded 39 computer (minicomputer and mainframe) installations compared to 197 installations from

1978 to 1980, the period following the promulgated decree (UNU, 2004). By 1988, the number of computer installations in Nigeria had reached 754 (UNU, 2004). Additionally, by the late 1970s the Nigerian government established the Central Computer Committee (CCC), whose mandate was to create standards for users and vendors of computers in Nigeria and develop inputs for the national policy on computing (UNU, 2004).

Unfortunately, the incoming government dismantled this body. Consequently, the country was without any national ICT policy for many years (Ifinedo, 2004). It was not until the year 2000 that the country began to clamor for a new national ICT policy that resulted in the birth of the Nigerian telecommunication policy. The country again witnessed an expansion in ICT products diffusion and use. In addition, a governmental agency called the Nigerian Communication Commission (NCC) that was formed in 1992 was reactivated in 2000 (Ifinedo, 2004). The Nigerian national ICT policy became more effective when the new civilian government created the Nigerian IT Development Agency (NITDA), whose mandate was to administer the ICT policy for the country (NITDA, 2001). NITDA's strategies include the establishment of an e-governance model for Nigeria in specific areas such as e-administration, e-judiciary, e-healthcare, e-taxation, e-education, and so forth (Ajayi, 2003b).

Further, evidence suggests that the use of ICT products by the ordinary Nigerian citizen and government officials is growing remarkably (Ajakaye & Kanu, 2004; Hamilton, Jensen & Southwood, 2004). Nigeria seems to be moving in the right direction with the formulation of its new national ICT policy, which appears to promote e-governance initiatives. However, the main problem for the country continues to be the unavailability or poor condition of the enabling infrastructure for e-governance, such as telecommunication facilities. Nigeria has unfavorable statistics on its ICT infrastructure. For example, basic telecommunication services such as telephone lines, Internet access, and so forth, required for e-governance are inadequate in the SSA region, including Nigeria (Ifinedo, 2005). The teledensity (number of telephones lines per 100 inhabitants) in Nigeria in 1999 was 0.5, but rose to 2.0 in 2002 only after the Nigerian government

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liberalized the ICT sector. Similarly, Nigeria's Internet usage is poor (ITU, 2005). In 2002, there were 100,000 Internet users in Nigeria (CIA: World Factbook, 2004).

Currently, it is encouraging to know that Nigeria has made steady progress both in its infrastructure and internet usage. According to the UN E-Governance Survey (2014), Nigeria climbed from 162nd place to 141th  in the last twelve months, and is the 19th country in the top 20 in Africa, with a development index of 0.2929. That is significant progress, I must say, considering where we were in the past years.

## 2.1.8 Legislation: The role of an e-Governance Legal Framework

The reformation of regulations is one of the crucial concerns that are continually being overlooked in developing countries with emerging e-governance regimes. Yet, practice has demonstrated that it is important for e-government positive results, both with regards to the long-term sustainability and affordability. Regulatory reform is commendably required to conduct almost all e-government systems. In instances where these systems were developed outside the relevant regulatory framework, likeliness of their realization would be very much lowered. The successful outcome of e-governance general scheme and initiative are particularly dependent on government's role in ensuring a proper legal framework for their operation.

Many countries delve into e-governance without relevant policies laws and the absence of cyber legal framework. Processing of e-government principles and functions require a range of new rules, policies, laws and legislative changes to address electronic activities including electronic signatures, electronic archiving, and freedom of information, data protection, computer crime, intellectual property rights and copyright issues. Any sound e-government policy must consider a citizen-centred approach. This means that e-government should be an end-user or demand-driven service. It is equally important for e-government processes to have the legal structures that exist with the parallel paper processes.

OECD governments are aware of the need for framework to provide for enforceable electronic transactions, both in the e-government sphere and for e-commerce, and have taken action. For example, the legal recognition of digital signatures is necessary if they are to be use in e-government for the submission of electronic forms containing sensitive personal or financial information. As of 2003, 26 of 30 OECD countries have passed legislation recognising digital signatures, though a much smaller number have actually introduced applications beyond a pilot phase.

Developing countries are tasked with the responsibility of identifying the legal issues. It has been mentioned earlier in this work that developing countries are still are the preliminary stages of their e-governance regimes hence their political inclinations and the structure of government would reflect this through there lie of actions.

Basu opined that Legitimacy might express itself through expressions of authority to act, which is related to but not the same as saying that an action is not illegal. In some settings, the legitimacy of government action would affect the enforceability of the action, either on the part of government against a Subhajit Basu, E-government and Developing Countries overview person subject to that government's rule or on the part of private citizen against the government. E-government requires the establishment of a range of suitable legal and regulatory measures that are aimed at:

- ❖ Integrating and sharing data systems within and among administrations
- ❖ The use of this public information by third parties, especially the private sector, safeguarding privacy and security issues
- ❖ Enabling digital exchange of information and transactions between government agencies, citizens and businesses.
- ❖ Recognizing the digital exchange of information and allowing electronic transactions and record keeping
- ❖ Reaching citizens affordably and enabling citizens to reach government affordably by facilitating availability and access to information and communication services

throughout the world concerns are raised about the safety of electronic information transfer and storage.

Governments must ensure that e-government is preceded by changes in the legal system to protect information and privacy in the digital age. At the same time criminal codes need to be upgraded to incorporate cyber-crime, and the stealing of electronic data. Intellectual property rights legislation must be amended to include the protection of e-content ownership.

Countries should be ready to adapt their legislative framework to apply electronic equivalents of traditional paper procedures, such as personal identification, signing and filing. Legislation should therefore identify types and standards for electronic signatures and electronic authentication and allow, but regulate, electronic record keeping.

In addition, the move towards more intra and inter-government information sharing, required by e-government, necessitates legislation that validates and regulates access to such information and to data matching. Accessibility to government by citizens and to citizens by government can be facilitated by legal solutions that can affect the availability and accessibility of telecommunication services, such as liberalization of the telecommunication market, the establishment of independent regulators and pro-competitive regulation measures and introduction of fiscal benefits for investment in telecommunication infrastructure, as well as of hardware and software mainly through revision of domestic and import taxation on ICT related equipment, parts and software. Other reforms may prove to be necessary to regulate the internal organization of government, with the objective to facilitate e-government adoption.

In particular the process of simplification of administrative procedures can eliminate barriers that hinder its application. Hence, to provide legitimacy to act electronically can only be conferred by legislative measures and supported by an effective legal framework.

This framework should be capable of identifying and addressing legal obstacles to e-government.

Legal obstacles may include the differences that exist between traditional data collection requirements (that is, sharing of information collected by and provided to various government agencies) and the ease of electronically collecting and sharing data. Legitimacy may also be in terms of the standards. There should be standards the e-government systems should meet; the same goes for the quality of services that would be offered by the government. In the bid to attain the legislative revamping, enactment would be necessary, as current rules, Regulation and Laws most likely do not acknowledge the admissibility of electronic documentations and procedures.

For instance, The Laws should provide that authorizations done electronically, signatures and contracts should have the same effect legally as manually executed documents. Although because of the features of technology, giving both the same legal effect can alter or even erode the orthodox methods these affairs are executed. Examples of these are notarization of a document.

Currently in Nigeria we have an un-coordinated activity of digitalization and automation and in some cases some degree of system redesign. These activities have been happening as normal processes of adoption of digital processes in most government organisations and as driven b some entrepreneurial government officials, respectively. This simply is the case because of the inadequacy of the current Legal framework in the country.

The NNPIT is a policy with good intention, well thought out for the growth and development of all sectors/industries through the usage of ICT nation wide. But as the name implies it only a policy, which is no better than a guideline or blueprint to the actual Legislation that would have a more coercive and binding effect on all the stakeholders. This ambitious document has the potential to effect many changes to the legislative status on the ICT is the country. Considering all the other political and technical issues that

withhold the progress of the objectives of the NNPIT, it has only been able to achieve little in the past 14years. A number of draft legislations where born out of NITDA's policy document. Such as draft Data Protection Act, the draft Nigerian Cybercrime Act and Public Key Infrastructure blueprint for Nigeria. The above listed have only generated more political and bureaucratic contention and unfortunately are no anywhere near ready to be passed into Laws.

The Telecommunications sector has distinguished its self and a Nigerian communication Act 2003 was enacted under the NCC. Since the introduction of the Act the telecommunication has been regulated accordingly. This has brought about a more effective communication regime in the country Nigerian.

The vision statement of the NNPIT "To make Nigeria an IT capable country in Africa and a key player in the Information Society by the year 2005, using IT as the engine for sustainable development and global competitiveness" I agree with the author who is of the opinion that Ideally, a legal framework that allows for the implementation of e-government processes and services will:

❖ Preserve basic public policy goals, such as privacy and security, retention, and public access to information.

❖ Provide the statutory basis of, authority for, and regulations related to the government processes and services that may be supplied electronically.

❖ Assign responsibility for and ownership rights to the data provided and accumulated electronically.

❖ Address the sharing of data collected by one government agency with other government
agencies that require the same information.

❖ Clearly, define jurisdictional responsibilities related to intergovernmental transactions and business to government transactions.

❖ Provide a mechanism by which legal requirements are recognized and enforced.

- ❖ Provide a basis for the establishment of fees related to electronic processes and services.
- ❖ Identify the records that should be maintained, the period of retention and the required storage media.
- ❖ Not be technology-specific or favour one form of service delivery (traditional or electronic).
- ❖ Minimize costs and the potential for litigation.[International Review of Law Computers & Technology, Volume 18,No1,pages 109-132, march 2004.Ibid(n49)]

## 2.1.9 Public Service Defined

The concept of public service differs from country to country, but in this case, the concern is what it is in Nigeria. Section 318 of the 1999 constitution of the Federal Republic of Nigeria as amended defines the public service as "the service of the Federation in any capacity in respect of the Government of the Federation" and includes Service as:

a) clerk or other Staff of the National Assembly or of each House of the National Assembly;

b) member of Staff of the Supreme Court, the Court of Appeal, the Federal High Court, the High Court of the Federal Capital Territory Abuja, the Sharia Court of Appeal of FCT, the Customary Court of Appeal of FCT or other courts established for the Federation by this Constitution and by Act of the National Assembly;

c) member or Staff of any Commission or authority established for the Federation by this Constitution or by an Act of the National Assembly;

d) staff of any area Council;

e) staff of any Statutory Corporation established by an Act of the National Assembly;

f) staff of any educational institution established or financed principally by the Government of the Federation;

g) staff of any company or enterprises in which the Government of the Federation or its agency owns controlling shares or interest;

 h) members or officers of the armed forces of the Federation or the Nigeria Police Force or other government security agencies established by law.

In a clearer view, Agba, Ochimana and Abubakar (2013) see public service as "the activities of government employees and institutions aimed at formulating and implementing governmental policies and programmes for the interests of the masses (public)." However, the concept of public service is often used interchangeably with the term civil service but the fact remains that they are two unique concept, though with some similarities. According to Adamolekun (2002) cited in Ibietan (2013), public service "usually indicates a wider scope than the civil service (and)... means the totality of services that are organized under public (i.e. government) authority." It covers ministries, departments and agencies of the central government, its field administration, local government, the military, other security forces and the judiciary.

This is a broader conceptualization and it is in line with the constitutional definition of the terms and the distinction between them. Civil Service refers to "the body of permanent officials appointed to assist the political executive in formulating and implementing government policies" (Ibietan, 2013). The similarities they both share is that they are machinery of government saddled with the responsibility of implementing governmental policies, that is carrying out the day-to-day duties that public administration demand (Adebayo, 2000). It is imperative to state that public service encompasses the civil service or put differently is broader than civil service. Public service has to do with the totality of services that are organized under government (Ezeani, 2006).

## 2.1.10     Public Service Delivery

Public service describes the direct and indirect services provided by government to its nationals or residents within a country. Government provides public service directly by engaging in production, distribution or service and indirectly by financing services rendered to the citizenry by third parties. Governments control the resources of the people and are duty-bound to render services that benefit the people albeit in varying degrees. The extent of involvement of government in service delivery to the masses often corresponds to the economic system in use. While the private sector dominates service delivery in a capitalist economic system, the government is the dominant figure in a socialist economy. For a mixed economy like Nigeria, both the private sector and government provide services substantially to the general public. In Nigeria, government constitutes the major service provider through the Public Service.  The Public Service refers to all organisations that exist as part of government machinery for delivering services that are of value to the citizens.

According to Oronsaye (2010), public service delivery can be seen as "the process of meeting the needs of citizens through prompt and efficient procedures."  This implies that the interaction between government and citizens are such that the needs of the citizens are met in a timely manner, thereby making the citizens key in public service delivery. The implication here is that as the private sector considers its customer as 'king', thereby ensuring quality service delivery, the public should be regarded as 'master' and the beneficiary of enhanced performance of the public service (Aladegbola & Jaiyeola, 2016). Acceptable service delivery can be seen as one of the core responsibilities for the establishment of public organisations. It is identified as "one of the key functions of the public sector." (Mitel,  2007). Okafor, Fatile & Ejalonibu (2014) see public service delivery as "the result of the intentions, decision of government and government institutions, and the actions undertaken and decision made by people employed in government institutions." They posit that it is "the provision of public goods or social

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(education, health), economic (grants) or infrastructural (water, electricity) services to those who need (or demand) them".

Supporting the arguments above, Ohemeng (2010) views public service delivery from the light of its key features as "doing more with less, empowering citizens, enhancing transparency and holding public servants accountable." Corroborating this further, Coopers (2014) itemises seven core objectives for public service delivery namely:

❖ **Speed** – The time taken to deliver a service should be the shortest possible for both the customer and the organisation delivering the service, right first time.

❖ **Engagement** – The manner in which services are delivered should be seen as customer centric (i.e. participatory and trustworthy with the customer's needs at the core).

❖ **Responsiveness** – There should be an 'intelligent' mechanism in place to address any variation in meeting service levels and to drive changes in the service delivery organisation.

❖ **Value** – The customer needs to believe that the service delivery mechanism is cost effective, and value is driven by customer outcomes, not organisational processes.

❖ **Integration** – The service delivery mechanism should be integrated. There should be no 'wrong door' policy for the customer.

❖ **Choice** – There should be multiple channels for service delivery, so that customers can have 'channels of choice', depending on specific needs at specific times.

❖ **Experience** – Personalisation of service is necessary to ensure that customers' experiences are on a par with what they are used to receiving from the private sector. Arising from the above, it can be concluded that there is a relationship between e-governance adoption and enhanced public service delivery in a country.

Joseph et al (1999) identifies six quality service delivery factors –convenience/accuracy; feedback/complaint; management; efficiency; queue management; accessibility; and customization. Equally important is security and privacy, and website design and ease of use.

According to ISS (2015), there are four main elements for effective and efficient service delivery which include service culture, quality of service, employee engagement and customer experience. This study will assess JAMB position as regards e-Governance from these four components of service delivery.

**Figure 2: Key Elements/Components of Service Delivery**
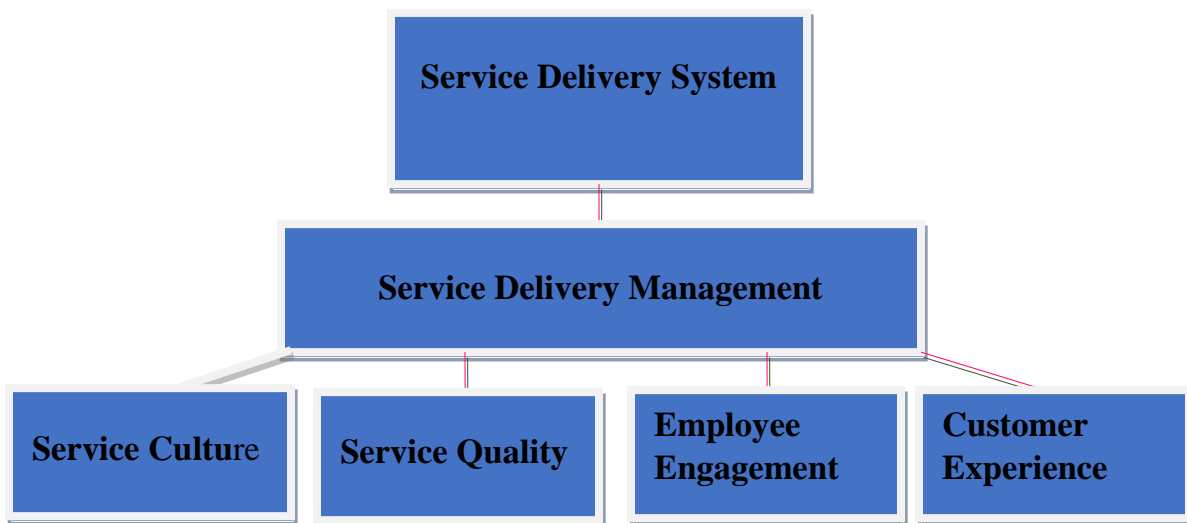


Source: Adapted from ISS (2015)

**Service Culture:** Service culture is considered to be a value creation mode for the company as well as the customer (Ostrom, 2010). Although the significance of service culture is known, there is a lack of understanding of current conceptual models referring to diverse service perspectives (Davis, 2013). This demonstrates the need to construct and cultivate service value and move from product based to service dominant logic (Brodie, 2009 as cited in Davis, 2010). Ostrom (2010) argue that service culture is a basic mode for creating value for service organizations as well as their customers. At present there is

a lack of proof to draw the attention of the supplier to the need for service practice and culture.

This led to the discussion by Edvardsson and Enquist (2006), who state that changes in "the service process must be understood and accepted by both employees and the users/customers" (Davis, 2010).This should result in ongoing training for customers and employees (Edvardsson and Enquist, 2006 as cited in Davis, 2010), which would help them to understand and carry out the innovative concept of service.

Along with the training, as pointed out by Lytle and Timmerman (2006), rewards should be provided for service-giving behaviours and for creating and delivering service excellence. "This also helps customers to be service co-creators" (Lusch, Vargo and O'Brien,2007 as cited in Davis, 2010,), encouraging service transformation by adapting new ways of service or innovating for fostering a positive service climate (Liao and Chuang, 2007). It would also help to build a strong association with the clientele leading to improved quality and service climate, which would be enhanced through service orientation (Gronroos, 2006). Service orientation predetermines the handling of a service encounter (employee-customer interaction). Patricio, (2011) also mention that a service system is comprised of technology, people and other resources in different phases of service helps to co-create value.

Antonacopoulou and Kandampully (2000) argue that as the revolution of culture change begins, suppliers focus their attention on outside demand and try to relate it to their in-house requirements.

Even Edvardsson and Enquist (2006) point out that during big transactions firms need to concentrate on transforming their principle mission of serving their main clients and their in-house culture can fulfill the rest of the requirements. Also the authors emphasize that, although "external pressure is important for continuous quality improvement" it may lead to a fear of change which can prevent service culture transformation, (Davis, 2010).

Kupers (1998) as cited in Davis (2010) notes that such disturbing sentiments will disturb the appearance of the service and also the service sharing relations between the client and the firm. This could lead to a drastic change being imposed on a firm's capability to build and sustain a service culture through the progress of employees, their service frame of mind and inculcating knowledge and a service focus during the transformation of the firm (Ostrom, 2010).

Davis and Gautam (2011) in their study have focused on service culture as an interconnected progression shaping the recruiting, training and rewarding of human resources activities. They have also represented service culture as a service framework for a product-service based organization. In addition their study has shown that through employee and customer knowledge an organization gets developed.

In their study Ostrom (2010) have indicated that to develop and maintain a service culture, it should be based on the four key principles):

1. Recruiting, training and rewarding.

2. Developing a service mindset in product focused organizations.

3. Creating a learning service organization by harnessing employee and customer knowledge.

4. Keeping a service focus as the organization grows and evolves.

Once a superior service delivery system and a realistic service concept have been established, there is no other component so fundamental to the long-term success of a service organization as its culture ( ISS, 2015).

**Customer Experience:** The notion of Customer Experience was first brought into focus by Holbrook and Hirschman in mid-1980s. Since then consumer researchers have extended their view from the mainstream approach which considered customers primarily as rational decision makers. Recently, the experience notion has become an important element to understand consumer behavior (Addis& Holbrook, 2001). Furthermore, the

concept also has been working as a beacon for many significant literatures in marketing arena. Most notably, Pine and Gilmore's book on the Experience Economy (1999) gives a good overview on how experience emerged as the forth economic offering after prior economic offerings- commodities, goods and services. Moreover, in the following years, various literatures can be found recognizing the importance of experience as a way to create value for both companies and their customers. Along these lines, a number of marketing experts have contributed in the sector in connection with experience, e.g. Bernd Schmitt (1999), LaSalle & Britton (2003), Shaw & Ivens (2002), and Gentile, Spiller & Noci (2007) to name a few.

Despite the various contributions, it has been found that the concept of customer experience lacks solid foundation, mainly because the notion of "experience" is ill-defined (Caru & Cova, 2007). Definitions of experience carry distinct meanings depending on various scientific disciplines such as, philosophy, sociology, psychology and etc. Even, consumer behavior and marketing disciplines hold separated meanings of experience (Caru & Cova, 2003). Thus, before dealing with customer experience and CEM concepts, it is essential to look at definitions of experience to highlight some important dimensions of experience.

According to consumer behavior study "an experience is above all a personal occurrence, often with important emotional significance, founded on the interaction with stimuli which are the products or services consumed" (Holbrook and Hirschman, 1982; cited by Caru & Cova, 2003). This definition acknowledges that experience is subjective and personal in nature. Here, subjectivity refers to a personal psychological state, for example, consumers emotions during consumption experience are subjective, which changes according to change in environments (Addis & Holbrook, 2001). Moreover, the above definition also recognizes the roles of emotions as important features of experience, which have been neglected before (Ibid).

The marketing discipline views experience from a more objective point of view, where marketers aim to create unforgettable experiences at various interactions that take place between service providers and their customers ( Caru & Cova, 2003). Such kind of experiences is termed as extraordinary experiences (Ibid). In order to make an experience memorable or extraordinary, creating positive emotions are crucial. From this perspective, marketing literatures can be found emphasizing emotions in creating experiences (e.g. Shaw, 2007). Despite differences, both consumer behavior and marketing studies have given importance to the roles of emotion to create superior value for customers through experience. Elaborating on the marketing aspects of experience, several researchers have focused on extraordinary experiences (e.g.Arnould & Price, 1993; LaSalle & Britton, 2003). Arnould and Price (1993) define extraordinary experiences as those characterized by a sense of newness of perception and process, triggered by unusual events and high levels of emotional intensity and experience (Arnould & Price, 1993). The basic premise of this definition is the assumption that customers cannot predict the outcomes of an event due to vague expectations, dynamic interactions with other customers, and changes of contexts. Nevertheless, the definition given by Arnould and Price (1993) emphasizes solely on emotional aspects of customer experience and thus might limit its application to specific industries such as entertainment industry e.g. theme park, extreme sports e.g. river rafting, leisure business and the like (Voss, Roth & Chase, 2008).

A study conducted by Gentile (2007) on some well-known and remarkably successful products found out that both functional and emotional values scored almost similar and even in some cases functional value scored higher than emotional value (Gentile, 2007). Therefore, from the holistic perspective it is important to balance between both rational and emotional experiences.

Having looked at characteristics of experience, some notable definitions of customer experience that can be found in existing customer experience literatures. One of the

recent Customer Experience definitions proposed by Gentile, Spiller and Noci in 2007: ''The Customer Experience originates from a set of interactions between a customer and a product, a company, or part of its organization, which provoke a reaction. This experience is strictly personal and implies the customer's involvement at different levels. Its evaluation depends on the comparison between a customer's expectations and the stimuli coming from the interaction with the company and its offering in correspondence of the different moments of contact or touch points'' (Gentile, 2007).

This definition gives a rather broad view on the concept of customer experience. Firstly, the definition conceptualizes that customer experience is multidimensional, which means that it includes sensory, cognitive, affective, physical and relational components (Gentile, 2007). Secondly, it recognizes the importance of both rational and emotional aspects of customer experience, which correlates with one of the distinguished feature of experience that was mentioned in the previous section. Thirdly, moments of contact or touch points notion consider all stages of customer experience specifically-pre-purchase, purchase and post-purchase experiences (Davis & Dunn, 2002). Finally, the above definition also sheds light on customer experience measurement by comparing customers' prior expectations with the actual experience in various touch points.

Another important and related definition of customer experience is presented by Meyer and Schwager (2007). According to the authors "Customer Experience is the internal and subjective response customers have to any direct or indirect contact with a company. Direct contact generally occurs in the course of purchase, use, and service and is usually initiated by the customer. Indirect contact most often involves unplanned encounters with representatives of a company's products, service or brands and takes the form of word-of-mouth recommendations or criticisms, advertising, news reports, reviews and so forth."(Meyer & Schwager 2007).

Both of the above presented customer experience definitions share some common premises. Specifically, experience is characterized as internal and subjective to the customer. However, the second definition provides enriched dimension by extending the range of touch points by considering both direct and indirect contacts. Identification of all touch points is crucial in order to deliver total customer experience because the brand can impact and be impacted by both direct and indirect touch points. It is important to note that not all touch points are important for a company. For that reason, a company needs to identify the key touch points. It can be seen, that the concept of context is rather implicit in both of the aforementioned customer experience definitions. One might argue the various touch points can be regarded as context. However, by abiding the line of thoughts of many others scholars (e.g. Pullman & Gross, 2004; Haeckel, 2003; Pine & Gilmore, 1999), there is emphasize on the context notion in delivering customer experience.

A definition on customer experience emphasizing on context states that "an experience occurs when a customer has any sensation or knowledge acquisition resulting from some level of interaction with different elements of a context created by a service provider" (Gupta & Vajic, 1999; stated in Pullman & Gross, 2000). Gupta and Vajic (1999) here define context as the physical and relational settings, where customers interpret and make sense of the physical environment and the interactions with service facilitators and other customers in a given service setting. Building on this definition, deliberate design of contexts can evoke emotions which can engage customers in unique, memorable and meaningful ways (Pine & Gilmore, 1999).

However the literature suggests that whatever the service (or indeed product) a customer is buying or receiving, that customer will have an experience; good, bad or indifferent, i.e. a service always comes with an experience (Carbone and Haeckel 1994) and that all service encounters provide an opportunity for emotional engagement, however mundane the product or service might be (Berry and Carbone 2007, Voss and Zomerdijk 2007).

A challenge that seems to be emerging from the literature is how can organisations systematically engineer their customer experiences (Carbone and Haeckel 1994) in order to achieve the "triple bottom line" i.e.to make them not only better for the customer but also better for the organisation's staff and better for its "bottom line" i.e. cheaper and more efficient (Bate and Robert 2007, H.M. Government 2007).

**Service Quality:** According to Parasuraman (1991), companies can get their competitive advantage by using the technology for the purpose of enhancing service quality and gathering market demand. For decades, many researchers have developed a service perspective (Zeithaml, 2009, Ramsaran and Fowdar, 2007).Chang (2008) describes that the concept of service quality should be generally approached from the customer's point of view because they may have different values, different ground of assessment, and different circumstances.

Parasuraman, Zeithaml and Berry (1990) mention that service quality is an extrinsically perceived attribution based on the customer's experience about the service that the customer perceived through the service encounter. According to the work of Kumra (2008), service quality is not only involved in the final product and service, but also involved in the production and delivery process, thus employee involvement in process redesign and commitment is important to produce final tourism products or services.

Another research study on service quality is presented by Grönroos (2007) who focuses on a model that is a comparison between customer expectations of the service and their experience of the service they have received before. This model is named "total perceived service quality". As he emphasizes on what customer is really looking for and what they evaluate, the service quality is based on two dimensions. The first dimension is the technical quality and this dimension refers to the outcome, what is delivered or what the customer gets from the service. The next dimension is the functional quality which refers to the manner in which the service is delivered or how it is delivered. Both dimensions

affect the corporate image and the perception of quality in various ways. According to total perceived service quality model, perceived quality of a service is not only affected by the experiences of the quality dimensions that the consumer used for evaluating whether quality is perceived as good, neutral, or bad. It is also affected by the perceived quality of given service as well as the outcome of the evaluation process. Chang (2008) support the earlier line of thinking by Grönroos but Parasuraman, Zeithaml, and Berry developed "The Gap Analysis Model", which is a well known model of service quality.

This model shows an integrated view of the consumer-company relationship. The main idea of the model is focused on the premise that service quality is dependent on the size and direction of the five gaps that can exist in the service delivery process.

 a. Gap 1: the gap between customer expectations and those perceived by management to be the customer's expectations.

 b. Gap 2: the gap between management's perception of consumer expectations and the firm's service quality specifications.

 c. Gap 3: the gap between service quality specifications and service delivery.

 d. Gap 4: the service delivery, external communication gap.

 e. Gap 5: the perceived service quality gap, the difference between expected and perceived service (Parasuraman, 1990).

The first four gaps are identified as functions of the way in which service is delivered from the service provider to the customer, while gap number five is connected to the customer and as such is considered to be the truth of service quality. Gap five is also the gap that the SERVQUAL instrument influences. Edvardsson (1996) mentioned that it is important for a service organization to define the level of quality at which to operate; he argued that it is more relevant to speak of the "right quality" than of merely high quality. The word quality means different things to people according to the context. Lovelock and wirtz (2007) mention that David Garvin identifies five perspectives on quality.

**1**. The transaction view of quality is synonymous with innate excellence: a mark of uncompromising standards and high achievement. This viewpoint is often applied to the performing and performing of visual arts. It is argued that people learn to recognize quality only through the experience gained from repeated exposure and managers or customers will also know quality when they see it is not very helpful.

 **2**. The product-based approach sees quality as a precise and measurable variable. Differences in quality, it is argued, reflect differences in the amount of an ingredient or attribute possessed by the product or service. Because this view is totally objective, it fails to account for differences in the tests, needs, and preferences of individual customers or even entire market segments.

**3**. User based definitions starts with the premise that quality lies in the eyes of the beholder. These definitions equate quality with maximum satisfaction. This subjective, demand oriented perspective recognizes that different customers have different wants and needs.

**4**. The manufacturing based approach is supply based and is concerned primarily with engineering and manufacturing practices, quality is also operation driven.

**5**. Value based definitions define quality in terms of value and price. By considering the tradeoff between perception and price, quality comes to be defined as "affordable".

Grönroos (1983) also describes different definitions and one of them comes from Philip Crosby (1979) who defines service quality as conformance to specifications. Services are performances and often they are performed in the presence of the customer. Services have a nature of varying from one firm to on other and from one situation to on other. It is also possible to make a distinction between technical and functional service quality, technical quality is connected to what is delivered and functional quality is connected to how it is delivered.

On other example is Jarmo Lehtinen who describes customer quality in terms of process quality and output quality. The process quality is evaluated during the service delivery

and output quality is evaluated after the service delivery. In the study described by Grönroos (1983) 10 determinants of service quality were identified:

**Reliability**

That is connected to the consistency of performance and dependability.

Here it is determined if the company give the service in the right way the first time and keeps to its promises.

**Responsiveness**

This factor concerns to what extent the employees are prepared to provide service. This involves factors such as mailing a transaction slip immediately, calling a customer back in short time and giving prompt service.

**Competence**

Competence is connected the knowledge and skills of contact personnel, operational support personnel (and also research capability) that are needed for delivering the service.

**Access**

This factor is connected to the approachability which means for example if the operating hours are convenient, the location of the facilities are convenient, the waiting times are short and also easy access by telephone.

**Courtesy**

This factor involves politeness, respect, consideration, friendliness of contact personnel (including receptionists, telephone operators and so on).

**Communication**

This is about keeping the customer informed in a language they can understand and also listen to the customer. The company may have to make some adjustments in order to include foreign customers.

**Credibility**

Factors such as trustworthiness, believability and honesty are included. It means to the level the company has the customer's best interest at heart. Factors that affect the credibility are the company name, reputation, personal characteristics and the degree to which the hard sell is connected to interactions with customers.

**Security**

Security means freedom from danger, risk or doubt. Factors included are: physical safety, financial security and confidentiality.

**Understanding the customer**

This is about making an effort to understand the customer which involves learning about specific requirements, providing individualized attention and recognizing also the regular customer.

**Tangibles**

They include physical aspects of the service such as physical facilities, appearance of personnel, tools or equipment that is used to provide the service, physical representations or other customers in the service facility.


Lapierre (1996) study the service quality evaluation from various perspectives based on studies done by Gronroos (1983) and Parasuraman (1985). Lapierre (1996) distinguish between professional services and standard services, by considering the professional service as being „an art or an representation offered by a person with qualified experience to a third party that disposes of a code of ethics and which represents the object of high quality control standards." A standard service is „any other tertiary activity, a temporal experience, an art or a representation in which propriety cannot be transfered, it is intangible and usually presupposes a personal interaction between client and service provider."

 Cetină(2009) considers that a well-delivered service is a profitable strategy for the company which offers concomitantly a greater satisfaction to the customer. A high quality service results in attracting new clients, an enlarged business portfolio with current customers and new potential customers. The quality is the main element which creates loyal customers, customers satisfied with the choice they made regarding a company and its services, customers that will therefore use its services in the future and recommend them to their friends and acquaintances.

**Employee Engagement:** Harter, Schmidt, and Hayes (2002) published one of the earliest and most definitive pieces of practitioner literature on employee engagement. Using a research foundation pioneered by the late Donald O. Clifton in 1985 as a part of the Gallup Strengths movement and popularized by the publication of First Break All the Rules (Buckingham & Coffman, 1999), Harter and colleagues (2002) pulled data from a meta-analysis of 7,939 business units across multiple industries. Harter (2002) were the first to look at employee engagement at the business unit level and used an enormous data-base to link higher levels of employee engagement to increased business unit outcomes.

In their conceptualization, employee engagement was defined as an "individual's involvement and satisfaction with as well as enthusiasm for work" (Harter, 2002). This definition added the expectation of an individual's satisfaction level, significantly altering the way engagement had been viewed. In addition, prior to Harter (2002), employee engagement was seen as a broad-based variable organizations assumed they had or did not have—a concept that executive leaders assumed that they controlled.

Harter (2002) showed that organizational culture should be measured at the individual level by looking at separate business units, separate unit managers, and separate unit employees. In later works (Fleming & Asplund, 2007; Harter, Schmidt, & Keyes, 2003; Wagner & Harter, 2006), Gallup researchers claimed that engagement develops one micro-culture at a time, highlighting the individual Human Resource Development Review 9(1) view of engagement.

In a recent update, Gallup researchers continued to drive empirical research from the practitioner perspective with a growing database of 10 million participants speaking 51 languages from 736 organizations in 144 different countries; their research continues to confirm their previous research findings (Fleming & Asplund, 2007). Harter (2002) article was a catalyst for the rapid expansion of interest in the employee engagement

concept because it was the first widely disseminated publication to suggest an employee engagement–profit linkage. The Corporate Leadership Council (2004) and Towers Perrin (2003, 2007) as well as other similar firms followed Harter (2002) by disseminating consulting literature on employee engagement geared toward proprietary consulting products. These for-profit organizations remain huge international players in driving the profitability of the employee engagement concept, although none share a common conceptualization or definition.

The first academic research to specifically conceptualize and test antecedents and consequences of employee engagement occurred in 2006 (Saks, 2006). Prior to

Saks (2006), practitioner literature was the only body of work connecting employee engagement drivers to employee engagement and its consequences. Saks believed employee engagement developed through a social exchange model and was the first to separate job engagement and organizational engagement into separate types of employee engagement. Using 102 working employees enrolled in a gradate course at a large Canadian university, Saks defined employee engagement as "a distinct and unique construct consisting of cognitive, emotional, and behavioral components associated with individual role performance".

This definition was inclusive of previous literature by introducing the idea that employee engagement was developed from cognitive (Kahn, 1990; Maslach et al., 2001; Maslow, 1970), emotional (Harter, 2002; Kahn, 1990), and behavioral components (Harter, 2002; Maslach, 2001). Through his research, Saks (2006) provided an important bridge between previous early theories of employee engagement, practitioner literature, and the academic community and was the first to propose an empirical model. In 2006, SHRM commissioned a publication on employee engagement and commitment as an extension of their

Effective Practice Guidelines Series. This report was hailed as a "clear, concise, and usable format" (Vance, 2006, p. v) for understanding employee engagement, hoping to

make the concept of employee engagement more accessible to SHRM members. Although topic headings such as "Key Ingredients," "Job and Task Design," and "Designing Engagement Initiatives" were peppered throughout the pages, this publication was not clear and concise, lacked a single definition of employee engagement, and offered few research-based solutions for those struggling with developing engaged employees. This publication is noteworthy however because it marked the entrance of professional societies into the engagement conversation.

Since the first SHRM publication, future SHRM studies have developed further conceptualizations around the employee engagement construct (see Lockwood, 2007).

Two years after the SHRM study, the ASTD commissioned a study in association with Dale Carnegie Training to look at employee engagement (Czarnowsky, 2008).

This study focused on the role of learning in the employee engagement construct, marking the first major research publication by ASTD on employee engagement and the first look into the concept from an HRD perspective. Using data from 776 human resources and learning executives from around the world, ASTD defined engagement as "employees who are mentally and emotionally invested in their work and in contributing to their employer's success" (Czarnowsky, 2008). The results of the study showed connections to the foundational work of Kahn (1990) and Maslach (2001) by creating meaningful work environments, providing opportunities for learning and focusing on the experience of the employee.

This study presented an important link to the academic community, as ASTD was the first professional society to use a research-driven framework to understand the employee engagement concept. Building significantly on the work of multiple scholars, Macey and Schneider (2008) pioneered conceptual research in the area of employee engagement. Conceptualizing that employee engagement develops from (a) trait engagement, (b) state engagement, and (c) behavioral engagement (2008), they drew significant parallels from previous research and defined each as a separate engagement construct, similar to Saks

(2006). From their perspective, employee engagement is defined by suggesting "(a) job design attributes . . . directly affect trait engagement, (b) the presence of a transformational leader . . . directly affect[s] state engagement, and (c) the presence of a transformational leader . . . directly affect[s] trust levels and thus, indirectly affect[s] behavioral engagement" (Macey & Schneider, 2008).

In this conceptual model, the preceding state of engagement builds on the next, each developing a piece of the overall employee engagement concept. This contribution to the field helped to clear the cluttered, scattered, and unfocused conceptual state of employee engagement by breaking the engagement construct into distinct parts and debunking "folk" definitions of engagement.

As evidenced by the literature reviewed, several definitions of employee engagement exist. Although each represents unique perspectives of the time and field, the disjointed approach to defining employee engagement as lent itself to its mis-conceptualization and to the potential for misinterpretation. Starting with the earliest specific definition and working forward in time. "Personal engagement is the simultaneous employment and expression of a person's 'preferred self' in task behaviors that promote connections to work and to others, personal presence, and active full role performances" (Kahn, 1990)." "A persistent, positive affective-motivational state of fulfillment in employees that is characterized by high levels of activation and pleasure" (Maslach, 2001)." "Employee engagement refers to the individual's involvement and satisfaction with as well as enthusiasm for work" (Harter, 2002)."
"A distinct and unique construct that consists of cognitive, emotional, and behavioral components that is associated with individual role performance" (Saks, 2006)." "[Engaged] employees are mentally and emotionally invested in their work and in contributing to their employer's success" (Czarnowsky, 2008)." Trait engagement is defined as the "inclination or orientation to experience the world from a particular vantage point" (Macey & Schneider, 2008). Psychological state engagement is defined as

an antecedent to behavioral engagement (encompassing the constructs of satisfaction, involvement, commitment, and empowerment). Behavioral engagement is "define[d] in terms of discretionary effort" (p. 6).

In each of the definitions, several areas of consistency and inconsistency can be identified. Inconsistently, it seems there is some confusion about where the decision to become engaged develops. For some researchers, being engaged is a personal decision; it concerns the individual employee, not the organization. Many definitions (Kahn, 1990; Macey & Schneider, 2008; Saks, 2006) allude to this; however, Maslach (2001) and Czarnowsky (2008) speak only of engagement in generalities, which leaves the reader to assume that engagement is an organizational-level variable. This underscores a common misconception that employee engagement is about the organization and explains why some scholars, researchers, and practitioners have trouble developing specific strategies. They simply start their planning too widely. Instead, when planning strategies, scholars, researchers, and practitioners should ask, "How will this affect our employees and what are the implications of the strategy for their work?" As Kahn (1990), Harter (2002), Saks (2006), and Macey and Schneider (2008) suggested to their readers, engagement starts one person's experience of work at a time.

Employee engagement concerns the individual, not the masses, and is a personal decision that cannot be mandated or forced. Engagement in work is a personal experience inseparable from the individualistic nature of being human. Another inconsistency concerns types of engagement. In two definitions (Macey & Schneider, 2008; Saks, 2006), different types of engagement can be identified:
(a) cognitive engagement, (b) emotional engagement, and (c) behavioral engagement—each as separate, definable areas. Other definitions mention only one type of general engagement (Czarnowsky, 2008; Harter, 2002; Maslach, 2001). Saks
(2006) empirically tested this idea and presented data that show support for different types of engagement. The idea according to Saks (2006) and further developed by Macey

and Schneider (2008) is that each type of engagement builds on the next, which is consistent with the early employee engagement framework (Alderfer, 1972; Maslow, 1970). According to Macey and Schneider (2008) and Saks (2006), there are different types of engagement, each with different antecedents and outcomes. Little empirical evidence exists for this delineation at present; however, looking at engagement from this perspective opens new possibilities for what and how organizations measure engagement as well as what engagement-enhancing strategies organizations should choose to invest in. From this emerging conceptual space, it seems unwise for an organization to start developing behavioral engagement when cognitive and emotional engagement may precede such an overt state of employee behavior.

Consistently and conceptually connected in consequence with the idea of different types of engagement, scholars agree that employee engagement has no physical properties but is manifested and often measured behaviorally (Kahn, 1990; Macey & Schneider, 2008). Behavioral manifestation of employee engagement is understood inconsistently as an employee's role performance, an employer's success and profit, or an employee's discretionary effort but consistently understood as an internal decision manifested outwardly and is best conceptualized as a positive or forward-moving emotive state (Maslow, 1970).

By taking into context the historical foundations of the concept (Kahn, 1990; Schaufeli et al., 2002), it becomes clear employee engagement is rooted in the psychology of the employee and observed through behavior. An employee must decide if and when they are willing to engage. Although this thought process may not be an entirely overt one, the decision to disengage can be very conscious and overt. Finally, scholars agree that employee engagement is about adaptive behaviors purposefully focused on meeting or exceeding organizational outcomes. This is not to be confused with extra-role behaviors such as organizational commitment behaviors (OCBs) outside of one's primary area of responsibility (Macey & Schneider, 2008; Saks, 2006). Although engaged employees

may be involved in OCBs, employee engagement is focused on an employee's main responsibilities of work (Kular, Gatenby, Rees, Soane, & Truss, 2008). Engaged employees excel at their work through a willingness to adapt their behavior toward communicated organizational outcomes.

## 2.1.11 Interface between E-governance and Service Quality

The government uses information technology and particularly the Internet to support government operations, interact with citizens, and provide government services which is termed E- Government. The interaction may be in the form of obtaining information, filings, or making payments and a host of other activities via the World Wide Web (Sharma & Gupta, 2006), (Sharma, 2007).

Service Quality has been recognized as one of the major factors for maintaining sustainability and one of the driving forces for an organization's achievement. Quality Service represents the comparison between customers' expectations of how a company or organization should perform and the service performance that customers perceive.

The most dominant and extensively used scale for assessing quality service is SERVQUAL Scale, which was developed by Parasuraman, Zeithami and Berry (1985). The dimensions of service quality for this study are Reliability (the ability to execute the promised service in an accurate and trustworthy way), Responsiveness (willingness to assist the end users and provide punctual service), Assurance (personnel cognizance which persuades user confidence and trust), and Empathy (providing caring and paying individual attention to customers).Although the SERVQUAL scale was developed in a marketing environment, it has been widely used in an Information System context and Information Technology. According to Lee and Lin, many research studies have successfully employed SERVQUAL in E-Commerce context.

However, designing IT infrastructures for large public sectors is a challenging task since it requires knowledge of existing processes, the views of different players and users, and the conjunction of technical expertise in different domains that rarely reside in a single individual (Veen, Annelies van der; Jan van Bon, 2007).

Hardware and software are essential in the IT applications as they ease the work of an organization, some software are used as analytical hierarchy approach and tools that can be used to assess E-Government induced changes in Public Service Quality as Many authors have recognized the transformational potential of ICT in government due to the application of software and hardware Jeong (2007).

It is also believed that web accessibility improves service quality in public sectors because there are more needs addressed by web accessibility and improve service quality including, visual impairments to help citizens with such a problem to get the services required. (Trenton 2013) Human resource is a great aspect in running of an organization, be it public or private. All institutions need people who have the required skills to do the appropriate jobs available; therefore Human Resource is concerned with how people are managed in an organization, focusing on policies and the system. (Johnason, 2009).

**FIGURE 3: CONCEPTUAL FRAMEWORK**
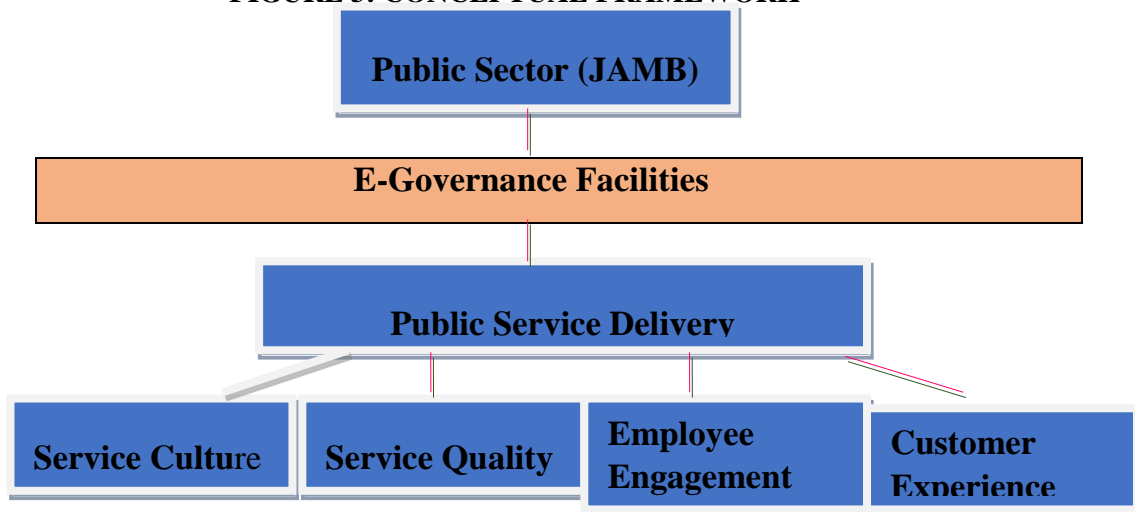


Source: Adapted by Researcher (2017)

## 2.1.12 E-Governance and Public Service Delivery in Nigeria: The nexus

In Nigeria, the public sector plays significant role in service delivery having controlled relatively large portion of the available economic resources of the people (Abasilim, Gberevbie, &Ifaloye, 2017; Darma& Ali, 2014).The government provides public services through Ministries, Departments and Agencies established by Acts of the parliament. The government recruits and maintains sizeable number of workers to render essential and non-essential services to the masses. Where expertise is lacking or government considers that efficiency may not be optimized using the available workforce, she considers concession or using third party services to serve public interest.

Due to inefficiency that characterizes public service delivery in Nigeria, authors(Abasilim 2017;Ofoegbu, Onodugo, & Onwumere, 2015;Adejuwon, 2014; Darma &Ali, 2014) have advocated for a paradigm shift in governance and government processes to more efficient ones.

There have been concerted efforts (at varying intensity level) by successful governments to carry out reforms aim at improving public service delivery. Recent attempt at curbing corruption, nepotism and laziness that have become pervasive in the Nigeria public service, led to the establishment of SERVICOM. SERVICOM is an agreement (i.e. SERVICE COMPACT) between the government and the governed to promote efficient public service delivery through independent monitoring and control. The Economic and Financial Crimes Commission (EFCC) and the Independent Corrupt Practices Commission (ICPC) are to some extent, ultimately aimed at improving public service commission by dealing with corruption (in various forms) in the public service. In spite of the SERVICOM initiative and efforts of the agencies to improve public service delivery, inefficiency is still evident in the Nigeria public service delivery.

Several blueprints towards attaining efficiency in public service delivery have been proposed but e-governance appear to dominate the public service discourse in recent

times. Many recent studies in Nigeria and many more elsewhere have advocated for e-governance as a viable option towards attaining efficient public service delivery. In Nigeria, Abasilim (2017), Eme & Onuigbo, (2015), Fatile, (2012) and  Okwueze, (2010) among others, have advocated for the adoption or deepening of e-governance in the Nigeria public service as a plausible option towards improving public service delivery in the country. In the extant literature on governance, e-governance is construed in various ways. There are also complications on the stages of e-governance as well as how to measure it. This requires a clear view of what e-governance is and perhaps, what is it not.

## 2.1.13 What Has Been Achieved in Nigeria Thus Far?

 Notwithstanding the fact that Nigeria is home to over 178 million people spread over an area of land of about 923,768 square kilometres and the logistic task that goes with implementing services provided by the central government round the country can only be envisaged, there are still noteworthy achievements thus far as regards the progress of government delivering G2C services via ICT channels.

The West African Examinations Council established an online presence as far back as 2003. This has enabled candidates for the West African Senior School Certificate Examination (WASSCE) to access information to address all queries concerning participation, registration and results.

The same goes for the National Examination Council NECO examination, which is an equivalent to the WASSCE examination has an online presence as well making the process of participation easier for prospective candidates.

In 2010 there was another major improvement in the education system. The National Matriculation Examination for Admission to Nigerian higher institutions of learning - Joint Admission and Matriculation Board (JAMB) written by million of candidates of

which their scripts are now being computer-marked and the results are released and up-loaded to the website within seven working days. This complete turnaround can only be fully appreciated when contrasted with the previous time-line of 8weeks where candidates had to wait nervously for mails to be sent through the physical post office. This generated all kinds of muddles-up as some alerts got missing in transit, owing to the fact that some candidates might have changed addresses within that gap. More so this was a huge improvement in the sense that the manually marked scripts were more prone to mistakes and even examiners influences.

In the Oil and Gas sector being one of the countries most important industries it was imperative that there be some improvement to contract allocation phasing out favouritism. In 2006 there was a major reform in transacting with the government in the industry. The Nigerian National Petroleum Corporation (NNPC) through one of its division National Petroleum Investment Management Services (NAPIMS) created the Nigerian Petroleum Exchange (Nipex). Nipex is set up to improve the contracting processes in the oil and gas sector. It is the electronic contracting platform for NNPC and its operating partners to offer projects to pre-qualified contracts and suppliers for easy selection. This system has brought about fast, efficient and transparent transactions in the industry, reducing the contracting cycle timeline from almost 24months to merely 12months. It has created a platform for indigenous contractors and suppliers to be more visible for contract opportunities. Stakeholders in the industry can be rest assured that they would get the best-qualified vendors to work on their various projects.

There are many more records of functional G2C services online which have to a large extent made the quality of life better for citizens in the country by easier processes. These including: The National Youth Service Corps (NYSC) postings and registration of corps members has been converted from manual processes to an electronic platform. The NYSC scheme was actually designed to build, reunite and integrate the country after the dreadful civil war. Nigerian Graduates from all institutions home and abroad are

generally required to enrol for the NYSC program to serve the country in any giving location.

The residency permits by the Nigerian Immigration Services have been computerized. The issuance of Certificate of Occupancy and land registration in the Federal Capital territory Abuja Administration (FCTA) has also been simplified by computerizing these processes.

The Nigerian Custom ASYCUDA Programme is an integrated computer system for the management of Customs procedures and operations, initiated and maintained by the United Nations Conference on Trade and Development (UNCTAD). It is designed to harmonize and standardize Customs procedures in the Country, leading to better management and improved productivity in the Nigeria Customs Service. SMS text messaging has been very efficient for conveyance of information from G2C owing to the wide reach of mobile telephony from urban areas to the rural areas of the country.

 Biometric forms of identification for civil servants remuneration via e-payment and for pension records. In the capital city Abuja traffic management and regulatory enforcement have been put in place hence traffic officers can easily detect ever vehicle and driver by simply by a system that electronically encodes the  particulars. The progress thus far is quite impressive considering all the odds. Nevertheless, there is still a lot to be done to bring the e-system of governance to its full potential. [Nigeria national policy for information technology(IT) 2001 http://commtech.gov.ng/index.php/resoures]

## 2.1.14 Historical Foundation of JAMB in Nigeria

 JAMB was founded as one of the foremost examination bodies in Nigeria, which the legal instrument that established the Board was promulgated by the Act (No. 2 of 1978) of the Federal Military Government on 13th February 1978. By August 1988, the Federal

Executive Council amended Decree No. 2 of 1978. The amendments have since been codified into Decree No. 33 of 1989, which took effect from 7th December 1989. Decree No. 2 of 1978 (amended by Decree No. 33 of 1989) empowered the Joint Admissions and Matriculation Board to: (a) Conduct Matriculation Examination for entry into all Universities, Polytechnics and Colleges of Education (by whatever name called) in Nigeria (b) Appoint Examiners, Moderators, Invigilators, members of the Subject Panels and committees and other persons with respect to matriculation examinations and any other matters incidental thereto or connected therewith. (c) Place suitably qualified candidates in the tertiary institutions after having taken into account: (i) The vacancies available in each tertiary institution (ii) The guidelines approved for each tertiary institution by its proprietors or other competent authorities (iii) The preference expressed or otherwise indicated by the candidates for certain tertiary institutions and courses (iv) Such other matters as the Board may be directed by the Honourable Minister to consider or the Board itself may consider appropriate in the circumstances. (d) Collate and disseminate information on all matters > relating to admissions into tertiary institutions or any other matter relevant to the discharge of functions of the board. (e) Carry out other activities as are necessary or expedient for the full discharge of all or any of the functions conferred on it under or pursuant to this Decree. [Sahara Reporters Sept. 25, 2008]

In the 2009, JAMB was subject to serious controversy when the overall performance was one of the poorest on records. Much to JAMB's embarrassment, it was later revealed that the machines which optically graded the papers had erroneous answers and that JAMB changed some students' scores by as much as 15%. Consequently, the government setup a national committee on university entrance under the chairmanship of Mr. M. S. Angulu.

In December 2013, the management of Joint Admission and Matriculation (JAMB) introduce a new system for Candidates that are applying for an admission in the higher institutions, Jamb cancelled the option of choosing at least two university as a choice, The new system will only allow an applicant to can fill one University, one Polytechnic,

one College of Education and one Computer Institutes unlike before during form registration.

On 17th April 2014, The Joint Admission and Matriculation Board released her 2014 Jamb result edition for those that registered for her Pencil and Paper examination type. The statistic showed that over a total number of 990,179 candidates registered for Pencil and Paper examination type while 25,325 candidates registered for CBT which amounts to 1,015,504 applicants". And out 36,164 were taken as invalid results and 37,315 are for students who were absent on the exam date. 2,494 results were withheld due to various examination malpractices.

The Joint Admission and Matriculation board stated the commencement of computer base test starting from the 17th of May 2014; some notable innovations of JAMB since its inception are stated in the table 5 below:

Table 2: Some Remarkable Innovations Made by the Board since Inception.

| Year | Old Practice | Year | New Practice |
|------|-------------|------|--------------|
| 1987 | Printed the first set of question papers locally using question paper booklet which contained all the eighteen subjects | 1991 | Developed its own syllabus and thus stopped using WAEC syllabus which was a little higher that the WAEC's |
| Before 1980 | Registration done by manually completing registration forms. | 1980

1981 | Change the method of manual registration of application forms

Introduction of Optical Mark Readable (OMR) which made data capturing easier |
| Before 1994 | Four (4) different OMR sheets for the four subjects attempted. | 1994 | Introduction of a single answer sheet per Candidate such that the registration and examination number and subject types for each candidate were pre shade |

| Year | Old Practice | Year | New Practice |
|---|---|---|---|
| Before 1997 | Paper cartons being used for the packaging of examination materials. | 1997 | Introduction of metal boxes for the packaging of examination materials. This served to prevent tampering and damage to examination Materials during rain and transportation. |
| Before 1998 | Open ended script which can be swapped. | 1998 | Customized answer script, question paper booklets. This made cheating and giraffying difficult. |
| Before 2002 | Checking of examination number, centres done manually. This is susceptible to misplacement of information or giving wrong examination numbers/centres. | 2002 | Online services which has enabled UME/MPCEME candidates to check their examination number/centres through the internet. |
| Before 2003 | Examination documents were without the image of the candidates. Susceptible to impersonation. | 2003 | Introduction of image integration into the examination documents i.e. embossment of candidate's passport photograph in the attendance register and examination notice. This has tremendously reduced cases of impersonation. |
| Before 2006 | Manual registration is cumbersome in that the candidates had to come physically to the Board to register and submit registration document. | 2006 | Introduction of e-registration whereby applicants resident anywhere in the world can register for the Board's examinations. This has reduced cost, human traffic to Board's premises and also ensures accuracy and reliability of information. |
| Before 2007 | Metal boxes being used. It is bulky and made storage difficult for the custodian of examination materials. | 2007 | Security bag replaced metal boxes. This is for easy, convenient transportation and storage in the bank premises. |
| Before 2007 | Some even registered a day to the examination. This made adequate preparation difficult. | 2007 | Deadline for registration given by the Board strictly enforced. This has helped in preparing adequately for the examination. |

| Year | Old Practice | Year | New Practice |
|---|---|---|---|
| Before 2007 | These centres were used for checking those whose information on examination was not available. | 2007 | Abolition of special/standby/checking centres which had been turned into fraudulent centres for the cheats. |
| Before 2007 | Examination materials were left for weeks at the custodian after examinations. The possibility of pilfering could not be ruled out. | 2007 | Retrieval of examination materials right from the examination day. This is to forestall any form of post-examination malpractice. |
| | Release of the Board's results always delayed for up to 3 and 4 months in the past. | | Prompt release of the examination result<br>2007 UME – 3 weeks<br>2007 MPCEME – 11 days<br>2008 UME – 11 days<br>2008 MPCEME – 7 days<br>2009 UME –4 days<br>2009 MPCEME-3 days |
| Before 2008 | Result slip sent by post. Some got lost in transit. | 2008 | • Commencement of online result slips, admission letters and Change of course.<br>• The Board introduced the online services which enable candidates to check their examination centres through the internet.<br>• JAMB began full animation of its online service to candidates. Online printing of admission letter etc. |
| | Image Integration | 2009 | Image integration whereby candidates photographs were captured at the point of registration and also embossed on their examination notification slip. |

| Year | Old Practice | Year | New Practice |
|------|--------------|------|--------------|
| Before 2010 | JAMB had two exams: The Universities Matriculation Examination [UME] and Monotechnics, Polytechnics and Colleges of Education Matriculation examination [MPCEME]. | 2010 | • JAMB's two separate Matriculation exams were merged and named Unified Tertiary Matriculation Examination [UTME]. <br> • Increase of examination centers to 3096 centers in Nigeria, six foreign centres in Acca(Ghana), Buea (Republic of Cameroon), Cotonu (Republic of Benin), Jeddah (Kingdom of Saudi Arabia), Johannesburg (Republic of South Africa) and London( United Kingdom. |
| | | 2011 | Introduction of the use of biometric Verification machines for verification of candidates, since biometric data are specific to every individual. |
| | | 2012 | The Psychometric Division, a new division under the Registrar's office was created |
| | | 2013 | Introduction of three modes of Examination delivery <br> • PPT- Pencil Paper Test <br> • DBT- Dual Based Test <br> • CBT- Computer Based Test |
| | | 2014 | Integration of Albinos candidate sitting for 2014 CBT at Bueau, Cameroun. |

**Sources : Ojerinde,(2009)/ Nigerian Journal of Edu. Research and Evaluation 14,3, 2015**

## 2.1.15 ELIGIBILITY FOR THE EXAMINATION

Those eligible to sit for the UTME are holders of the following qualifications or their equivalents:

  i.    the West African School Certificate (WASC)
 ii.    the Senior Secondary School Certificate (SSCE)

 iii.   the National Technical Certificate or the National Business Certificate(NTC/NBC)

 iv.    Teachers' Grade II Certificate.

**Joint Admissions and Matriculation Board**

Official logo

| | |
|---|---|
| **Acronym** | JAMB |
| **Type** | Computer-Based Test |
| **Knowledge / skills tested** | Academic performance in selected subjects. |
| **Purpose** | Admission into tertiary institution. |
| **Year started** | 1978 |
| **Duration** | 2 hours. |
| **Score / grade range** | 0 to 400 |
| **Score / grade validity** | 1 year |
| **Offered** | Once in a year |
| **Countries / regions** | Nigeria |
| **Languages** | English |
| **Annual number of test takers** | More than one million |
| **Prerequisites / eligibility criteria** | SSCE results or awaiting SSCE results. |
| **Scores / grades used by** | Over 500 universities, agencies and other institutions in Nigeria. |
| **Website** | www.jamb.org.ng |

## 2.2.0 Empirical Review

E-Governance and Public Service Delivery has been studied by various authors but in different aspects and directions.

Francis and Ojo (2013) investigated on challenges and prospect of implementing e-governance in Nigeria, their study therefore examined the challenges its implementation in Nigeria would pose. It takes a cursory look at the processes involved and relating it with Nigerian environment and concludes that for success to be achieved, the following should be in place; a purposeful leader willing to embrace e-governance as a matter of government policy, creating more and effective cyber laws and cafes, making deliberate and concerted plans for training on the effective use of machineries and equipments necessary for e-governance, provision of adequate funds for hard ware's and soft ware's, establishing of community e-centers, and providing easily accessible websites of government and non governmental agencies among others.

Torres, Pina, & Royo (2005) conducted a study to examine the development of e-government initiatives at regional and local level in the EU through the opinion of agents who were directly involved in the e-governance projects. The study was quantitative in design and survey-based. Data were obtained through a questionnaire administered on 47 regional and local governments. Exploratory content analysis of data was carried out to identify the outstanding underlying characteristics and main features of the governments e-governance activities. They found that e-Governance activities were still in early stages in most of the EU countries and expected benefits from e-Governance is still not being realised. Besides, the study reported that, currently, political and managerial determination rather than the countries' administrative traditions are crucial to attaining the advanced stage of e-Governance at which the way government relates with the citizens becomes truly transformed.

Awoleye, Oluwaranti, Siyanbola, & Adagunodo (2008) assessed the e-Governance resource use in South-Western Nigeria. Specifically, the study examined the awareness and use of e-Governance in the study area. . E-Governance resource use was measured in terms of computer use, internet use, computer proficiency, public complaints phone number use and visit to the state government's website. The study used multiple data collection instruments including a questionnaire designed for the government employees (GEs) and non-government employees (NGEs). The study also employed interview and 'observation' as data collection instruments. Data were collected from 300 respondents, selected randomly, in the region. Obtained data were analysed using descriptive statistics including frequency counts, percentages and measures of central tendency. Results revealed high level of awareness of e-Governance among the two categories of respondents.  Internet use was found to range between 33.5-35.1% with no significant difference between the GEs and the NGEs, the computer literacy found to be averagely 80% with better proficiency found among both groups in Lagos when compared to the Ogun State. Irrespective of the categories and States, the use of public complaints phone number was found to be very low (generally less than 10%). Significant difference was found between the GEs and NGEs in terms of visits to state government websites with the GEs having higher visits.

Employing the social constructivism approach to research, Madon (2004), in a qualitative research, exploratively examined the developmental impact of e-Governance initiatives in India. The study employed longitudinal survey research design conducting 52 interviews with government officials, politicians, private sector employees and the general public over 15 weeks period. Findings revealed that e-Governance was perceived as an enabler and contributing to human and industrial development as well as employment.

Schwester (2009) investigated the factors militating e-Government adoption in the United States. The study focused on U.S. municipalities with less than 100,000 in population. The e-Government components focused on include online payment of taxes, online

payment of utility bills, online payment of fines/fees, online completion and submission of permit applications, online completion and submission of business license applications/renewals, online requests for local government records, online delivery of local governments records to the requestor, online requests for services, such as pothole repair, online voter registration, online property registration, online downloading of forms for manual completion, employment information /applications, access to ordinances/codes online, access to council agendas/minutes online, electronic newsletter sent to residents/businesses, streaming video and online communication with individual elected and appointed officials. Descriptive statistics including frequency counts, percentages and measures of central tendency were used in analyzing the study data. Findings revealed that the level of e-Government adoption is a function of finance, technology available and quality and 'quantity; of human resources available. Factors militating against e-Government adoption include political environment, privacy and security issues were found to be the important barriers to e-Government adoption in the study area.

Ngulube (2007) investigated the nature and accessibility of e-Government in Sub Sahara Africa (SSA). The study was a qualitative review of e-Government in the SSA. Technology, organizational and environmental variables were identified as drivers of e-Government in SSA. Accessibility to e-Government facilities was found to be relatively low and where accessible, the functionality was found to be relatively poor. E-illiteracy was found to be a major challenge in the use of e-Government where available. The recommended the development of ICT and deliberate intervention to raise the e-literacy level as panacea to increasing e-Government readiness, availability and use.

Sa'ad, Mohammed, & Ribadu (2015) examined the level of e-Governance in Nigeria and the link between e-Governance and service delivery in the country. The study specifically reviewed relevant literature with a view to identifying model(s) that is appropriate for e-Governance in Nigeria and identify the prospects of e-Governance when effectively

implemented. To supplement the review, primary data were collected in a survey. In collecting the primary data, personal observation and interview (with experts) were employed. Three major e-Governance frameworks/models were reviewed including 'Non-internet Government', the U.S. Federal Enterprise Architecture and the European One-Stop Government (EOSG) model. The study recommends a hybrid adoptive framework that articulates the government's vision, targets and milestones, technical approach and standards for e-government systems.

Ifinedo (2004) assessed the precursors, problems, practices and prospects of e-Government in Nigeria. The study was a chronological review of e-Government capacity development, practices and prospects in Nigeria. The study traced the official development of ICT as a principal requirement (precursor) for e-Government in Nigeria to the Nigerian telecommunication policy launched in 2000 by the General Olusegun Obasanjo led Federal Government of Nigeria. The study alleged that although e-Government capacity building preceded the policy (traced back to 1948 in the Nigeria Airport Authority where the first computer was documented), the match towards e-Government readiness became more visible afterwards. The study reported that indicators of e-Government practice was very limited owing to poor ICT infrastructure and human resource problem. Consequently, e-Governance development was adjudged as relatively poor. In terms of prospects, the study identified appealing prospects of e-Government for effective service delivery in Nigeria.

Abasilim, Gberevbie, & Ifaloye (2017) investigated the connection between e-Governance adoption and attaining effective service delivery in Nigeria and possible barriers to its attainment. The study employed qualitative ex-post-facto research design using secondary data as the basis for conclusions made. The study concludes that e-Governance is a plausible approach to attaining effective service delivery in Nigeria. It, however, made case for addressing barriers such as infrastructure (hardware and

software), quality of human resource, non-supportive governmental processes as necessary precondition to achieving the effective service delivery.

Abdulkareem (2015) examined the challenges to the implementation of e-Government in the Nigeria public Service in a qualitative review of relevant literature. The conclusions made in the study were based on critical factor analysis of infrastructure, digital readiness among other important variables. The study reported infrastructural gap, power failure, digital divide, low ICT literacy level, theft and vandalization of ICT equipment, issues of privacy and security as critical challenges to the implementation of e-Government in Nigeria.

According to Abdel-Fattah and Galal-Edeen (2008), the major challenge of e-governance in the Nigerian public service is lack of trained and qualified personnel to handle and operate its infrastructures. They further state that due to the high cost associated with the procurement and training of public servants with ICT skills, government sometimes feel reluctant in the actual implementation of e-governance in the public service. Similarly, Ayo & Ekong (2008) also stress the absence of skilled workers to handle various ICT services and their applications in bringing about the successful implementation of e-governance in the public sector. They also noted that the lack of government regulatory policy is a major issue that needs to be addressed if e-governance is to be a reality in government organisations. To them, the effective and successful implementation of e-governance requires experts to coordinate and operate the ICT-related infrastructures, because where there are no competent personnel to handle it infrastructure, it will be useless to procure the infrastructures (Ayo & Ekong, 2008).

Additionally, ITU, 2006; and Adeyemo, 2011 identified other factors impeding the effective implementation of e-governance in Nigeria's public service as:
Lack of ICT Infrastructure: This is another crucial challenge to the implementation of e-governance in Nigeria's public service. As it has been explained in the definition of e-

governance above, it is the application of ICTs in the operations of government business. The Nigeria's public service is still lacking in basic ICT infrastructure. For instance, some of the offices still lack common computers let alone the common skills for its operation. What you see in their daily activities is the traditional way of doing things. That is, they are still known for doing a lot of paper work which if e-governance is embraced fully would have reduced. In a better case, you will see the combination of both the traditional way of doing things alongside the digital approach. There is still no access to internet network in most public sector offices, no regular power supply and so on. All these pose challenge to the implementation of e-governance in Nigeria's public service (ITU, 2006; Adeyemo, 2011).

Attitude or Resistance to Change: This is also a challenge in the public sector. Most of them are still used to the old way of carrying out government activities. That is, they are still known to be working with a lot of papers, carrying of files from one desk to the other or from one office to the other. Their resistance to e-governance implementation in their services is what has culminated to the poor rating of the implementation of e-governance in the public service. Some of the reasons for this, is that most of the public servants are not computer literate, not qualified, have little or no training in the installation, maintenance, designing and implementation of ICT infrastructure.

Another challenge has to do with the state of power supply in the country, which is said to be epileptic and irregular in terms of supply. These have posed a considerable challenge to the realization of e-governance objectives in Nigeria. Okwueze (2010) also noted that adequate power supply is an important element to be considered for the successful implementation of e-governance in the country's public sector. Against the current picture of what exist in most of the public service, most government agencies operate on generators and sometimes the generators lack capacity to power adequately the ICT facilities. Corroborating this view, Gberevbie; Ayo; Iyoha; Duruji & Abasilim (2015) stress that there is need for the government to establish the needed infrastructure in electricity power supply, internet connectivity, telecommunications and computer

hardware, optical fiber cables, among others for the implementation of e-governance to be successful. This implies that the success of e-governance implementation in the Nigerian public service is tied to dealing with these current challenges, among others.

For Bansode & Patil (2011) the digital divide also poses a challenge to e-governance implementation in Nigeria's public service.

What this simply means is "the gap between those with regular, effective access to digital and information technology and those without this access" In a clear manner, Keniston (2003) sees digital divide as the level of ICT knowledge between the rich and powerful who he terms as those part of the information age and the poor and powerless who are not. He further note that digital divide is not only limited to the level of ICT knowledge between the rich and the poor but also that which has to do with linguistic. To him, this divide separate those who can speak English from those who cannot. Another feature of this digital divide can be seen from the growing digital gap between the rich and poor nations and also the digital divide between a new elite group, which he called the "digerati", that is, those who benefit from the enormous successful information technology industry and other knowledge based sectors of the economy such as biotechnology and pharmacology. The implication of this, is that, the challenge of digital divide encompasses the access to technology hardware physically and the required skills and resources needed for the judicious application of its use. But there are factors that are known to have contributed to this digital divide. For instance, factors like physical disability, physical access, access to the contents and lack of ICT skills contribute to the digital divide (Bansode & Patil, 2011).

However, Olaopa (2014) succinctly itemized "inadequate funds allocated to the e-governance projects, difficulty associated with streamlining various silos of e-Government projects already existing or being implemented prior to the creation of the Ministry of Communication Technology, disparity between urban and rural dwellers or those with low literacy levels in accessing the internet, potential to erode the privacy of the citizenry, perceived lack of value for money when the huge cost of deploying e-

Governance projects is compared to the actual value to the people, false sense of transparency as the challenges to the adoption and delivery of e-governance in Nigeria.

In a descriptive survey research, Chukwuemeka, Ubochi, & Okechukwu (2017) examined the effect of e-government on University service delivery focusing on the Federal University Ndufualike Ikwo, Ebonyi State. Data were obtained from 287 teaching and non-teaching staff of the university selected through a proportional random sampling technique. Structured questionnaire was used in data collection from the respondents. Frequency counts, percentages and Chi-square statistics were used in analyzing the study data. The study results showed that e-Governance had strong positive effect on the workers' service delivery. The authors, thus, recommended improvement on the current ICT infrastructure, internet access and reduce digital divide among staff as panacea to continuously experience the benefits of e-Governance in the institution.

Shaikh, Shah, & Wijekuruppu (2016) investigated the relationship between e-Governance and public service delivery (PSD) in Pakistan. Specifically, the study examined how manual and electronic PSD affected good governance, decentralization and socio-economic development, the benefits and justification for e-Governance and policy options to deepen e-governance in Pakistan. The study was a review of relevant literature on e-Governance in Pakistan and elsewhere but the focus was on the Pakistani-based studies. The studies were analysed using item-by-item and discuss analyses. The study reported positive relationship between e-Governance and PSD. It recommended public-private partnership (PPP) in the provision of ICT, broadening of ICT reach in local communities, trust building with the citizenry for support and legitimacy of e-Governance initiative and curbing of cybercrime as sin-qua-non-to enabling effective e-Governance in the country.

Olaitan (2015) examined the socio-cultural factors determining of adoption of e-Government services by Nigerians. Socio-cultural variables including age, gender, and

ethnic background were investigated. The study was survey-based. A structured questionnaire consisting of 27 items were used in collecting data from 270 respondents selected randomly. Responses to the questions were measured on 5-point Likert scale. Frequency counts, percentages and measures of central tendency were used in analyzing the study data. Findings revealed a general less favourable perception and disposition to e-Governance initiative. However, significant difference was found in the propensity to adopt e-Governance on the basis of gender, age and ethnic group. The study recommended that government should endeavor to understand the public's attitude to e-government services and their readiness to adopt it to avoid mismatch and failure.

Schwester (2009) a researcher at the university of New York, USA comparatively analysed the e-Government application use by two municipalities in the United States with data collected from the International City/County Management Association (ICMA). The study focuses on finding the level of e-Government application adoption and use between the two municipalities with a view to determining if observed differences are explained by some barriers and the extent to which the differences are explained by the barriers. A number of variables were regressed on the adoption of e-Government applications through a multiple regression model. Findings revealed that the differences in the level of e-Government applications were function of financial, technical, and human resources. Political support was also found to significantly influence the adoption level. The study concludes that the municipality that lagged in the adoption was impeded by financial, technical and human resource constraints as well as political support.

Gilbert, Balestrini, & Littleboy (2004), researchers at either the University of Surrey, UK and a private limited in the UK investigated the barriers to e-Government service adoption by individuals with options to use the traditional government service mode and e-government service mode. Using the technology adoption model (Diffusion of Innovation: DOI) and the service quality concept (SERVIQUAL), the study assessed the determinants of decisions of individuals to use e-government service with data obtained

from survey. Multiple regression and correlation models were used in testing the relationship between the adoption of the e-Government services and some variables including 'interaction avoidance', Cost, time, visual appeal, experience, financial security, information quality, low stress and trust. Time needed to do the transaction, transaction cost, financial security, information quality, and trust were found to significantly ($p<0.01$) predict the choice of e-Government service adoption over the traditional service delivery mode.

Bigdeli & de Cesare (2011), employing stakeholders' analysis, examined the barriers to e-Government service delivery in Iran. Specifically, the study investigated the technological, strategic, policy and organizational barriers to e-service delivery by the Government of Iran. Both primary and secondary data were used in the study. The primary data were collected from high profile stakeholders in the country's e-Government service delivery programmes through interview schedule. The secondary data were obtained from the publications, reports, surveys and census of the Iranian government. The data were descriptively analysed. Findings revealed insufficient financial support, unclear vision and objectives and lack of guidelines as potent strategic barriers in the country's e-Government service delivery. The technology barriers found include divergencies in technical/data standards among the ministries, poor e-government infrastructure, and lack of security model to guarantee safety of data. The policy barriers found include poor legislation and lack of trust and confidence while the organizational barriers found in the study include poor IT/ICT skill, substandard training, non-reliable G2G interaction through the internet, internal resistance to change and lack of top management support.

Using structural review research design, Lau (2003)- a project leader of the OECD E-Government Project, examined challenges facing e-Government development in the OECD countries. The study focused on the internal challenges and external barriers to e-Government adoption. The study reported that the external barriers to e-Government adoption and development in the OECD countries include rapid technological change,

digital divide, privacy and security concerns, citizen expectation and seamless service. The internal challenges observed include legislative and regulatory barriers, budgetary barriers and lack of common technical framework and infrastructure.

Mohammed (2016) investigated the challenges confronting e-Government in developing countries with special focus on Iraq e-Government initiatives. The study was a chronological and structural review of relevant literature and government activities penultimate, during and after the implementation of the e-Iraqi initiatives with a view to identifying challenges to effective implementation of e-Government in a developing country like Iraq. Findings of the study revealed that the challenges are political, organizational, technical and are related to deficient human capital and security in nature. Specifically, limited budget, slow decision-making process, bureaucracy, transparency and monitoring lapses and poor legal framework were found to impede the e-Iraqi e-Government initiatives.

Angelopoulos, Kitsios, Kofakis, & Papadopoulos (2010) examined the emerging barriers in e-government implementation. The study combined structural review of the literature on e-government and a qualitative case study of a governmental organization towards arriving at the study conclusions. The case study data were obtained through semi-structured interviewing of the leadership cadre in the governmental organization. The data were coded and thematically analysed. Results revealed that finance, political and institutional barriers are the more compelling of the barriers against successful implementation of e-government project.

El-sofany, Al-Tourki, Al-Howimel, & Al-Sadoon (2012) appraised the barriers, challenges and developmental roles of e-Government in Saudi Arabia. The study reviewed the literature on international experiences on e-government and compare key indices with what obtained in Saudi Arabia. Factor by factor analysis of the key barriers and challenges to e-government was done. Findings revealed that in many countries and

in Saudi Arabia, barriers and challenges to e-government implementation include resistance to change to electronic service, lack of policy and regulation for e-service usage, lack of partnership and collaboration, lack of strategic planning, financial barriers, lack of qualified personnel and training, problem of culture, poor ICT infrastructure, privacy, security and trust issues and leadership/political support.

### 2.2.1 Summary of Literature Review

Conclusively, there are different kinds of challenges which hinder E-governance in Nigeria. These have made public sector organizations not to fare very well when it comes to the implementation of e-governance when they are delivering their services. Some of the key challenges, which have been identified generally, include the lack of information technology infrastructure, lack of interrupted power supply in the country, lack of well-trained and well-qualified employees and resistance to change attitude by a number of the public servants. This has hindered effective delivery of the E-governance. As such, various measures ought to be put into place, in order to ensure that they are adequately addressed (Dhillon & Laxmi, 2015).

### 2.2.2 Gap in Literature

From the review of existing literatures on e-governance, with different  mode of research and application, it was noted that e-governance has the capacity to impact on public service delivery as revealed in the empirical studies from USA, UK, Iraq, Nigeria and Iran mentioned earlier like: Francis and Ojo (2013) investigated the challenges and prospect of implementing e-governance in Nigeria, Torres, Pina &Royo(2005) examined the development of e-government initiatives at regional and local level in the EU, El-sofany, Al-Tourki, Al-Howimel, & Al-Sadoon (2012) appraised the barriers, challenges and developmental roles of e-Government in Saudi Arabia, Mohammed (2016) investigated the challenges confronting e-Government in developing countries with special focus on Iraq e-Government initiatives, Bigdeli & de Cesare (2011), employing stakeholders' analysis, examined the barriers to e-Government service delivery in Iran,

Schwester (2009) a researcher at the university of New York, USA comparatively analysed the e-Government application use by two municipalities in the United States, Shaikh, Shah, & Wijekuruppu (2016) investigated the relationship between e-Governance and public service delivery (PSD) in Pakistan, Olaitan (2015) examined the socio-cultural factors determining of adoption of e-Government services by Nigerians.

However, in Nigeria, there is little or no such Empirical research which linked E-governance with Public Service Delivery as it concerns the relationship between E-governance and Service Culture, customer Experience, Service Quality and Employee Engagement. Consequently, this study, E-governance and Public Service Delivery: A study of the Joint Admission and Matriculation Board (JAMB) fills the gap in literature.

## 2.3.0 Theoretical Framework

The study is premised on the Andersen, Henriksen's Public Sector Process Rebuilding (PPR) maturity model of e-government.

**Public Sector Process Rebuilding (PPR) maturity model**

Andersen, Henriksen (2006) proposed the (Public Sector Process Rebuilding (PPR) Model) which was an extension of the Layne and Lee Model four stages (Catalogue, Transaction, Vertical integration and Horizontal integration). The major difference between the Layne and Lee model and the Public Sector Process Rebuilding (PPR) model that is, (customer centric approach rather than the technological capability).

1. **Phase 1**: The cultivation: shelters horizontal and vertical integration within government, limited use of front-end systems for customer services, and adoption and use of Intranet within government. There can be elements of self-service but most often in the form of PDF files that can be downloaded, completed, and then returned either as an attachment to e-mail or by mailing the completed form to government. The organizations in this group are not likely to have digital services in focus and will rarely have work processed and displayed through the net. Instead, the organization is unclear whether to

define the objective with the use of the Internet to increase the user frequency, the services provided, and/or the quality and speed of services. From the user point of view, the Internet interface to the public institution in this phase can be experienced as yet another means of enforcing "gate keeping" and filtering the users. By gate keeping, the employees are protecting against stress and they are able to control the information flow. The downside is that the public institution in this phase will be experienced as inaccessible, have long case processing time, and no accessibility for accessing the processing of requests. (Andersen, Henriksen 2006)

This is the stage where most governments are now, and worse it is often considered a strategic goal for most governments. Having the characteristics of this phase as a strategic goal can be counterproductive to the activity and customer focus.

2**. Phase 2**: The extension stage with extensive use of intranet and adoption of personalized Web user interface for customer processes. There is a sharp distinction between "our data" and the services provided through "them".

Ownership and data infrastructure are essential as in phase I, but the Web user interface is targeted towards the end-users rather than other public authorities or the agencies themselves. The ambition of having a user interface for the end-users shines through the actual Web site. While this is a key difference between phases I and II, this ambition also presents a key failure risk and precipitates costly user interfaces, no integration with other systems, expensive maintenance, and fading out of old software and data format. At this stage there are still many manual routines, and while the user might be likely to find many forms and information, the agency is equally interested in re-directing the users to information at other agencies.

Whereas it is a frequent feature at many Web sites to provide link icons to other information, we view this feature negatively: The more links to other places, the more negative we would rate the agency because this indicates that the users did not get their requests for information rewarded at this particular agency.

3. **Phase 3**: is the stage where the organization matures and abandons the use of the intranet, have transparent processes, and offers personalized Web interface for processing of customer requests. The Internet and intranet have merged and the key concern is to use IT to lower the marginal costs for processing the customer requests for services. Rather than linking to other institutions, the homepage is feeding information from other institutions to the users online. Further, the Web site is organized to solve problems and requests rather than presenting formal organizational structures and general information. Self-service is a key priority in this phase and the exceptions where this cannot be completed online are clearly stated with instructions on how to proceed in analog mode.

4. **Phase 4**: Revolutionary phase characterized by data mobility across organizations, application mobility across vendors, and ownership to data transferred to customers. In this phase, the employees' actions can be traced through the Internet and there is information available online about progress in, for example, case handling. This is possible through intra- and extra organizational mobility of data and services. Also, economics of scale is sought after actively. The Internet is not seen exclusively as a means to create increased mobility within the government. Rather, the ambition is to transfer data ownership and the orientation of data base infrastructure to the end-users. (Andersen, Henriksen 2006) There indeed is a long push to reach phase
IV. The blooming literature on e-government has provided the fuel for the hypothesis that governments are still predominately in phase I, that is, they are aiming for data and system integration but have only limited front-end services, and essentially still have an intra- and intergovernmental view of the development and implementation of IT.
Accordingly, a personalized Web interface for customer processes, data mobility across organizations, application mobility across vendors, and transfer of data ownership to the customers is still not implemented and constituted in light of the PPR approach key challenges to be met. (Andersen, Henriksen 2006)

The PPR maturity model is changing the focus of e-government to the front-end of government and away from a technical integration issue, as is suggested in the Layne and Lee Model. Also, contrasting the Layne and Lee model, the PPR model emphasizes the digitalization of the core activities not from the perspective of what is technologically feasible but from what is beneficial for the end-users regardless of the possible internal changes caused by the digitalization.

Figure 4: Public Sector Process Rebuilding (PPR) maturity model

Phase IV: Revolution

Mobility across Organisation

Application Mobility across Vendors

Ownership to data transferred to customers

General, Widely applied

.

PHASE III: Maturity

Abandoning of intranet

Accountability+ Transparent processes

Personalized web-interface for customer processes

Customer Centic

Phase II: Extension

Extensive use of intranet

Personalized web-interface for customer processes

Exception Sparse

Phase I: Cultivation

Horizontal & Vertical integration within government

Front- end system

Adoption and use of intranet

Few, rare                                                        widely applied

Activity Centric

## 2.3.1 Application of the theory to the study

While information communication technology, has been acclaimed globally as a means of providing improved service delivery from governments [the public sector] and organization to citizens, the fact remains that each Agency/organization who adopts the e-governance is at a certain stage of its implementation. The Public Sector Process Rebuilding (PPR) maturity model will help us to ascertain what stage of e-governance implementation is the Joint Admission and Matriculation Board [JAMB] in their service delivery as it relates the South-Eastern States of Nigeria. It will further help us to make possible recommendations to improve it and propel them to optimum capacity.

The maturity model is changing the focus of E-governance to the front- end of government, away from a technical integration issue as suggested in the Layne and lee model. Also, contrasting the Layne and Lee model, the PPR model emphasizes the digitalization of the core activities not from the perspective of what is technologically feasible but to what is beneficial for the end-users regardless of the possible internal changes caused by the digitalization.

The public sector process rebuilding maturity model, a consumer centric model, will help JAMB South East in particular and Public sector in general, handle their costumers as kings by making sure that all their E-governance initiatives are consumer friendly and easy to use, thereby ensuring effective and efficiency public service delivery.

# CHAPTER THREE

# RESEARCH METHODOLOGY

This section aims at proving information on the technique and procedure for the collection and analysis of the data used in this study. Also it will highlight the type of data used in the research and their sources.

The section further provides useful insight on how the sample size was selected, where the researcher used as the study area and those that make up the simple size.

## 3.1 Research Design

The Research Design chosen in the study is a combination of the survey and oral interview. In the survey, the Researcher does not have the control of the independent variables because they have already occurred [stone, 2006]. If it is possible for the Researcher to have experimental and control groups, the appropriate Research Design would have been an experiment and not a survey [Podsakoff and Dalton, 1987]. In the oral interview, the research questions are asked as open-ended questions.

## 3.2 The study area

The study area is JAMB South-east, Nigeria. South-east, Nigeria comprises of five States viz Abia, Anambra, Enugu, Imo and Ebonyi. The Geographical coordinates of the five States lies between latitude 5° 45' North and longitude 8° 30' East of the equator. The land area is approximately 76,000 square kilometers representing about 8.2% of the total land mass of Nigeria (CIA World Fact Book, 2003). The focus of this study is to appraise the effectiveness of the JAMB service delivery.

## 3.3 Sources of Data

It is very important that the researcher takes proper care of the sources of data, in view of the fact that it reflects on the final result of the work. However, if the data is faulty, certainly the result will be faulty (Osuala, 1991).

Therefore, in undertaking the research two kinds of data are needed, that is primary and secondary data. The nature of each of the two types of data is discussed briefly below.

### 3.3.1 Primary Data

The primary data for this study was obtained through a structured questionnaire. In addition, oral interviews may be conducted where necessary in order to complement the information that would be derived from the questionnaire. The aim is to give respondents the opportunity of supplying that information they may not give in the structured questionnaire.

### 3.3.2 Secondary Data

For this study, the secondary data sources can be summarized to include:

Study of relevant information contained in textbooks, newspapers, magazines, seminar paper, journals, periodicals, management and panel reports and more importantly the internet that gave the access to information in the world in general.

## 3.4 Population of the Study

The population of study is the entire JAMB employees, including the individuals in charge of the JAMB ICT resources in the five South- Eastern states of Nigeria with a total number of 110 staff. The staff strength distribution is represented below:

- Abia State office:        17
- Anambra State office:     18
- Ebonyi  State office:      15
- Enugu Zonal office:       30
- Imo Zonal office:         30
  
  TOTAL:                    110 (see attached appendix II-IV)

## 3.5 Determination of Sample size

Since the total work force of all the JAMB employees in the five South- Eastern states of Nigeria is 110, the researcher studied the entire population.

## 3.6 Method of Data Collection

The questionnaire as stated earlier formed the major data collection instrument for the study. Neuman (2006) and Asika (2006) identified four types of data collection instruments, namely, mail and self-administered questionnaires, telephone interviews, face-to-face interviews and web surveys, with each having its advantages and disadvantages. As a result of the educational level of the target population under study, an assumption was made that all respondents are capable and competent to understand the instructions and questions to complete the questionnaires on their own.

Consequent on the above, the researcher adopted self-administered questionnaire as well as direct observation methods of data collection. The survey questionnaire contains two sections. The first section comprises of demographic questions – relating to gender, education, length of service, job status, ICT compliance and job category. The second section of the questionnaire is the operational data which deals with the substantive issues of the survey. This study utilized variety of methods (questions) that require a 'Yes' or 'No,' as well as 'Strongly Agree', 'Agree', 'Undecided' 'Strongly Disagree' a Disagree' as invented by Rensis Likert, the US Sociologist, requested the  respondents to indicate the extent to which they agree or disagree with the statement.

## 3.7 Validity of the Research Instrument

According to Chukwuemeka (2006), one of the ways validity of the research instrument can be sought is through the research supervisor. Thus, research methods specialists from the Faculties of Management Sciences, Physical Sciences and Education validated the questionnaire. They examined the instrument in terms of clarity, as well as to ascertain if the items were related to the objective of the study. After scrutinizing the instruments, they offered useful suggestions that were effected in the final copies of the instrument used for field work.

Construct validity of the research instrument was established by associating a set of other suggestions with the results received from using the study's measurement instrument. Construct validity is the degree to which scores on a test can be accounted for by the explanatory constructs of a sound theory; the extent to which it confirms to predicted correlations with other theoretical propositions. Since the measurements on the formulated scale for the study correlated in a predicted way with some stated criteria and tests (theories), this shows that the measuring instrument is valid and resulted in correct measurement.

## 3.8 Reliability of the Research Instrument

Reliability refers to the consistence, stability, or dependability of the data. Whenever an investigator measures a variable, he or she wants to be sure that the measurement provides dependable and consistent results (Cooper & Schindler, 2003). A reliable measurement is one that if repeated a second time gives the same results as it did the first time. If the results are different, then the measurement is unreliable (Mugenda & Mugenda, 2003).

Reliability on the other hand refers to the ability of result to be constant over time when applied to the same sample. The measuring instrument will only be reliable when being consistent overtime, credible and dependable. In view of the above, the researcher ensured that the questions are unambiguous, easy to understand, simple and clear.

A pilot study was conducted to test the reliability and validity of the research. According to Orodho (2003), a pilot test helps to test the reliability and validity of data collection instruments. Validity refers to the extent to which an instrument measures what is supposed to measure, data need not only to be reliable but also true and accurate. If a measurement is valid, it is also reliable (Joppe, 2000).

A pilot study was carried out among Ten (10) employees of WAEC Awka, Anambra state to confirm the validity of the questionnaire. Reliability of research instrument simply means the degree to which the instrument consistently measures what it seeks to

measure. The study therefore, employed the Cronbach's Alpha method to assess the survey instrument in which the same measuring instrument was applied in taking two separate measurement on the same elements at different times using the same methods. The result of the pilot survey was compared with that of the final survey to see if the results are the same. However, is not infallible as it is not possible to control the environment in which the questionnaires were answered. For example, the mood of the respondent may influence his or her responses. Such environmental factors may also have influence on other research methods.

The tables below shows that 10 respondents were used for the pilot study of this research. The items in the questionnaire with the 5point Likert scale of Disagree (1), Strongly Disagree (2), Not Sure (3), Agree (4), and Strongly Agree (5) have good internal consistency, with a Cronbach's alpha coefficient of 0.985(98.5%). The items are made up of 30 statements in all (**See Appendix III**).

The Corrected Item-Total Correlation values in the Item-Total Statistics (**See Appendix IV**) give an indication of the degree to which each item correlates with the total score. Low values (less than 0.3) indicate that the item is measuring something different form the scale as a whole. The Cronbach's Alpha value of 0.985(98.5%) in the reliability result shows that there is very good internal consistency reliability for the scale. According to SPSS survival manual, values above 0.7 are considered acceptable; however, values above 0.8 are preferable.

## 3.9 Methods of Data Analysis

Analysis is a research technique for making replicable and valid references from data to their context. The researcher searches for structures and patterned regularities in the text and makes inferences on the basis of the regularities (Krippendor K. 1990). The Statistical Package for Social Sciences (SPSS) was used to analyse the data collected.

Representations like tables, bar charts, pie charts etc was used to ensure easy and quick interpretation of data. Responses were also expressed in percentages. Data from the

completed questionnaire was checked for consistency. The items in the questionnaire were grouped based on the responses given by the respondents and coded for easy usage of the Statistical Package for Social Sciences (SPSS).  This method was used because it is the best instrument to identify, compare, describe and reach a conclusion

Multiple regression analysis was employed to address research questions one and three and to test hypotheses one and three; while Pearson Correlation Coefficient was used to examine the relationships between the dependent and independent variables in research questions specific objective two and four and to test hypotheses two and four. All tests of hypotheses were at the conventional 5% level of significance.

**Multiple Regression Analysis**

The multiple regression analysis as indicated above involved the classical linear regression technique using the ordinary least square (OLS) approach. The implicit specification of these models are as follows:

$$\text{Service culture} = f(X_1, X_2, X_3, X_4 \ X_5, \ X_6) \tag{1}$$

$$\text{Employee engagement} = f(X_7, X_8, X_9, X_{10} \ X_{12}) \tag{2}$$


Where :

$X_1$ to $X_6$ = Vectors of E-governance indicators (weighted mean of responses to each of the indicators based on 5 point Likert Scale).

The explicit specification of the models are as follows (3 & 4):

$$\text{Service culture} = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + e \tag{3}$$

$$\text{Employee engagement} = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + e \tag{4}$$

where $\alpha$s and $\beta$s are the parameters to be estimated, and $e$s are the error terms in each of the models.  All calculations and estimates were obtained through the use of version 21 of the SPSS package.

# CHAPTER FOUR

# DATA PRESENTATION AND ANALYSIS

This chapter presents the data used in examining E-governance and Public Service Delivery: A Study of the Joint Admission and Matriculation Board (JAMB) in the south-East, Nigeria. It also presents analyses and interprets the data obtained through the administration of questionnaire to all staff of the Joint Admission and Matriculation Board (JAMB) in the south- East, Nigeria.

The researcher distributed a total of one hundred (100) questionnaires of thirty five (35) items each to all staff of the Joint Admission and Matriculation Board (JAMB) in the south- East, Nigeria. As a result of frequent persuasion on the importance of responding fully and honestly to the questionnaire, the researcher was able to achieve questionnaire return of ninety (90) responses while twenty (20) were not returned out of the total distributed. Leaving a total of ninety (90) usable questionnaires, yielding a response rate of 90percent. The researcher proceeded with the analysis of the data as 90percent response rate is regarded as very satisfactory for this study. According to Babbie and Mouton (2001), some rules of thumb about the return/response rate is that a response rate of 50percent is adequate for analysis and reporting, 60percent is good while 70percent is very good.

## 4.1    Respondents Characteristics' and Classification

This section is divided into **A** and **B**. Section **A** consists of the socio-demographical data of the respondents while section **B** covers the research questions that were based on the research objective.  The data are presented in percentage, frequency tables, pie charts, bar charts, mean and Std. Deviation values while the hypotheses were analyzed using Pearson moment correlation.

**Table 4.1 Socio-Economic or Demographic Factors of respondents**

| S/N | Factors | Frequency | Percentage (%) |
|-----|---------|-----------|----------------|
| 1 | **Gender** | | |
| | Male | 35 | 38.9 |
| | Female | 55 | 61.1 |
| | Total | **90** | 100 |
| 2 | **Designation** | | |
| | 01-05 | 15 | 16.7 |
| | 06-12 | 65 | 72.2 |
| | 13-17 | 10 | 11.1 |
| | Total | **90** | 100 |
| 3 | **Length of Service** | | |
| | 5 and below | 10 | 11.1 |
| | 6-10 | 15 | 16.7 |
| | 11-15 | 20 | 22.2 |
| | 16-20 | 20 | 22.2 |
| | 21 and above | 25 | 27.8 |
| | Total | **90** | 100 |
| 4 | **Educational Qualification** | | |
| | PG | 10 | 11.1 |
| | First Degree/HND | 50 | 55.6 |
| | NCE/ND | 20 | 22.2 |
| | WASC/SSCE/NECO | 10 | 11.1 |
| | Total | **90** | 100 |
| 5 | **Job Category** | | |
| | Managerial /Admin | 60 | 66.7 |
| | Technical | 20 | 22.2 |
| | Clerical/others | 10 | 11.1 |
| | Total | **90** | 100 |

**Source: Field Survey, 2017**
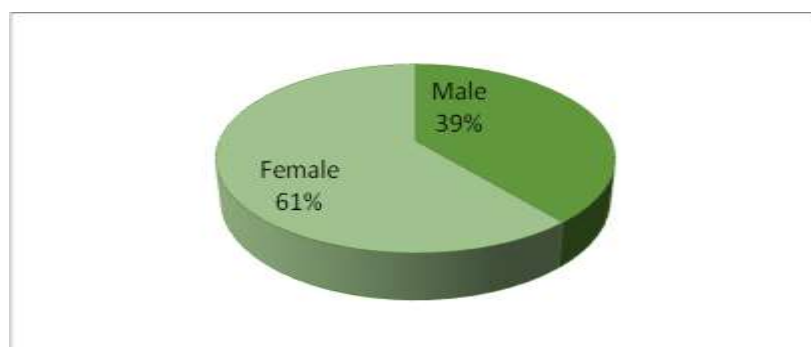


**Figure 4.1.1: Pie chart of distribution of respondents based on gender**

Table 4.1 and figure 4.1.1above shows that 35 or 39percent of the respondents were male while 55 or 61percent were female, which implies that the population of female respondent was higher than male.
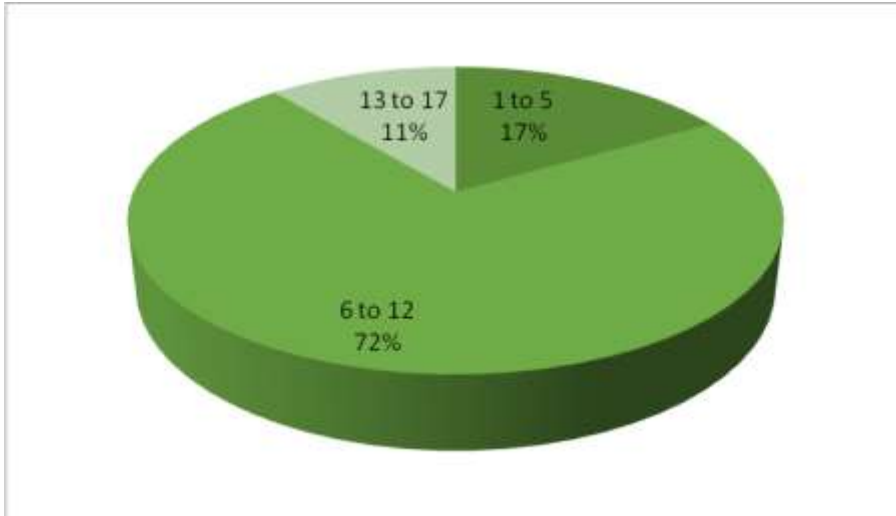
**Figure 4.1.2: Pie chart of distribution of respondents based on designation**

The analysis of the designation profile of the surveyed respondents shows that the surveyed respondents cut across junior, senior and the senior managerial cadre. Of the 90 valid responses on table 4.1 figure 4.1.2 above shows that 17percent of the respondents were junior staff, 72percent were senior staff while 11percent were senior managerial staff. This shows that senior staff on levels 6 to 12 were more than junior staff and senior managerial staff respectively.
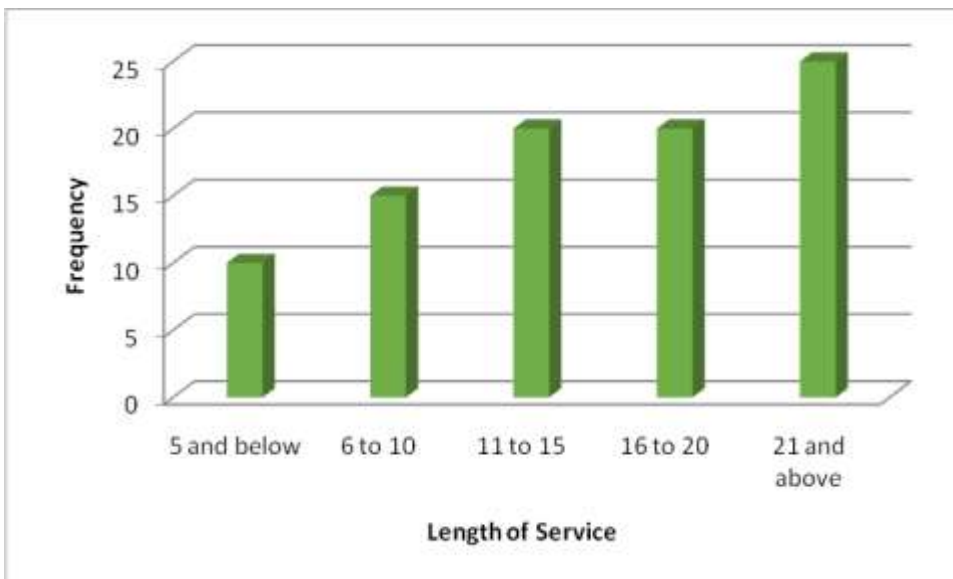


**Figure 4.1.3: Bar chart of distribution of respondents based on length of service**

Table 4.1 and figure 4.1.3 above shows that 11.1percent of the of the respondents have served in the organization for 5 years and below; 16.7perccent have served for 6 – 10 years; 22.2percent have served for 11-15 years; 22.2percent have served for 16 – 20 years; while 27.8percent have served for 21 years and above.
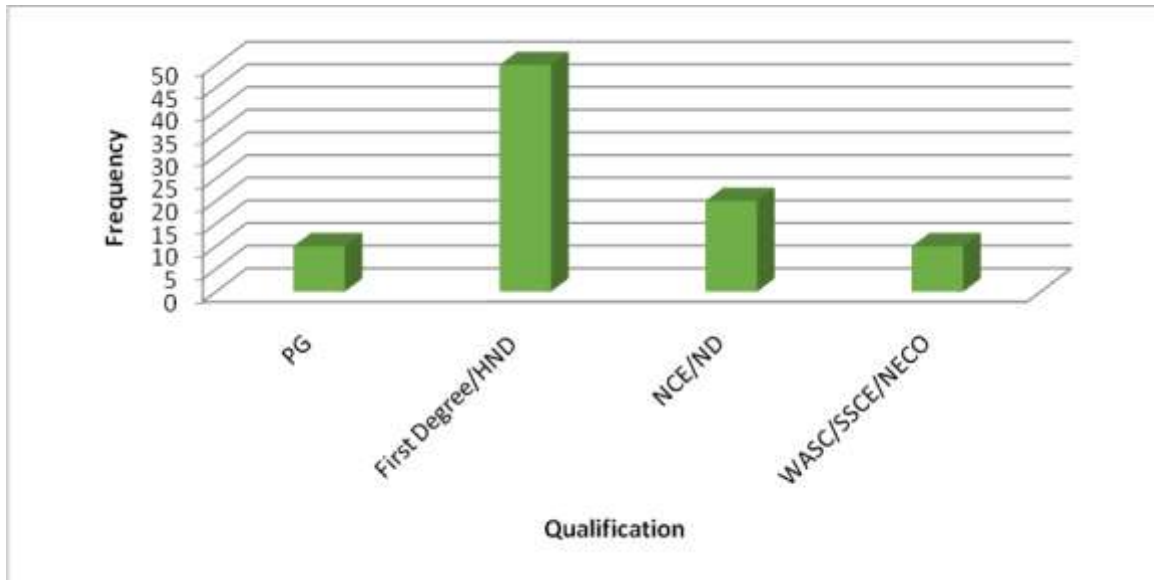


**Figure 4.1.4: Bar chart of distribution of respondents based on Qualification**

Table 4.1 and figure 4.1.4 above, shows that 11.1percent of the respondents had postgraduate certificates; 55.6 percent had B.Sc and HND certificates; 22.2 percent of the respondents had NCE and ND certificates while 11.1percent of the respondents had WASC/SSCE/NECO certificates.
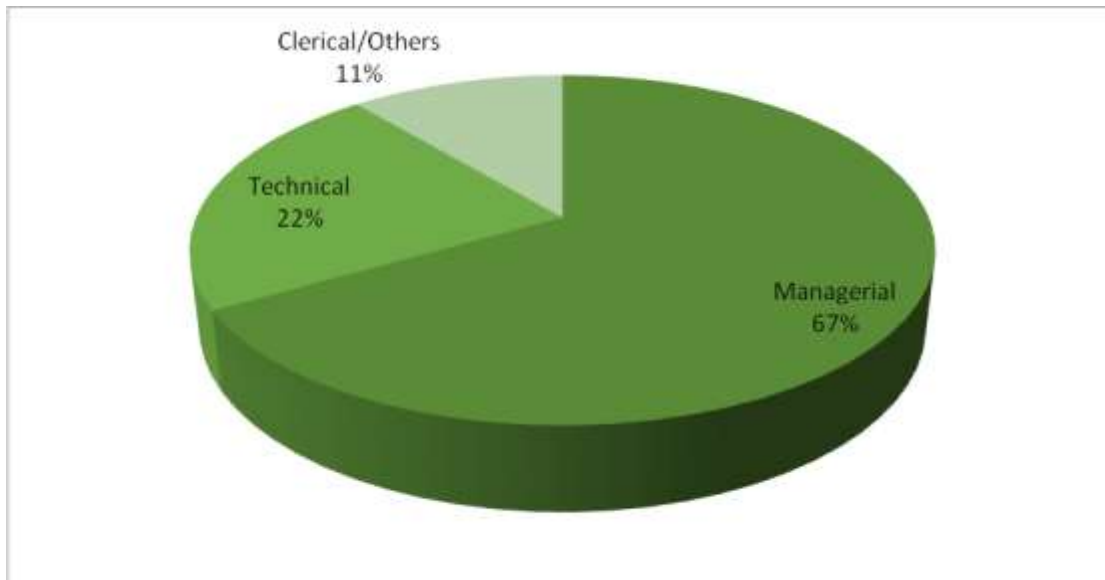
**Figure 4.1.5: Pie chart of distribution of respondents based on Job Status**

The analysis based on job status of the surveyed respondents shows that the surveyed respondents cut across varied job categories. Of the 90 valid responses, table 4.1 and figure 4.1.5 indicates that 67percent were within the managerial/admin categories, 22percent were technical officers; while 11percent belonged to clerical and other categories.

**4.2 Presentation, Analysis of Data and Discussion of Research Objectives**

This section of the questionnaire analysed the research objectives and questions. The questions try to find out the respondents reactions on E –Governance and Public Service Delivery: A study of the Joint Admission and Matriculation Board [JAMB] in the South-East, Nigeria. The section contains 30questions, from question 6 to question 35 as analysed in Table 4.2 below**.**

### Table 4.2 Item Statistics

| Item Number | Item | Mean | Std. Deviation | N | Remark |
|---|---|---|---|---|---|
| 6 | Use of interactive website to pass and receive information | 4.0111 | .38202 | 90 | Agree |
| 7 | Investment in internet backbone and ICT infrastructure development | 3.7556 | .70808 | 90 | Agree |
| 8 | Use of information technologies (Wide Area Networks, the Internet, and mobile computing, etc.) in offices | 3.5889 | .88552 | 90 | Agree |
| 9 | Availability of knowledgeable, skilled and ICT compliant staff | 3.9333 | .66704 | 90 | Agree |
| 10 | Availability of appropriate software for internet connectivity and E-infrastructure | 3.7667 | .82175 | 90 | Agree |
| 11 | Existence of appropriate ICT legal and government support | 3.8222 | .64613 | 90 | Agree |
| 12 | Operational use of ICT in the internal processes and activities (memos/mail distribution, employee salaries and emoluments, staff training, etc. | 3.9000 | .65429 | 90 | Agree |
| 13 | I conduct my affairs in a manner capable of engendering public trust. | 3.9889 | .78604 | 90 | Agree |
| 14 | Corrupt practices and abuse of administrative processes have reduced in the service of JAMB. | 4.0444 | .88573 | 90 | Agree |
| 15 | Am consistent at my duty post until close of work. | 3.5000 | 1.07317 | 90 | Agree |
| 16 | Workers exhibit courtesy in delivering services. | 4.0889 | .51154 | 90 | Agree |
| 17 | I report to work on time. | 3.3889 | 1.06733 | 90 | Agree |
| 18 | I see a career path in my present job. | 3.3333 | 1.00560 | 90 | Agree |
| 19 | I am dedicated to work and emphasize services quality. | 3.5000 | 1.07317 | 90 | Agree |
| 20 | JAMB applications facilities are convenient for customers use. | 4.0778 | .56544 | 90 | Agree |
| 21 | My approaches in attending to the public suggest that am inclined towards offering people-oriented service. | 3.3333 | 1.00560 | 90 | Agree |
| 22 | My work orders are completed on time. | 3.9111 | .64728 | 90 | Agree |
| 23 | Services are performed according to specifications. | 3.7667 | .94868 | 90 | Agree |
| 24 | I find personal meaning and fulfillment in my work. | 4.0556 | .70887 | 90 | Agree |
| 25 | I am willing to work extra hours to complete a task. | 3.6667 | 1.11174 | 90 | Agree |
| 26 | It is difficult to detach myself from my work. | 2.3556 | 1.18332 | 90 | Disagree |
| 27 | I will stay with JAMB even if I am offered a comparable position with greater pay and benefits elsewhere. | 2.3556 | 1.18332 | 90 | Disagree |
| 28 | My job inspires me to put in my best at work. | 3.8889 | .56973 | 90 | Agree |
| 29 | I am enthusiastic about achieving my personal best at attending to visitors and users of JAMB services. | 3.8889 | .77088 | 90 | Agree |
| 30 | JAMB offers services that can be tailored to my specific needs. | 3.8778 | .95785 | 90 | Agree |
| 31 | I have availability of services round the clock at JAMB. | 3.7111 | 1.04122 | 90 | Agree |
| Item Number | Item | Mean | Std. Deviation | N | Remark |
| 32 | I have ease of getting issues/complaints resolved. | 3.5667 | 1.02825 | 90 | Agree |
| 33 | JAMB staffs have positive attitude and are knowledgeable in their job. | 3.7778 | 1.03617 | 90 | Agree |

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| 34 | Customer and corporate objectives can be integrated to achieve better service delivery. | 3.9889 | .78604 | 90 | Agree |
| 35 | JAMB is an organization that puts the consumer first. | 3.7444 | .91873 | 90 | Agree |

**Source: Field Survey, 2017**

Item statistics can be referred to as item-by-item analysis. The mean less than 3.0 implies disagree and mean greater than 3.0 implies agree.

As shown in the above table, the respondents agree with all the items except items 26 and 27.

**Table 4.2a Summary Item Statistics**

|  | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | N of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 3.686 | 2.356 | 4.089 | 1.733 | 1.736 | .178 | 30 |
| Item Variances | .774 | .146 | 1.400 | 1.254 | 9.595 | .125 | 30 |

### 4.2.1   Measure of E- governance in JAMB

**a. E-governance:** E-governance measure was measured with 7 questions items relating to E-governance   (items number 6, 7, 8, 9, 10, 11and 12) were included in the questionnaire with a 5 point Likert scale of Disagree (1), Strongly Disagree (2), Not Sure (3), Agree (4), and Strongly Agree (5). The average scale of the responses of the respondents represents the rating of E-governance which was used to assess the level of E-governance

From the table 4.2 above, question 6 on use of interactive website to pass and receive information by JAMB, the weighted mean value is **4.0111**, showing that the respondents agreed that JAMB has an interactive website which it uses to pass and receive information.

From the table 4.2 above, question 7 on investment in internet backbone and ICT infrastructure development, the weighted mean valve is **3.7556**, showing that the respondents agreed that JAMB had invested to acquire internet backbone and ICT infrastructure development does have other means of sharing information with other government agencies electronically.

From the table 4.2 above, question 8 on the use of information technologies (Wide Area Networks, the Internet, and mobile computing, etc.) in offices, the weighted mean value is **3.5889**, showing that the respondent agreed that information technologies (Wide Area Networks, the Internet, and mobile computing, etc.) were being used in JAMB offices.

From the table 4.2 above, question 9 on availability of knowledgeable, skilled and ICT compliant staff, the weighted mean valve is **3.9333**, showing that the respondents confirms the availability of knowledgeable, skilled and ICT compliant staff in JAMB..

From the table 4.2 above, question 10 on whether availability of appropriate software for internet connectivity and E-infrastructure, the weighted mean value is **3.7667,** showing that the respondents agreed that there is appropriate software for internet connectivity and E-infrastructure in JAMB.

From the table 4.2 above, question 11 on whether there exists appropriate ICT legal and government support, the weighted mean value is **3.8222**, showing that the respondents agreed that there exists appropriate ICT legal and government support in the use and development of ICT in JAMB.

From the table 4.2 above, question 12 on whether there exists an operational use of ICT in the internal processes and activities of JAMB, the weighted mean valve is **3.9000**, showing that the respondents agreed that there exists an operational use of ICT in the internal processes and activities of JAMB like memos/mail, distribution, employee salaries and emoluments, staff training, etc.

### 4.2.2   Measure of Service Culture in JAMB

**b. Service Culture:** To measure service culture 6 questions items relating to service culture, (items numbers 13, 14, 15, 16, 17 and 18) were drafted in the questionnaire with a 5 point Likert scale of Disagree (1), Strongly Disagree (2), Not Sure (3), Agree (4), and Strongly Agree (5). The average scale of the responses of the respondents represents the rating of service culture which was used to assess the level of service culture.

From the table 4.2 above, question 13 on whether my conduct is capable of engendering public trust, the weighted mean value is **3.9889**, showing that the respondents agreed that they conduct their affairs in a manner capable of engendering public trust.

From the table 4.2 above, question 14 on whether corrupt practices and abuse of administrative processes have reduced, the weighted mean value is **4.0444**, showing that the respondents agreed that corrupt practices and abuse of administrative processes have reduced in the services of JAMB.

From the table 4.2 above, question 15 on whether am consistent at duty post till closing hour, the weighted mean value is **3.5000**, showing that the respondents agreed that they are consistent at their duty post till the close of work.

From the table 4.2 above, question 16 on whether JAMB workers exhibit courtesy in delivering services, the weighted mean value is **4.0889**, showing that the respondents agreed that workers exhibit courtesy in delivering services.

From the table 4.2 above, question 17 on whether JAMB workers report to work on time, the weighted mean value is **3.3889**, showing that the respondents agreed that they report to work on time.

From the table 4.2 above, question 18 on whether I see career path in my job, the weighted mean value is **3.3333**, showing that the respondents agreed that they see career path in their job.

### 4.2.3  Measure of Service Quality in JAMB

**c. Service Quality:** To measure service quality, 5 questions items relating to service quality (items number 19, 20, 21, 22 and 23) were included in the questionnaire with a 5 point Likert scale of Disagree (1), Strongly Disagree (2), Not Sure (3), Agree (4), and Strongly Agree (5). The average scale of the responses of the respondents represents the rating of service quality which was used to assess the level of service quality.

From the table 4.2 above, question 19 on whether am dedicated to work and emphasize service quality, the weighted mean value is **3.5000,** showing that the respondents agreed that they are dedicated to work and emphasize service quality.

From the table 4.2 above, question 20 on whether JAMB application facilities are convenient for customer use, the weighted mean value is **4.0778**, showing that the respondents agreed that JAMB application facilities are convenient for customer use.

From the table 4.2 above, question 21 on whether my approaches of attending to the public is people oriented, the weighted mean value is **3.3333**, showing that the respondents agreed that their approaches in attending to the public suggest that they are inclined towards offering people- oriented services.

From the table 4.2 above, question 22 on whether work orders are completed on time, the weighted mean value is **3.9111**, showing that the respondents agreed that their work orders are completed on time.

From the table 4.2 above, question 23 on whether services are performed according to specification, the weighted mean value is **3.7667**, showing that the respondents agreed that they perform their services according to specification.

### 4.2.4  Measure of Employee Engagement in JAMB

**d. Employee Engagement:** To measure **Employee Engagement**, 6 questions items relating to **Employee Engagement** (items number 24, 25, 26, 27, 28 and 29) were included in the questionnaire with a 5 point Likert scale of Disagree (1), Strongly Disagree (2), Not Sure (3), Agree (4), and Strongly Agree (5). The average scale of the responses of the respondents represents the rating of service quality which was used to assess the level of service quality.

From the table 4.2 above, question 24 on whether I find personal meaning and fulfillment in my work, the weighted mean value is **4.0556**, showing that the respondents agreed that they find personal meaning and fulfillment in their work.

From the table 4.2 above, question 25 on the willingness to work extra hours to complete a task, the weighted mean value is **3.6667**, showing that the respondents agreed to their willingness to work extra hours to complete a task.

From the table 4.2 above, question 26 on whether it is difficult to detach myself from my work, the weighted mean value is **2.3556**, showing that the respondents disagree that it is difficult to detach their selves from their work.

From the table 4.2 above, question 27 on the willingness to stay in JAMB even if offered much better job elsewhere, the weighted mean value is **2.3556**, showing that the respondents disagree that they would stay with JAMB even if they are offered a comparable position with greater pay and benefits elsewhere.

From the table 4.2 above, question 28 on whether my job inspires me to put in my best at work, the weighted mean value is **3.8889**, showing that the respondents agreed that their job inspires them to put in their best.

From the table 4.2 above, question 29 on whether am enthusiastic about achieving my personal best, the weighted mean value is **3.8889**, showing that the respondents agreed that they are enthusiastic about achieving their personal best at attending to visitors and users of JAMB services

### 4.2.5  Measure of Customer Experience in JAMB

**e. Customer Experience:** To measure customer experience, 6 questions items relating to customer experience (items number 30, 31, 32, 33, 34 and 35) were included in the questionnaire with a 5 point Likert scale of Disagree (1), Strongly Disagree (2), Not Sure (3), Agree (4), and Strongly Agree (5). The average scale of the responses of the respondents represents the rating of customer experience which was used to assess the level of customer experience.

From the table 4.2 above, question 30 on whether JAMB's services are tailored to my specific needs, the weighted mean value is **3.8778**, showing that the respondents agreed JAMB's services are tailored to their specific needs.

From the table 4.2 above, question 31 on whether there is availability of JAMB services round the clock, the weighted mean value is **3.7111**, showing that the respondents agreed that there is availability of JAMB services round the clock.

From the table 4.2 above, question 32 on ease of getting issues resolved in JAMB, the weighted mean value is **3.5667**, showing that the respondents agreed that they have ease of getting issues/complaints resolved.

From the table 4.2 above, question 33 on whether JAMB staff have positive attitude to work and knowledgeable, the weighted mean value is **3.7778**, showing that the respondents agreed that, JAMB staff have positive attitude to work and knowledgeable.

From the table 4.2 above, question 34 on the integration of customer and corporate objectives, the weighted mean value is **3.9889**, showing that the respondents agreed that customer and corporate objectives can be integrated to achieve better service delivery in JAMB.

From the table 4.2 above, question 35, on whether JAMB is an organization that put customer first, the weighted mean value is **3.7444**, showing that the respondents agreed that JAMB is an organization that put customer first.

## 4.3 Presentation, Analysis of Data and Discussion of the Hypotheses

It will be recalled that in chapter one, we identified a number of hypotheses. We will at this juncture test them one after the other using Pearson Correlation Coefficient and Multiple Regression.

### Test of Hypotheses

### Hypothesis I:

Ho: E-governance has no significant effect on the service culture in the Joint Admission and Matriculation Board (JAMB)

Ha: E-governance has significant effect on the service culture in the Joint Admission and Matriculation Board (JAMB)

For the hypothesis, items 6 to 11 were used to measure E-governance and items 13 to 18 were used to measure service culture.

**Table 4.3.1 Available data generated from weighted mean**

| S/N | E-governance | Service Culture |
|-----|--------------|-----------------|
| 1 | 4.0111 | 3.9889 |
| 2 | 3.7556 | 4.0444 |
| 3 | 3.5889 | 3.5000 |
| 4 | 3.9333 | 4.0889 |
| 5 | 3.7667 | 3.3889 |
| 6 | 3.8222 | 3.3333 |

Output (source: Table 4.2 above)

**Table 4.3.2: R egression Estimates (Effect of E-governance on service culture).**

| Model | Coefficient Estimates | T-Value | Significance |
|-------|----------------------|---------|--------------|
| (CONSTANT) | 3.947 | 5.626 | .000 |
| Use of interactive website to pass and receive information | .004 | .050 | .960 |
| Investment in internet backbone and ICT infrastructure development | .533 | 4.139 | .000 |
| Use of information technologies (Wide Area Networks, the Internet, and mobile | .361 | 1.722 | .088 |

computing, etc.) in offices

| | | | |
|---|---|---|---|
| Availability of knowledgeable, skilled and ICT compliant staff | .258 | 2.190 | .031 |
| Availability of appropriate software for internet connectivity and E-infrastructure | .775 | 4.358 | .000 |
| Appropriate ICT legal and government support | .834 | 10.463 | .000 |
| Operational use of ICT in the internal processes and activities (memos/mail distribution, employee salaries and emoluments, staff training, etc | 1.191 | 11.353 | .000 |
| $R^2$ | 0.872 | | |
| $Adj\ R^2$ | 0.863 | | |
| $F$ | 99.058 (Sig. @ 0.000) | | |

*Dependent Variable: Service culture*

The estimate of $R^2$ suggests that all the E-governance variables in the model collectively accounted for over 99% of the variations in service culture. The F ratio value of 99.058 was significant at less than 0.000 levels. Five out of the seven E-governance indicators had positive signs and significant relationship with service culture.

**DECISION:** The F ratio as seen above (41.973) is significant at 0.000 levels. The null hypothesis is therefore rejected and the alternate, which states that E-governance has significant effect on service culture in the Joint Admissions and Matriculation Board (JAMB) is accepted.

**Hypothesis II:**

**Ho:** There is no significant relationship between E-governance and the service quality of the Joint Admission and Matriculation (JAMB)

**Ha:** There is significant relationship between E-governance and the service quality of the Joint Admission and Matriculation (JAMB)

Items 6 to 10 were used to measure E-governance and items 19 to 23 were used to measure Service Quality.

**Table 4.3.3 Available data generated from weighted mean**

| S/N | E-governance | Service Quality |
|---|---|---|
| 1 | 4.0111 | 3.5000 |
| 2 | 3.7556 | 4.0778 |
| 3 | 3.5889 | 3.3333 |
| 4 | 3.9333 | 3.9111 |
| 5 | 3.7667 | 3.7667 |

Output (source: Table 4.2 above)

**Correlations**

**Table 4.3.4    Correlations: Relationship between E-governance and Service Quality**

|  |  | EG | SQ |
|---|---|---|---|
| EG | Pearson Correlation | 1 | .717 |
|  | Sig. (2-tailed) |  | .026 |
|  | N | 5 | 5 |
| SQ | Pearson Correlation | .717 | 1 |
|  | Sig. (2-tailed) | .026 |  |
|  | N | 5 | 5 |

**Source: Field Survey, 2017**

The correlation value of 0.717 can be interpreted as strong positive. Then, there exists strong positive relationship between the variables. The P-value of 0.026 shows the existence of enough evidence to reject the null hypothesis and conclude that E-governance has significant relationship with the service quality delivered by Joint Admission and Matriculation Board (JAMB).

## Hypothesis III:

**Ho:** E-governance has no significant effect on employee engagement in the Joint Admission and Matriculation Board (JAMB).

**Ha:** E-governance has significant effect on employee engagement in the Joint Admission and Matriculation Board (JAMB).

Items 6 to 11 were used to measure E-governance and items 24 to 29 were used to measure Employee Engagement.

**Table 4.3.5 Available Data generated from weighted mean**

| S/N | E-governance | Employee Engagement |
|-----|--------------|---------------------|
| 1 | 4.0111 | 4.0556 |
| 2 | 3.7556 | 3.6667 |
| 3 | 3.5889 | 2.3556 |
| 4 | 3.9333 | 2.3556 |
| 5 | 3.7667 | 3.8889 |
| 6 | 3.8222 | 3.8889 |

Output (source: Table 4.2 above)

**Table 4.3.5: Regression Estimates (Effect of E-governance on employee engagement).**

| Model | Coefficient Estimates | T-Value | Significance |
|-------|----------------------|---------|--------------|
| (CONSTANT) | 3.047 | 1.832 | .070 |
| Use of interactive website to pass and receive information | .220 | 1.054 | .294 |
| Investment in internet backbone and ICT infrastructure development | .051 | .166 | .868 |
| Use of information technologies (Wide Area Networks, the Internet, and mobile computing, etc.) in offices | .314 | .632 | .529 |
| Availability of knowledgeable, skilled and ICT compliant staff | .261 | .934 | .352 |
| Availability of appropriate software for | 1.774 | 4.208 | .000 |

internet connectivity and E-infrastructure

| | | | |
|---|---|---|---|
| Appropriate ICT legal and government support | .792 | 4.190 | .000 |
| Operational use of ICT in the internal processes and activities (memos/mail distribution, employee salaries and emoluments, staff training, etc | .961 | 3.863 | .000 |
| $R^2$ | 0.544 | | |
| Adj $R^2$ | 0.512 | | |
| F | 17.366 (Sig. @ 0.000) | | |

*Dependent Variable: Employee engagement*

The estimate of $R^2$ suggests that all the E-governance variables in the model collectively accounted for over 54% of the variations in employee engagement. The F ratio value of 17.666 was significant at 0.000 levels. Three out of the seven E-governance indicators had positive signs and significant relationship with employee engagement.

**DECISION:** The F ratio as seen above (17.366) is significant at 0.000 levels. The null hypothesis is therefore rejected and the alternate, which states that E-governance has significant effect on employee engagement in the Joint Admission and Matriculation Board (JAMB) is accepted.

**Hypothesis IV:**

**Ho:** There is no significant relationship between E-governance and the customer experience in the Joint Admission and Matriculation Board (JAMB).

**Ha:** There is significant relationship between E-governance and the customer experience in the Joint Admission and Matriculation Board (JAMB).

Items 6 to 11 were used to measure E-governance and items 30 to 35 were used to measure customers' experience.

**Table 4.3.7 Available data generated from weighted mean**

| S/N | E-governance | Customers' Experience |
|-----|--------------|------------------------|
| 1 | 4.0111 | 3.8778 |
| 2 | 3.7556 | 3.7111 |
| 3 | 3.5889 | 3.5667 |
| 4 | 3.9333 | 3.7778 |
| 5 | 3.7667 | 3.9889 |
| 6 | 3.8222 | 3.7444 |

Output (source: Table 4.2 above)

**Correlations**

**Table 4.3.8 Correlations: Relationship between E-governance and Customers' Experience**

| | | EG | CE |
|------|------------------------|------|------|
| EG | Pearson Correlation | 1 | .569 |
| | Sig. (2-tailed) | | .039 |
| | N | 6 | 6 |
| CE | Pearson Correlation | .569 | 1 |
| | Sig. (2-tailed) | .039 | |
| | N | 6 | 6 |

**Source: Field Survey, 2017**

The correlation value of 0.569 can be interpreted as strong positive. Then, there exists strong positive relationship between the variables. The P-value of 0.039 shows the existence of enough evidence to reject the null hypothesis and conclude that e-Governance has significant relationship with customers' experience.

## 4.4 Discussion of the Results

**Measure of E-governance**

Respondents agreed that JAMB uses interactive website to pass and receive information to/ from the members of the public and that the website also have an interface to share information with other governmental agencies. In a follow up question, the respondents also agreed that JAMB possess huge investment in internet backbone and ICT infrastructure development. This result is in support of Dew (2010) who argues that the purpose of E-governance is not only the conversion of traditional information into bits and bytes and making it reachable via the internal websites or giving government officials computers or automating old practices to an electronic platform, it also calls for rethinking ways the government functions are carried out today in order to improve process and integration. The result is also in line with the findings of OECD(2003) which opines that E-governance is not about business as usual, but should instead focus on using ICT to transform the structures, operations and most importantly, the culture of government using, the most innovative information and communication technologies, particularly web-based internet application, to provide citizens and businesses with more convenient access to government information and services, to improve the quality of the services and provide greater opportunities to participate in democratic institutions and processes.

The respondents agreed that there is the use of information technologies (Wide Area Networks, the Internet, and mobile computing, etc.) in JAMB's offices; the respondents also agreed that there exist availability of Knowledgeable, skilled and ICT compliant staff in JAMB. Similarly, in a follow up question 10, the respondents agreed that there is availability of appropriate software for internet connectivity and E-infrastructure in JAMB. This result is in support with the recent evaluation review of JAMB by the Coalition of Civil Society Organisations for Transparency on Governance (CCSOTG) whose mission is to hold government and government agencies accountable by making sure they affect their abilities and deliver their mandates to the public, which hailed the

management of the Joint Admission and Matriculation Board (JAMB) over the successful conduct of the recent Unified Tertiary Matriculation Examination (UTME). CCSOTG subsequently conferred the title of "Ideal Change Agent" on JAMB Registrar, Professor Ishaq Oleyede for well- conduct of the examination. (www.tribuneonlineeg.com/jamb-registrar-oleyede-bags-awards, june1, 2017). Also on December 30,2017, the Presidency released a statement to give a panorama of President Muhammadu Buhari's achievement in the year ending within the education sector, JAMB appeared to be the poster boy as the presidency noted thus: The Joint Admissions and Matriculation Board (JAMB), under the new management, appointed by the president Buhari in 2016 remitted ₦7.8 billon to the coffers of the Federal Government, a staggering distance from the ₦51 million remitted by JAMB between 2010 and 2016"(mohfouzadimeji.com/2018/01/18/why-is- Nigeria-proud-of-jamb)

Respondents agreed that there exist appropriate ICT legal and government support in JAMB. This result is in support of Prof. Oleyede JAMB Registrar's statement, during the stakeholder's meeting that the issues of exams malpractices is addressed by the introduction of optional mock examination for candidates, introduction of 8-key keyboard to minimize the challenge of use of mouse for candidates, expanded and active involvement of stakeholders throughout the exercise, standardization of CBT centers, discontinuance of the use of scratch cards and introduction of E-Pin obtainable from banks and other partner organizations to procure application documents. Others according to him, include the introduction of central (online) control room monitoring of examination at the Headquarters, among others (http//newstelegraphonline.com/2018/01/2018-utme-jamb-sets-new-strategies)

The respondents agreed that there exists an operational use of ICT in the internal processes and activities of JAMB like memos distribution, employee salaries and emoluments, staff training and development. This result is in support of Seifert (2003) who argues that G2E refers to the relationship between government and its employees only. The purpose of this relationship is to serve employees and offer some online

services such as applying online for annual leave, checking the balance of leave and reviewing salary payment records among other things. This is also supported by Ndou (2004) who stated that internetworking is required to enable appropriate sharing of information and opening up of new channels for communication and delivery of new service.

## Measure of Service Culture

The survey participants were requested to state their opinions on the questions measuring service culture; the respondents agreed on these: that they conduct their affairs in a manner capable of engendering public trust, that corrupt practices and abuse of administrative processes have reduced in the service of JAMB, that they are consistent at their duty post until close of work, that they exhibit courtesy in delivering services, that they report to work on time and that they see a career path in their present job. This result denotes that there exist a good service culture in JAMB which is in support of the assessment of the National information Technology Development (NITDA) which commended the Joint Admission and Matriculation Board (JAMB) for meeting the expectations and requirement of the presidential directives on the promotion of transparency and efficiency in the business environment designed to facilitate the ease of doing business in Nigeria as related to the use of ICT for service delivery. On NITDA's further evaluation of the websites of JAMB, it noted that JAMB was amongst the agencies taking the lead in complying with the presidential directives on the use of ICT to improve public service delivery in an efficient and transparent manner. (itedgenews.ng/2017/06/19/nitda/commends-jamb)

## Measure of Customer Experience

The respondents agreed to these questions bordering on the measure of customer experience, that Jamb offers services that can be tailored to my specific needs, that they have availability of services round the clock at JAMB, that they have ease of getting issues/ complaints resolved, that JAMB staff  have positive attitude and are knowledgeable in their job, that customer and corporate objectives can be integrated to

achieve better service delivery and that JAMB is an organization that puts the customer first. This result is in support of the Research conducted by Rawson, Duncan and Jones (2013) which showed that companies able to manage the whole customer experience gain massive rewards. They had improved customer satisfaction, reduced churn, increased revenue and enhanced employee satisfaction. This is also supported by Meyer and Schwager (2007) who argued that Customer Experience is the internal and subjective response customers have to any direct or indirect contact with a company. Direct contact generally occurs in the course of purchase, use, and service and is usually initiated by the customer. Indirect contact most often involves unplanned encounters with representatives of a company's products, service or brands and takes the form of word-of- mouth recommendations or criticisms, advertising, news reports, reviews and so forth.

**Measure of Service Quality**

Respondents agreed that they are dedicated to their work and emphasize services quality, that JAMB applications facilities are convenient for customers use, that their approaches in attending to the public suggest that they are inclined towards offering people- oriented service, that their orders are completed on time and also that services are performed according to specifications in JAMB. This result shows that the quality of service delivery in JAMB is efficient and this is in support of Prof. Odirinde's (2015) who enumerated some remarkable innovations of the board to improve quality of service delivery in JAMB in the table below:

**Table 4:  Showing the Activities of JAMB Before and NOW**

| ACTIVITY | WHAT WAS | WHAT IS |
|---|---|---|
| Use of Syllabus | Prior to 1987-The Boards Examination was based on WAEC syllabus | 1991-The Examination is now based on the syllabus developed by JAMB |
| Test Production and Moderation | Prior to 1991- The Board involved universities in the test  production and            moderation process to ensure             that the highest standards were attained | 1991-Items are developed by the test development department, however tertiary institutions are involved in Moderation. |
| Use of Computer Facilities | Prior to 2008- The Board had no computers of its own; it had to rely on facilities elsewhere. | 2008-The Board owns a computer complex with systems that process data; it does not need rely on any facilities elsewhere. |
| Despatch of Examination  Notices | Prior to 2008- Examination Notices were sorted into States into Post Office bags and either taken by staff to                  state capitals or major towns within the states to facilitate timely delivery. | 2008- Online services are provided for applications, examination notifications, results of examinations, change of course/institutions, admission status and printing of admission letters. |
| Use of Special Centres | Prior to 2007- Special Centres were established in examination towns to attend to candidates who did not receive examination notifications. | 2007- Special centres have been abolished. Examination notifications are available online. |
| Custody of Examination Materials | Prior to 2013-Commercial banks allowed the use of their Strong Rooms to store examination materials. | 2013- With the inception of the DBT and CBT, deployment of test items is done electronically. |
| Post-Examination Processing | Prior to 2008- Scanning and Scoring; Pre and Post examination processing done by UK- based contractor at exorbitant operational costs. | 2014- CBT has eliminated the scanning of OMR sheet; and therefore reduced operational cost. Other post examination activities are now done in-house. |
| Examination Administration | Prior to 2008- Examination administration involves distribution and retrieval of Examination Materials; With huge transportation logistic. | 2008- Examination administration and up loading of candidates responses done entirely online. |
| Format of OMR Sheets | Prior to 1994- The Board started its JME with 4 OMR sheets Per candidate. This leads to prolong processing time and delayed the release of results. | 1994-Presently, one OMR sheet per candidate, this facilitates processing and prompt release of results. |
| Release of Results | Prior to 2007- JAMB results were delayed for close to 2 or 3 months due to limited number of scanners | 2008-The Board has a total number of 26 scanners which has facilitated the prompt release of results. |

Source: Prof. Odirinde's (2015)

**Measure of Employee Engagement**

The respondents were requested to state their opinions on the questions measuring Employee Engagement; they agreed on these questions, that they find personal meaning and fulfillment in their work, that they are willing to work extra hours to complete a task, that their job inspires them to put in my best at work, that that they are enthusiastic about achieving my personal best at attending to visitors and users of JAMB services while they Disagreed that it is difficult to detach their selves from work and that they will stay with JAMB even if they are offered a comparable position with greater pay and benefits elsewhere. The respondents who disagreed that it's difficult to detach them from their work were mainly junior and senior staff of JAMB while those who agreed were senior managerial staff. It is worthy of note that this is a reflection of the Nigerian public service where the senior managerial staff members are often satisfied with their job, refuse to go on annual leaves, refuse to retire and are ready to do anything to keep the job. Also, the senior managerial staff members have much job to do while the junior staff members and senior staff have little or no job to occupy them (see Briggs, 2007).

During our field survey, some junior staff in JAMB revealed that JAMB's top Management had refused to convert them to senior staff cadres on the submit of their additional higher degrees/ qualifications. Consequently, they see their services in JAMB as a facilitator to get a better job elsewhere. As one respondent stated thus: "JAMB is my starting point to get experience, since other organizations always request for years of experience". This perception could adversely affect employee morale and productivity.

This result has a negative implication for service delivery in JAMB, because any organization that workers are ever willing to leave if offered much better Job elsewhere is likely to experience high rate of labour loss.

However, the results here runs counter to Ahmad (2012) who argues that to satisfy customers, firms do much effort but do not pay attention on satisfying employees. But the fact is that customer would not be satisfied until and unless employees are satisfied. Because, if employees are satisfied, they will do more work therefore ultimately customers will be satisfied. Azar and Shafighi (2013) also supported that employee performance is actually influenced by motivation because if employees are motivated then they will do work with more effort and by which performance will ultimately improve.

# CHAPTER FIVE

## SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

This chapter covers the summary of finding, conclusions and recommendations of this study. It also indicates some areas that still need further research and makes recommendations for policy makers to adjust, change and adopt E-governance initiatives that may help the public service delivery minimize or reduce red-tape, and bring efficiency in serving citizens.

### 5.1    Summary of Findings

This work has succeeded in evaluating E-governance and Public Service Delivery: A Study of the Joint Admission and Matriculation Board (JAMB) in the South East Nigeria. The study among other things reviewed related literatures as well as review of prior studies. The study further collected and analyzed data to come out with the following findings:

1. That E-governance indicators have significant effect on service culture in JAMB. This result invalidated the first null hypothesis of the study which states that E-governance has no significant effect on service culture in JAMB. The F ratio of 99.058 from the regression analysis was found to be significant at 0.000 levels. Therefore, the null hypothesis was rejected; thereby leading to the conclusion that e-Governance has significant relationship with employee engagement in Joint Admissions and Matriculation Board (JAMB).

2. That there is a significant relationship between E-governance and service quality in JAMB. This finding invalidated the second null hypothesis which states that there is no significant relationship between E-governance and service quality in JAMB. The correlation value of 0.717 can be interpreted as strong positive. Then, there exists strong positive relationship between the variables. The P-value of 0.026 shows the existence of enough evidence to reject the null hypothesis and

conclude that e-Governance has significant relationship with the service quality delivered by joint Admission and Matriculation Board.

3. That E-governance indicators have significant effect on employee engagement in JAMB. This result invalidated the third null hypothesis of the study which states that E-governance has no significant effect on employee engagement in JAMB. The F ratio of 17.366 from the regression analysis was found to be significant at 0.000 levels. Therefore, the null hypothesis was rejected and we concluded that e-Governance has significant relationship with the employee engagement.

4. That there is a significant relationship between E-governance and customer experience in JAMB. It also invalidates the fourth null hypothesis of the study which states that there is no significant relationship between E-governance and customer experience in JAMB. The correlation value of 0.569 can be interpreted as strong positive. Then, there exists strong positive relationship between the variables. The P-value of 0.039 shows the existence of enough evidence to reject the null hypothesis and conclude that e-Governance has significant relationship with customers' experience.

## 5.2    Conclusion

The main aim of the study is to examine the impact of E-governance on public service delivery using the Joint Admission and Matriculation Board (JAMB) as the case study. The research was guided by four research questions and hypotheses. From the research findings, this study reveals a diverse aspect of e-Governance which is referred to the use of Information Communication Technology (ICT) in government to run governmental activities including public service delivery. It argues that well established e-Governance has positive implications on service delivery in the Joint Admission and Matriculation Board (JAMB).

In review of relevant empirical literature and the subsequent testing of the four stated hypotheses, we came to the conclusion that e-Governance has a significant effect on service culture in the Joint Admission and Matriculation Board (JAMB). Secondly, that there is a significant relationship between e-Governance and services quality in the Joint Admission and Matriculation Board (JAMB). Thirdly, that e-Governance has a significant effect on employee engagement in the Joint Admission and Matriculation Board (JAMB). The fourth hypothesis also discovered that there is a significant relationship between e-Governance on employee commitment in the Joint Admission and Matriculation Board (JAMB).

This study argues that e-governance remain the best in encouraging effective service delivery that will lead to transparency and accountability in government businesses and operations for Nigeria's public service. The study is premised on the Andersen, Henriksen's Public Sector Process Rebuilding (PPR) maturity model of e-government. Andersen, Henriksen (2006) proposed the (Public Sector Process Rebuilding (PPR) Model) which was an extension of the Layne and Lee Model four stages (Catalogue, Transaction, Vertical integration and Horizontal integration). The major difference between the Layne and Lee model and the Public Sector Process Rebuilding (PPR) model is that, the latter talks more of customer centric approach rather than the technological capability.

The study also reveals that E-Governance is the application of electronic means in the interaction between government and citizens, government and businesses, as well as internal government operations to simplify and improve democratic government and business aspects of governance (Backus, 2003). While e-government is simply about the transformation, delivering services effectively and seamlessly, developing new forms of communication between government and the governed, and enhancing quality of lives through economic development and enhancing civil society (Worrall, 2011). In the words of Ayo (2014), e-government is about "increasing transparency, sharpening

accountability, increased scrutiny, taking out hierarchies, changing working practices, changing cultures, changing behaviours and about radically changing power structure by making power more diffused and less concentrated among a small political and administrative elite."

This study revealed that an efficient Service delivery is the objectives of all public organization, but that the major causes of poor service delivery in public service are: political manipulation, corruption and lack of accountability and transparency, inadequate citizen participation, poor human resource policy, failure to manage change, lack of employee capacity, poor planning, and poor monitoring and evaluation etc. By implication however, the e-governance implementation in the Nigerian public service in general and JAMB in particular, is accompanied with many challenges.

## 5.3    Recommendations

In view of the findings of this study, it is imperative at this juncture to suggest what can be done to achieve a more successful implementation of e-governance in Nigeria's public service in general and JAMB in particular. Based on the issues identified as some of the major challenges to e-governance implementation in Nigeria's public service in general and JAMB in particular, the following recommendations are advanced:

1. The importance of e-governance in the achievement of positive service culture cannot be over emphasized. Therefore, public sector agencies should as a matter of policy, develop a positive service culture and set up e-governance implementation committees who will work out modalities for effective implementation of the concept, with performance evaluation units, establish to evaluate the successes and failures in its targets as well as feedback mechanism to report implementation effectiveness. The Federal Government of Nigeria should establish Ministry of ICT Affairs to set up ICT implementation framework evaluation units in each of the Ministries and Parastatals, with the Permanent Secretaries as the head. The

ICT Ministry will liaise with the implementation committees at various ministries including state ministries to evaluate performance as well as feedback to help in its effectiveness. The government should also enact ICT laws that will make computer literacy a compulsory aspect for every public or civil servant both at the local, state and federal levels. The policy should also include creation of ICT awareness with computer literacy programmes among public servants. With the above done, the challenges will be reduced to a mere insignificant level as well as putting the country into the world map of e-governance high ranking list. The implementation of e-governance should be a must to all public service institutions as well.

2. JAMB in particular and public sector organizations in general should avail themselves the windows of opportunities that **e-governance** provides in their drive to enhance service quality by showing a high level of e-readiness in their operations. All that is needed must be put in place by the government, especially that which is within their capacity. For instance, ensure that all office is equipped with functional computers, employ highly skilled personnel in ICT, provision of continuous training of the personnel to keep them informed on how best to utilize e-governance in engendering effective service delivery among others.

3. Also, for improved service delivery in Nigeria's public service in general and JAMB in particular, the government must provide the necessary infrastructure that will aid the successful implementation of e-governance in Nigeria's public service. For instance, robust broadband services, required internet network and the availability of power supply, which has been identified as one of the major challenges to e-governance implementation in the public service has to be taken care of. This means that the success of e-governance implementation in the public service is tied to the availability of power supply and in this case electricity. Government offices must also be internet connected with trained and qualified staff. Another factor to be considered is the Human element. This is important

because no technology can drive itself, it is the human element that will drive the technology so their willingness is critical to whether e-governance implementation in Nigeria's public service will succeed or not, and this is because they have the capacity to truncate whatever innovation and benefits e-governance promises to bring to bear. So on this note, government needs to carefully address the issue of human factor which often manifest in resistance to change, nonchalant attitudes and the likes which is responsible for underutilization of most of the ICT facilities put in place by government especially in offices or departments that tends to embrace e-governance in their operations, thereby sabotaging the good effort of the government.

4. Based on the findings and conclusions, we recommend that a reliable and strategic framework for e-governance operation is necessary. Government's Ministries, Departments and Agencies should set up e-governance implementation committees that will work out modalities for effective implementation, alongside the performance evaluation units established to assess the successes and failures in its targets as well as feedback mechanism to report implementation effectiveness. Additionally, there is the need for the government to come up with a regulatory policy, especially on the framework through legislation of e-governance and other ICT-related issues as it pertains to the operations strategies among the tiers of government. By so doing, the public service will be aware on the areas that need to be worked on, in order to actualize effective implementation of e-governance in Nigeria's public service in general and JAMB in particular.

The Nigeria government should also enact Information and Communication Technology (ICT) laws that will make computer literacy a compulsory aspect for every public or civil servant both at the local, state and federal levels. Such policies should also involve the adoption of effective ICT awareness with computer-related literacy training programmes introduced in our primary, secondary and tertiary institutions. With this implemented, the challenges will be

reduced as well as putting the country into the world map of ICT/e-governance high ranking list.

## 5.4    Contribution to Knowledge

The research extensively dealt with the concept of E- governance and Public Service Delivery as it concerns a developing country like Nigeria by opening a discussion on the role E- governance plays on public service delivery. This study has added to the efforts of researchers' world over to understand the association between E- governance and public service delivery. The study investigated and statistically established:

   I.   a significant effect of E- governance on Service Culture.

  II.   a significant relationship between E- governance and Service Quality

 III.   a significant relationship between E- governance and Customer Experience

 IV.   a significant effect of  E- governance on Employee Engagement


## 5.5    Suggestions for Further Studies

This study focused on investigating E-governance and Public service Delivery: A study of the Joint Admission and Matriculation Board (JAMB) in the south-East, Nigeria. In the course of the research on this topic, the researcher found need for further research into the following areas:

   I.   The challenges of e-governance implementation process in the government ministries.

  II.   The processes of e-governance implementation in non-governmental/ private organizations in Nigeria.

 III.   Legal frameworks for implementation of e-governance in Nigeria.

 IV.   Comparative studies of e-governance implementation process in public sector between Nigeria and developed countries.

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# Appendix 1

**Questionnaire survey on E-Governance and Public Service Delivery: a Study of the Joint Admission and Matriculation Board (JAMB) in the South-East, Nigeria**

<div align="right">

Okeke Chinenye Gloria
Department of Public Administration
NnamdiÁzikiwe University,
Awka
Anambra State of Nigeria
02/08/2017.

</div>

Dear Respondent,

I am a post graduate student in the Department of Public Administration, Nnamdi Azikiwe University, Awka.

I am carrying out a research on E –Governance and Public Service Delivery: A study of the Joint Admission and Matriculation Board [JAMB] in the South- East, Nigeria. Kindly supply me with information as the success of the project will depend on the authenticity of the information collected.

I pledge that both your identity and your information will be held in the strictest confidence.
Thanks.

<div align="right">

Yours Sincerely,


**Okeke C. G**
Researcher

</div>

# QUESTIONNAIRE

## SECTION A:    Demographic Characteristics' of Respondents

For each question, please tick (√) the box you consider most appropriate or that which represent your situation. Please read through all the questions before attempting to complete the questionnaire. Kindly complete the questionnaire without discussing it with other members of your organization. All information supplied will be treated as strictly confidential. Information will be used only in aggregated form. Once again, I thank you for your kind consideration and cooperation.

**1. Sex/Gender:**

(a)  Male ☐

(b)  Female ☐

**2. Designation:**

(a) 01-05 Junior Staff ☐

(b) 06 -12 Senior Staff ☐

(c) 07-17 Senior Managerial ☐

**3. Length of Service:**

(a)   5 years & below ☐

(b)    6 – 10 years ☐

(c)    11 – 15 years ☐

(d)   16 – 20 years ☐

(e)   21 years & above ☐

**4. Education Qualification:**

(a) Postgraduate ☐

(b) First Degree/HND ☐

(c) NCE/ND ☐

(d) WASC/SSEC/NECO ☐

**5. Job Category:**

(a) Managerial/Admin ☐

(b) Technical ☐

(c) Others ☐

**SECTION B: Questions on the Subject of Research**

There is no wrong or right answer to any of the question below. Pls. place a tick **(√)** on the answer that represents your feelings or situation about each question using five rating scale: Do you (5) Strongly Agree; (4) Agree; (3) Not Sure (2) Disagree (1) Strongly Disagree.

| | **Measure of E-governance** | Strongly Agree 5 | Agree 4 | Not Sure 3 | Disagree 2 | Strongly Disagree 1 |
|---|---|---|---|---|---|---|
| 6 | Use of interactive website to pass and receive information | | | | | |
| 7 | Investment in internet backbone and ICT infrastructure development | | | | | |
| 8 | Use of information technologies (Wide Area Networks, the Internet, and mobile computing, etc.) in offices | | | | | |
| 9 | Availability of knowledgeable, skilled and ICT compliant staff | | | | | |
| 10 | Availability of appropriate software for internet connectivity and E-infrastructure | | | | | |
| 11 | Appropriate ICT legal and government support | | | | | |
| 12 | Operational use of ICT in the internal processes and activities (memos/mail distribution, employee salaries and emoluments, staff training, etc. | | | | | |
| | **Measure of Service Culture (SC)** | | | | | |
| 13 | I conduct my affairs in a manner capable of engendering public trust. | | | | | |
| 14 | Corrupt practices and abuse of administrative processes have reduced in the service of JAMB. | | | | | |
| 15 | Am consistent at my duty post until close of work. | | | | | |
| 16 | Workers exhibit courtesy in delivering services. | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 17 | I report to work on time. | | | | | |
| 18 | I see a career path in my present job. | | | | | |
| | **Measure of of Service Quality** | | | | | |
| 19 | I am dedicated to work and emphasize services quality. | | | | | |
| 20 | JAMB applications facilities are convenient for customers use. | | | | | |
| 21 | My approaches in attending to the public suggest that am inclined towards offering people-oriented service. | | | | | |
| 22 | My work orders are completed on time. | | | | | |
| 23 | Services are performed according to specifications. | | | | | |
| | **Measure of Employee Engagement** | | | | | |
| 24 | I find personal meaning and fulfillment in my work. | | | | | |
| 25 | I am willing to work extra hours to complete a task. | | | | | |
| 26 | It is difficult to detach myself from my work. | | | | | |
| 27 | I will stay with JAMB even if I am offered a comparable position with greater pay and benefits elsewhere. | | | | | |
| 28 | My job inspires me to put in my best at work. | | | | | |
| 29 | I am enthusiastic about achieving my personal best at attending to visitors and users of JAMB services. | | | | | |
| | **Measure of Customer Experience (CE)** | | | | | |
| 30 | JAMB offers services that can be tailored to my specific needs. | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 31 | I have availability of services round the clock at JAMB. | | | | | |
| 32 | I have ease of getting issues/complaints resolved. | | | | | |
| 33 | JAMB staffs have positive attitude and are knowledgeable in their job. | | | | | |
| 34 | Customer and corporate objectives can be integrated to achieve better service delivery. | | | | | |
| 35 | JAMB is an organization that puts the consumer first. | | | | | |

*Thank you for participating in this survey*

<div align="center">**APPENDIX II**</div>

<div align="right">
Department of Public Administration

Nnamdi Ázikiwe University, Awka

Anambra State of Nigeria

02/08/2017.
</div>

The Zonal Coordinator

JAMB Zonal Office, No. 22, Annong Street,

Ogui New Layout, Off Nkpotiki Junction, Enugu,

 Enugu State.


Dear Sir,

**APPLICATION TO OBTAIN NECESSARY INFORMATIONS FOR RESEARCH PURPOSES**

I am a Ph.D student in the Department of Public Administration, Nnamdi Azikiwe University, Awka.

I am carrying out a research on E –Governance and Public Service Delivery: A study of the Joint Admission and Matriculation Board [JAMB] in the South- East, Nigeria.

The success of the project we depend on the authenticity of the information collected. Please kindly assist me in the following ways:

1. Allow me distribute the attached questionnaire to all staff of your office
2. Encourage your staff to fill and return the questionnaires
3. Provide the list of all the staff in your office stating their names, rank/designation and departments/units.

 I pledge that the information will be held in the strictest confidence.

Thanks.

<div align="right">
Yours Sincerely,


**Okeke Chinenye G.**

Researcher
</div>

<center>**APPENDIX III**</center>

<div align="right">
Department of Public Administration

Nnamdi Ázikiwe University, Awka

Anambra State of Nigeria

02/08/2017.
</div>

The Zonal Coordinator

JAMB Zonal Office, Okigwe Road,

Beside Court of Appeal

P. M. B. 1020,

Owerri, Imo State.

Dear Sir,

**APPLICATION TO OBTAIN NECESSARY INFORMATIONS FOR RESEARCH PURPOSES**

I am a Ph.D student in the Department of Public Administration, Nnamdi Azikiwe University, Awka.

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Thanks.

<div align="right">
Yours Sincerely,

**Okeke Chinenye G.**

Researcher
</div>

<center>147</center>

Department of Public Administration

Nnamdi Ázikiwe University, Awka

Anambra State of Nigeria

02/08/2017.

The State Coordinator

JAMB State Office,

Amawbia Bye-pass,

Awka,

Anambra State.

Dear Sir,

**APPLICATION TO OBTAIN NECESSARY INFORMATIONS FOR RESEARCH PURPOSES**

I am a Ph.D student in the Department of Public Administration, Nnamdi Azikiwe University, Awka.

I am carrying out a research on E –Governance and Public Service Delivery: A study of the Joint Admission and Matriculation Board [JAMB] in the South- East, Nigeria.

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I pledge that the information will be held in the strictest confidence.

Thanks.

Yours Sincerely,

**Okeke Chinenye G.**

Researcher

Department of Public Administration

Nnamdi Ázikiwe University, Awka

Anambra State of Nigeria

02/08/2017.

The State Coordinator

JAMB State Office,

No. 1, Amogu Street,

Near Unity Square,

Abakaliki, Ebonyi State.

Dear Sir,

**APPLICATION TO OBTAIN NECESSARY INFORMATIONS FOR RESEARCH PURPOSES**

I am a Ph.D student in the Department of Public Administration, Nnamdi Azikiwe University, Awka.

I am carrying out a research on E –Governance and Public Service Delivery: A study of the Joint Admission and Matriculation Board [JAMB] in the South- East, Nigeria.

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3.  Provide the list of all the staff in your office stating their names, rank/designation and departments/units.

I pledge that the information will be held in the strictest confidence.

Thanks.

Yours Sincerely,

**Okeke Chinenye G.**

Researcher

Department of Public Administration

Nnamdi Ázikiwe University, Awka

Anambra State of Nigeria

02/08/2017.

The State Coordinator

JAMB State Office,

Ubakala, Ubakala Junction,

Port harcourt- Enugu express way,

Umuahia,

Abia State.

Dear Sir,

**APPLICATION TO OBTAIN NECESSARY INFORMATIONS FOR RESEARCH PURPOSES**

I am a Ph.D student in the Department of Public Administration, Nnamdi Azikiwe University, Awka.

I am carrying out a research on E –Governance and Public Service Delivery: A study of the Joint Admission and Matriculation Board [JAMB] in the South- East, Nigeria.

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3. Provide the list of all the staff in your office stating their names, rank/designation and departments/units.

 I pledge that the information will be held in the strictest confidence.

Thanks.

Yours Sincerely,

**Okeke Chinenye G.**

Researcher

# APPENDIX VII

## Pre Reliability Test

**Item-Total Statistics**

| Items | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|---|---|---|---|---|---|
| 6 | 106.5778 | 473.191 | .612 | . | .984 |
| 7 | 106.8333 | 456.949 | .861 | . | .984 |
| 8 | 107.0000 | 448.764 | .905 | . | .984 |
| 9 | 106.6556 | 460.004 | .806 | . | .984 |
| 10 | 106.8222 | 450.552 | .925 | . | .984 |
| 11 | 106.7667 | 460.473 | .815 | . | .984 |
| 12 | 106.6889 | 459.026 | .858 | . | .984 |
| 13 | 106.6000 | 452.490 | .909 | . | .984 |
| 14 | 106.5444 | 448.138 | .922 | . | .984 |
| 15 | 107.0889 | 442.374 | .886 | . | .984 |
| 16 | 106.5000 | 466.051 | .778 | . | .984 |
| 17 | 107.2000 | 442.791 | .881 | . | .984 |
| 18 | 107.2556 | 446.282 | .852 | . | .984 |
| 19 | 107.0889 | 442.374 | .886 | . | .984 |
| 20 | 106.5111 | 464.994 | .746 | . | .984 |
| 21 | 107.2556 | 446.282 | .852 | . | .984 |
| 22 | 106.6778 | 461.389 | .780 | . | .984 |
| 23 | 106.8222 | 445.002 | .939 | . | .984 |
| 24 | 106.5333 | 455.061 | .924 | . | .984 |
| 25 | 106.9222 | 439.983 | .907 | . | .984 |
| 26 | 108.2333 | 455.731 | .522 | . | .982 |
| 27 | 108.2333 | 455.731 | .522 | . | .983 |
| 28 | 106.7000 | 460.594 | .924 | . | .984 |
| 29 | 106.7000 | 452.819 | .917 | . | .984 |
| 30 | 106.7111 | 445.579 | .915 | . | .984 |
| 31 | 106.8778 | 442.221 | .918 | . | .984 |
| 32 | 107.0222 | 443.842 | .891 | . | .984 |
| 33 | 106.8111 | 442.402 | .918 | . | .984 |
| 34 | 106.6000 | 452.490 | .909 | . | .984 |
| 35 | 106.8444 | 447.728 | .898 | . | .984 |

The last column shows possible value of Alpha if the particular item is removed from the questionnaire. Since the values are less than 0.985, therefore, all items are important or contribute significantly to the strength of Alpha.

**Case Processing Summary**

| | | N | % |
|---|---|---|---|
| Cases | Valid | 10 | 100.0 |
| | Excluded[a] | 0 | .0 |
| | Total | 10 | 100.0 |

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| .985 | .988 | 30 |

Alpha value is 0.985(98.5%) which implies the responses are reliable and can be used for decision making.

# APPENDIX VIII

## Post Reliability Test

Cronbach's Alpha can be used to determine internal consistency of questionnaire. Alpha level shows level of consistency of questionnaire and if less than 60%, the responses from the respondents cannot be used for decision making. Also, it shows the importance of an item in the research tool, that is, the resulting Alpha level if an item is deleted (If-Item Deleted). An item in the questionnaire is tagged not important if its removal would increase the Alpha level of the research tool.

Base on the data collected, the internal consistency of the research tool is as shown below:

**Item-Total Statistics**

| Items | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|---|---|---|---|---|---|
| 6 | 106.5778 | 473.191 | .612 | . | .984 |
| 7 | 106.8333 | 456.949 | .861 | . | .984 |
| 8 | 107.0000 | 448.764 | .905 | . | .984 |
| 9 | 106.6556 | 460.004 | .806 | . | .984 |
| 10 | 106.8222 | 450.552 | .925 | . | .984 |
| 11 | 106.7667 | 460.473 | .815 | . | .984 |
| 12 | 106.6889 | 459.026 | .858 | . | .984 |
| 13 | 106.6000 | 452.490 | .909 | . | .984 |
| 14 | 106.5444 | 448.138 | .922 | . | .984 |
| 15 | 107.0889 | 442.374 | .886 | . | .984 |
| 16 | 106.5000 | 466.051 | .778 | . | .984 |
| 17 | 107.2000 | 442.791 | .881 | . | .984 |
| 18 | 107.2556 | 446.282 | .852 | . | .984 |
| 19 | 107.0889 | 442.374 | .886 | . | .984 |
| 20 | 106.5111 | 464.994 | .746 | . | .984 |
| 21 | 107.2556 | 446.282 | .852 | . | .984 |
| 22 | 106.6778 | 461.389 | .780 | . | .984 |
| 23 | 106.8222 | 445.002 | .939 | . | .984 |
| 24 | 106.5333 | 455.061 | .924 | . | .984 |
| 25 | 106.9222 | 439.983 | .907 | . | .984 |
| 26 | 108.2333 | 455.731 | .522 | . | .982 |
| 27 | 108.2333 | 455.731 | .522 | . | .983 |
| 28 | 106.7000 | 460.594 | .924 | . | .984 |
| 29 | 106.7000 | 452.819 | .917 | . | .984 |
| 30 | 106.7111 | 445.579 | .915 | . | .984 |
| 31 | 106.8778 | 442.221 | .918 | . | .984 |
| 32 | 107.0222 | 443.842 | .891 | . | .984 |
| 33 | 106.8111 | 442.402 | .918 | . | .984 |
| 34 | 106.6000 | 452.490 | .909 | . | .984 |
| 35 | 106.8444 | 447.728 | .898 | . | .984 |

The last column shows possible value of Alpha if the particular item is removed from the questionnaire. Since the values are less than 0.985, therefore, all items are important or contribute significantly to the strength of Alpha.

**Case Processing Summary**

|        |                       | N  | %     |
|--------|-----------------------|----|-------|
| Cases  | Valid                 | 90 | 100.0 |
|        | Excluded[a]           | 0  | .0    |
|        | Total                 | 90 | 100.0 |

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|------------------|----------------------------------------------|------------|
| .985             | .988                                         | 30         |

Alpha value is 0.985(98.5%) which implies the responses are reliable and can be used for decision making.

# APPENDIX IX

GET
  FILE='D:\DELL\SPSS DOC\.sav'.
DATASET NAME DataSet1 WINDOW=FRONT.

SAVE OUTFILE='C:\Users\\Documents\Chinenye PUB.sav'
  /COMPRESSED.
REGRESSION
  /MISSING LISTWISE
  /STATISTICS COEFF OUTS R ANOVA
  /CRITERIA=PIN(.05) POUT(.10)
  /NOORIGIN
  /DEPENDENT Reliability1
  /METHOD=ENTER P1 P2 P3 P4 P5 P6.

## Regression

[DataSet1] C:\Users\Prof. Nwankwo\Documents\Chinenye PUB.sav

**Variables Entered/Removed[a]**

| Model | Variables Entered | Variables Removed | Method |
|---|---|---|---|
| 1 | P6, P5, P4, P1, P2, P3[b] | . | Enter |

a. Dependent Variable: Reliability1
b. All requested variables entered.

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .842[a] | .710 | .693 | 1.62689 |

a. Predictors: (Constant), P6, P5, P4, P1, P2, P3

**ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 666.555 | 6 | 111.092 | 41.973 | .000[b] |
| | Residual | 272.618 | 103 | 2.647 | | |
| | Total | 939.173 | 109 | | | |

a. Dependent Variable: Reliability1
b. Predictors: (Constant), P6, P5, P4, P1, P2, P3

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 4.260 | 1.050 | | 4.058 | .000 |
| | P1 | .070 | .132 | -.030 | .531 | .597 |
| | P2 | .731 | .191 | .227 | 3.829 | .000 |
| | P3 | 1.241 | .291 | .454 | 4.259 | .000 |
| | P4 | .618 | .170 | .206 | 3.633 | .000 |
| | P5 | .392 | .261 | .158 | 1.500 | .137 |
| | P6 | .905 | .119 | .422 | 7.612 | .000 |

a. Dependent Variable: Reliability1

REGRESSION
 /MISSING LISTWISE
 /STATISTICS COEFF OUTS R ANOVA
 /CRITERIA=PIN(.05) POUT(.10)
 /NOORIGIN
 /DEPENDENT EmpEngage
 /METHOD=ENTER P1 P2 P3 P4 P5 P6.

# Regression

[DataSet1] C:\Users\Prof. Nwankwo\Documents\Chinenye PUB.sav

**Variables Entered/Removed[a]**

| Model | Variables Entered | Variables Removed | Method |
|---|---|---|---|
| 1 | P6, P5, P4, P1, P2, P3[b] | . | Enter |

a. Dependent Variable: EmpEngage
b. All requested variables entered.

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .591[a] | .349 | .311 | 1.87941 |

a. Predictors: (Constant), P6, P5, P4, P1, P2, P3

**ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 195.104 | 6 | 32.517 | 9.206 | .000[b] |
| | Residual | 363.814 | 103 | 3.532 | | |
| | Total | 558.918 | 109 | | | |

a. Dependent Variable: EmpEngage
b. Predictors: (Constant), P6, P5, P4, P1, P2, P3

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 11.282 | 1.213 | | 9.303 | .000 |
| | P1 | .145 | .152 | .081 | -.956 | .342 |
| | P2 | 1.191 | .220 | .480 | 5.401 | .000 |
| | P3 | .345 | .337 | .164 | 1.026 | .307 |
| | P4 | .783 | .196 | .338 | -3.986 | .000 |
| | P5 | .115 | .302 | .060 | .379 | .705 |
| | P6 | .262 | .137 | .158 | 1.907 | .054 |

a. Dependent Variable: EmpEngage