

**INFORMATION AND COMMUNICATION TECHNOLOGY AND ITS
IMPLICATIONS FOR EDUCATIONAL PRODUCTIVITY AMONG
UNITY SCHOOLS IN NIGERIA: A CASE STUDY OF FEDERAL
GOVERNMENT GIRLS COLLEGE, BENIN CITY**

BY

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FACULTY OF SOCIAL SCIENCES
UNIVERSITY OF BENIN
BENIN CITY.**

DECEMBER, 2019

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**BEING A THESIS SUBMITTED TO THE DEPARTMENT OF
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FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF
MASTER OF SCIENCE (M.SC) DEGREE IN PUBLIC
ADMINISTRATION**

DECEMBER, 2019

CERTIFICATION

We, the undersigned, certify that this research work was carried out by Dan-Isah Omo Zainab and approved as meeting the requirements for the award of Master of Science (M.Sc.) degree in Public Administration.

Prof. L.U. Edigin
(Supervisor)

DATE

Dr. F. Imuetinyan
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DATE

DEDICATION

This project work is dedicated to the Almighty God and my parents, Mr. and Mrs. Dan-Isah.

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My gratitude goes to God Almighty for giving me the inspiration, wisdom, knowledge and the energy to start and complete this study. I also acknowledge the immense understanding nature, support and contribution of my supervisor, Prof. L.U Edigin Esq towards the completion of this work. He has been painstakingly thorough with me despite his tight schedule. I am very grateful to Dr. Festus Imuetinyan, the Ag. Head of department of Public Administration, Post Graduate Cordinator, Prof. D.A. Tonwe. To all my lecturers: Dr. Mrs. C.E. Omorede, Dr. E. Okonmah, Dr. A.I. Mustapha and many others that God has used to shore up my ebbing hope of finishing this programme. My sincere gratitude goes to Mr. Aigbe Endurance for his encouragement. Furthermore, I want to thank Mr. and Mrs. Ugbooe for their encouragement and support in making this research a success.

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ABSTRACT

In a dynamic and highly competitive business environment of the 21st century, Organizations have continuously made efforts to search and adopt strategies, techniques and tools to increase productivity while reducing cost, and boost efficiency and effectiveness. This informs the reason behind organizations increased adoption of ICT in recent times. Federal Government Colleges is one of many government establishments to key into the adoption of technology as a driver of productivity, and by so doing, serves as a role model for several other private establishments. This has created a need to evaluate the effect of ICT, on organizational performance and productivity, using Federal Government Girls College Edo State as a case study. To do this, the researcher adopted the survey method of research, using members of staff and students as its population of study, 250 respondents from the Federal Girls College of Edo State, were selected based on the non-probability sampling technique. Their opinion was gathered with the use of a well-structured questionnaire and analyzed using the simple percentage technique of data analysis. This research therefore concluded that FGGC, Benin City, is e-compliant, has witnessed several positive changes through its adoption of ICT. However, the study also revealed that computer illiteracy on the part of students and the public was also revealed to be another factor hampering the effective adoption of ICT amongst others. Based on the above, it was recommended that government, while investing in ICT, should make efforts to educate the populace on the need for ICT acceptance, and create an enabling environment for educating the public on the use of ICT. Government should also make efforts to increase collaboration and partnership with the private sector to ensure wider reach, local penetration and general acceptance of ICT in the country.

CHAPTER ONE

INTRODUCTION

1.1. BACKGROUND OF THE STUDY

Since the early years of the 20th century, the world has been experiencing a revolution known as information technology. Some consider it to be the most fascinating development since the industrial revolution around the mid-18th Century (Tom, 1991). This revolution is changing our daily lives at home and at work, in shops and banks, in schools, colleges and universities. It is changing the way people think, communicate and behave. Today, the world has become a global village with the internet, mobile phones and satellite networks shrinking time and space, bringing together computers and communications; resulting in new ways of communication, processing, storing and distributing enormous amounts of information (UNDP, 2001). Advancement in chips, satellite, radio, and optical fibre technology has enabled millions of people around the world to connect electronically regardless of national or international boundaries. This explosion in connectivity is the latest and the most important wave in the information revolution (Evans & Wurster, 2007).

Information Communication Technology (ICT) is clearly considered as a key growth area in this century, specifically, in a dynamic and highly competitive business environment which requires utilizing advanced ICT tools to improve efficiency, cost effectiveness, and deliver high quality products and services to customers (Allen & Morton, 2004). ICT is also considered as a tool of marketing, contacting customers and looking for possible customers, as well as presenting IT services as distinguished potential services for customers (UNDP, 2001; Werthner& Klein, 2005).

Organizations are increasingly using information communication technology to develop solutions to business problems, to improve both the efficiency and effectiveness of the decision-making process, to enhance productivity and service quality, to achieve dynamic stability, and compete for new markets (Attewell& Rule, 1984). According to Cerere (1993), organizations have always sought and adopted technologies that enhance efforts of their manpower in production and management. Indeed, he noted that although it has evolved over a considerable period of time, information technology has emerged as an important tool in management of organizational operations.

It is in the light of these foreseen advantages of Information communication technology that several business organizations, firms and parastatals, including educational institutions are increasingly investing in Information Communication Technology and several electronic and automated systems, making it imperative to investigate whether or not these investments are paying off in terms of increased performance and productivity.

1.2. STATEMENT OF THE PROBLEM

Information Communication Technology (ICT) is said to be the technology of 21st century. We live in an utterly technical and technological society, hence, constantly surrounded by technology. Mobile networks and the Web are “new” communication systems, without which our society would not be able to function effectively. It is not just citizens who are living a digital lifestyle though; organizations, parastatals, public administrators and authorities are also fully embracing information technologies in order to communicate in modern ways, to stay in touch with citizens and business units, to carry out internal work processes and ensure easier, faster and cheaper service delivery. The educational sector as well as general administration, are not left behind in the wave of technology and ICT, hence this sector has also witnessed the application of

information and communication technology in its processes, evidence of which is expected to be; improved performance and productivity. Prior to the federal government's investment in ICT in the education sector, It has been a general belief that the standard of education in Nigeria is dwindling by the day. Among the major reasons for the establishment of Federal Unity Colleges is to provide model in the secondary education provisions for both states and private sector providers.

Federal Government Secondary Schools, otherwise known as unity schools, therefore, are one of the first secondary schools to incorporate the use of technology and electronic processes in their administration, adopting the use of computers, the internet, school management systems, and other electronic processes to aid administration. This development created many changes in the administrative work style which shifted from the traditional administrative style in achieving works, to electronic administrative style (Yasien, 2005; Ghamidi, 2009).

Since then, there has been a need to evaluate the effect of federal governments' huge investment in ICT in the education sector on its performance and productivity.

It is therefore the purpose of this study to ascertain the effect of Information communication Technology (ICT) on organizational productivity and performance.

1.3. OBJECTIVES OF THE STUDY

This study has as its intent, to

- i. Ascertain the extent of ICT compliance in the administrative system of modern organizations, especially Federal Unity Colleges.
- ii. Determine the impacts ICT have on the educational productivity of FGGC Benin as a public sector organization?
- iii. Has the investment in ICT affected the performance of staff in terms of teaching, efficiency of works and release of results through internet facilities?
- iv. To determine the extent to which ICT has enhanced customer satisfaction in the process of service delivery in FGGC Benin?
- v. Recommend ways through which Information and communication technology can improve or increase organizational performance and productivity in modern organizations.

1.4. RESEARCH QUESTIONS

1. To what extent is the Federal Government Girls College ICT compliant?
2. What impact does ICT have on the educational productivity of FGGC Benin as a public sector organization?
3. Has the investment in ICT affected the performance of staff in terms of teaching, efficiency of works and release of results through internet facilities?
4. What impact does ICT has on enhanced customer satisfaction in the process of service delivery in FGGC Benin?
5. In what ways through can Information and communication technology improve organizational performance and productivity in modern organizations?

1.5. SIGNIFICANCE OF THE STUDY

Performance and productivity are two very important economic factors for determining the level of organizational growth. Hence, it is the ultimate goal of every establishment to maximize both. Dedrick et al (2003), identified both factors as foundations for economic prosperity and an important indication for organizational competitiveness. To this end, it is presumed that any research tailored towards finding ways to improve or increase performance and productivity in an organization is highly embraced by managers and administrators.

This study therefore amongst other things, will help to reveal the viability of Information communication technology in reducing administrative burdens, ensuring accuracy and objectivity, simplifying administrative procedures, and getting rid of routine in the performance of administrative tasks, hence confirming the role of ICT in improving organizational productivity and performance.

1.6. SCOPE OF THE STUDY

The study will be delimited to Federal Government Colleges in Nigeria otherwise known as Unity Schools, with special focus on Federal Government Girls College (FGGC) situated in Edo State.

1.7. DEFINITION OF TERMS

INFORMATION COMMUNICATION TECHNOLOGY

Information and Communication Technologies (ICT) refers to technological progress provided by informatics, telecommunications and audio-visual technologies. Basically, these technologies provide information, and serve as tools for its processing and communication channels. ICT in a general refers to any technology that helps to produce, manipulate, store, communicate and/or disseminate information in a system. It includes all types of technologies used to create, store, exchange and use information in its various forms including business data, voice conversations, still images, motion pictures, multimedia presentations and any other forms, including those not yet conceived. Presumably, when speaking of information communication technology as a whole, it is noted that the use of computers and information are associated and

interdependent. ICT deals with the use of computers and computer software to convert, store, protect, process, transmit, and securely retrieve information.

PRODUCTIVITY

Productivity, according to Onah (2010), is the relationship between output of goods and services, and inputs of human and material resources used in the production process. In economics, it is seen as the rate at which goods and services having exchange values are brought forth or produced. The quality, state or fact of being able to generate, create, enhance or bring forth goods and services. It is a measure of efficiency of a person, machine, factory, system etc, in converting inputs into useful outputs. In other words, one can say that productivity is the ratio of output to input. The higher the numerical value of this ratio, the greater the productivity. This informs the reason why Eatwell and Newman (1991) defined productivity as a ratio of some measure of output to some index of input used. Put differently, productivity is nothing more than the arithmetic ratio between the amount produced and the amount of any resources used in the course of production. This conception of productivity goes to imply that it can indeed be perceived as the output per unit input or the efficiency with which resources are utilized (Samuelson & Nordhaus, 1995).

Productivity is computed by dividing average output per period by the total cost incurred or resources (capital, energy, material, personnel) consumed in that period. It is a critical determinant of cost efficiency.

PERFORMANCE

The term performance as a concept has been a victim of definitive pluralism in the sense that it has been defined by several scholars from different perspectives. While others see it as an activity such as singing, acting or playing undertaken by a person or group of persons to entertain an audience, others, viewing it from a different perspective, define it to mean the act of doing a job or an activity. However, the definition given by Pilat&Wolfl (2004) best describes its meaning as used in this work. According to them, performance can be defined as the accomplishment of a given task, measured against preset known standards of accuracy, completeness, cost and speed. The Merriam Webster dictionary gave another related definition of performance as it defined performance as the extent to which a promise is fulfilled, a request is met, or a set goal is achieved. From this definition, it can be deduced that performance is measured against preset goals, or objectives.

It is important to note at this juncture, that performance leads to productivity, and is therefore a determinant of productivity. Inversely therefore, productivity, is a measure of organizational performance.

E-ADMINISTRATION

According to Rogers, (1983), e-Administration or electronic administration, refers to the use of Information and communication technologies (ICT) such as computers, mobile phones, world-wide-web (the internet), business management systems etc; in performing administrative task/duties, all to ensure ever increasing productivity and performance in the organization. From this definition, it can be deduced that one cannot talk of electronic administration (E-administration), without making reference to Information technologies (IT).

Electronic administration refers to any of a number of mechanisms which connect what in a traditional office, are paper processes into electronic processes with the goal being to create a paperless office (Wikipedia, 2019). Electronic administration can encompass both intra-office and inter-office communication for any organization. Its objective is to introduce total transparency and accountability, leading to a better and more effective organization.

CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1. INTRODUCTION

Performance and productivity are important factors for evaluating the economic growth of firms, industries and organization, hence, in their effort to survive in a highly competitive economy, they tend to invest as much energy and resources as necessary, in whatever can guarantee high and stable performance and productivity while ensuring efficiency and effectiveness. The strong wave of information and communication technologies in the 21st century saw the introduction of computers, mobile phones, world-wide-web (Internet), network systems and other electronic processes. The perceived advantages attached to its use, has led to its wide acceptance and usage by governments, business establishments, companies, schools, to mention a few.

Research has shown that modern day organizations are increasingly leveraging the use of Information and communication technologies in virtually all stages and processes of administration, investing heavily in the application of computers, mobile and web technologies, all with the prospect for increase in organizational performance and productivity.

The education system seems not to be left behind in this technological struggle, as government secondary schools have in recent times adopted the use of ICT in the administrative process, for faster, cheaper and easier management and service delivery.

2.2. E-ADMINISTRATION – CONCEPTUAL OVERVIEW

E-Administration is most often used as an abbreviated word for ‘electronic administration’. As the name suggests, it is a twin concept, made of two different lexical items: “Electronic” and “Administration”. The term “Electronic”, according to Morris & Westbrook, (1996), refers to any device or technology associated with, or employing low voltage current and solid state integrated circuits or components, usually for transmission and/or processing of analog or digital data.

It generally refers to all technologies, machines, devices or equipments constructed or working by the methods or principles of electronics. These include computers, telephones, television and radio sets, satellites, network switches and routers to mention a few.

Administration on the other hand as defined by Adebayo (1994), is “the organization and direction of persons in order to accomplish a specific end”.

Combining these two concepts, one can easily come to a conclusion that electronic administration, is the application of electronic processes and equipments in the organization, direction and coordination of persons towards accomplishing specific tasks and reaching predefined goals. The European Commission (2007) in an attempt to define the concept, referred to e-administration as the application of Information and Communication Technology (ICT) to support back-office administrative tasks. Sánchez (2006) pointed out that e-administration is the use of communication technologies to support information flow either in or outside the public authority. Heeks (2010) posits that e-Administration covers government to government (G2G) relation to improve administrative processes in a hierarchical organization.

According to Wikipedia (2019) e-Administration, or electronic administration, refers to any of a number of mechanisms which convert what in a traditional office are paper processes into electronic processes, with the goal being to create a paperless office. This is an ICT tool, with the goal being to improve productivity and performance. E-Administration can encompass both intra-office and inter-office communication for any organization (Hacker &

Saxton, 2007). Its objective is to introduce total transparency and accountability leading to better e-Governance within any organization.

Leavitt (1965), in his article titled ‘Applied organizational change in Industry’, noted that “The implementation of any e-administration solution should be customer centric rather than organization centric; it should remove dependence on specific individuals, and should introduce transparent systems of working.

The definition given by Rogers, (1983), can be said to have summarized the above conceptualizations. To Rogers, (1983), e-Administration or electronic administration, refers to the use of Information and communication technologies (ICT) such as computers, mobile phones, world-wide-web (the internet), business management systems etc; in performing administrative task/duties, all to ensure ever increasing productivity and performance in the organization. From this definition, it can be deduced that one cannot talk of electronic administration (E-administration), without making reference to Information technologies (IT).

Amongst the goals of the adoption of electronic administration, is organization cost reduction, partial or total elimination of paper processes, faster, easier and cheaper service delivery to mention a few, all for the ultimate goal of

increasing and improving organization performance and productivity (Mitchell & Stone, 1992).

2.3. INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)

Information and communication technology is one of many concepts which have enjoyed diverse definitive attempts from different scholars, each flexing his/her intellectual muscle in a bid to come up with an all-embracing definition of the concept.

As conceived by Poku and Vlosky, (2002), Information technology (IT) includes all types of technologies used to create, store, exchange and use information in its various forms including business data, voice conversations, still images, motion pictures, multimedia presentations and any other forms, including those not yet conceived. Alternatively, William and Sawyar (2005) elaborate IT as technology which facilitates to produce, manipulate process, store, communicate, and disseminate information.

Information and Communication Technologies (ICTs) are modern instrumental tool that enables the educators to update the teaching methods (Mbaeze et al., 2010). ICTs are generally defined as information tool used to create, process, transfer and share data (Saeed et al, 2010).

Categorizing the concept, Bardhan, (2005), in his research, subcategorized ICT into three main groups including Core Communicational Technologies (CCT), Enterprise Computational Technologies (ECT) and Group Collaboration Technologies (GCT). CCT according to him includes Email, Internet Search Engines, Mobile Communication; ECT will include Instant Messaging Software, Video-Conferencing Technologies, Groupware and Online Blogs. GCT will include Enterprise Application Software, Knowledge Management Software, Customer Relationship Management Software, Project Management Software, Business Intelligence and Document Management Solutions (Bardhan, 2005).

Looking at these subcategories, one will understand why Daft (1997), elaborated the definition of Information and communication technology, to refer to anything related to computing technology, such as telecommunications, database management, and other information-processing technologies used to store, process, and deliver information.

As organizations grow and change, they depend more and more on information technology for their survival (Feeny& Willcocks, 1998). Companies today implement and use information technology to find solutions to business problems, to improve management decision-making, enhance productivity and

quality, and compete for new markets in our global and aggressive business environment (Porter & Millar, 1985). Moreover, IT can be seen as a powerful force that opens exciting opportunities for organizations to achieve their missions and goals in an effective way. Therefore, leaders in organizations must obtain an overall appreciation of the potential of IT and link the acquisition and utilization of IT to the organizational mission (Hacker & Saxton, 2007).

2.4. ICT AND BUSINESS PROCESSES

The recent information technology developments have enormous implications on the operation, structure and strategy of organizations. According to Evans & Wurster (2007), the competitiveness of future economies will, to a great extent, depend both on the development and application of these technologies. The proliferation of the World Wide Web forced most organizations to rethink the way they do business and how they can reengineer their business processes. As businesses can now interact more efficiently, competent businesses become digital and networked, facing a whole range of fresh opportunities and challenges (Dennis, 2007).

According to Bocij et al (2003), technology has already revolutionized a wide range of functions including business functions, external environment

monitoring, communicating with partners and with consumers at large. Clear strategic goals and commitment are prerequisites for the development of an appropriate e-Commerce strategy and the development of web sites and other technological solutions. The emergent mobile technologies and mobile commerce are expected to change drastically a number of industries and to force organizations to reconsider their strategic management (Evans & Wurster, 2007).

2.5. THE ROLE AND USE OF ICT IN ORGANIZATIONS

Within the international community, the collective technical infrastructure of hardware, software, and telecommunications is often referred to as information and communications technology (ICT) which can be seen as an extended synonym for Information Technology (IT). Many organizations perceive IT as an important tool to optimize operations and conduct information exchanges. Information technologies can provide powerful strategic and tactical tools for organizations, which, if properly applied and used, could bring great advantages in promoting and strengthening their competitiveness. IT can also serve as a means of facilitating communication and the exchange of information, encouraging and improving knowledge sharing between various departments and functions in the organization. In this light IT can act as an enhancer of

collaboration and a networking tool amongst and/or between employees, customers and partners as it removes the barriers to real-time communication and effective information sharing. This is true in organizations such as banks and telecommunication industries where customer-related data and information are transmitted within milliseconds across the globe via the internet and intranet. So also is communication between the organization and customers facilitated via mails, electronic calls, internet chats etc, all improving service delivery.

IT also helps organizations innovate through fusion of new technologies with society and business thus enabling the creation of new knowledge and discovery (Diem, 2007). Little wonder why Hagen (2010), viewed Information Technology as a tool used by organizations to improve performance, communication, motivate employees, increase competitiveness, improve market dynamics, and reposition the company against its competitors facilitating entry into new markets. Research as well as physical evidence in most private organizations like banks, telecommunication industries, to mention a few, has proved that accompanying the introduction of Information and communication technology is increase in the speed at which administrative duties are performed,

better, accurate and transparent service delivery to customers, as well as a well organized feedback mechanism.

With the recently adaptation of the school management system and other electronic processes in federal unity schools, it is expected that the end result will be improved speed and accuracy in the performance of administrative task, as well as better service delivery and increased customer (students and parents) satisfaction.

2.6. PRODUCTIVITY AS AN ORGANIZATIONAL CONCEPT

The word “productivity “has become such a buzz word these days. It is almost mentioned in different fields such as commercial magazine, newspapers, political speeches, TV news, business news, social magazine etc.

In a formal sense, probably, the first time the word “productivity “was mentioned, was in an article by Quensay in the year 1766. In 1833 Littre defined productivity as the “faculty to produce “, that is, the desire to produce. In 1950, the Organizational European Economic cooperation (OEEC, 1950) offered the more precise definition of productivity: “Productivity is the quotient obtained by dividing output by one of the factors of production. In this way it is possible to speak of the productivity of capital, investment, or raw materials according to

whether output is being considered in relation to capital, investment or raw materials “After this time many economic specialists offered other definition from productivity. Sumanth (1984) offered that total productivity is the ratio of tangible output to tangible input while Tabatabae, (2000) added that productivity is a family of ratios of output to input.

Finally, the formula below simplifies the definition of productivity as:

(Output obtained) / (Input expended)

Or

(Performance achieved) / (Resources consumed)

Traditional economic studies of productivity focused on labour and capital such as plants and equipment. In order to measure capital, all component categories are considered. This issue is also considering about measuring labour. In some cases the number of the labour is used and in some other cases the person- hour for special period of time is regarded.

Increasing the productivity growth can have the following effect:

- The life level in the investigated countries or organization goes up.
- Inflation is decreased.
- The buying power of the people is increased.

- The life quality is improved.

(Wikipedia, 2019).

Some authors distinguish between productivity and efficiency. While productivity applies to the transformation of input to output in a process, efficiency expresses the relation between input and output in monetary terms. Thus measured, the results not only indicate the improvement in output per man-hour or the change in the quantity of inputs, but also the importance of changes in costs of inputs such as human resources (Rapp, 1999) .In this study, however, no difference is made between productivity and efficiency and the term productivity will primarily be used.

2.7. INFORMATION COMMUNICATION TECHNOLOGY AND ORGANIZATIONAL PRODUCTIVITY: THE PRODUCTIVITY PARADOX

Productivity is the fundamental measure of a technology's contribution. While major success stories exist, so do equally impressive failures (Kemerer& Sosa, 1991; Schneider, 1987). The lack of accurate quantitative measures for the output and value created by information technology has made information systems manager's job of evaluating investments particularly difficult.

Academics have had similar problems assessing the contributions of new technology, and sometimes this has been interpreted as a negative signal of its value. In the 1980s and early 1990s, disappointment in information technology was chronicled in articles disclosing broad negative correlations with economy-wide productivity and information worker productivity. Several econometric estimates also indicated low IT capital productivity in a variety of manufacturing and service industries. More recently, researchers began to find positive relationships between IT investment and various measures of economic performance.

Strassmann (1985) reported disappointing evidence in several studies. In particular, he found that there was no correlation between IT and return on investment in a sample of 38 service sector firms: some top performers invested heavily in IT, while others did not. In his later book written in 1990, he concluded that “there is no relation between spending for computers, profits and productivity”.

A study by Parsons, Gottlieb and Denny (1990) estimated a production function for banking services in Canada and found that overall; the impact of IT on multifactor productivity was quite low between 1974 and 1987. They

speculated that IT had positioned the industry for greater growth in the future. Similar conclusions were reached by Franke (1987), who found that IT was associated with a sharp drop in capital productivity and stagnation in labor productivity, but remained optimistic about the future potential of IT, citing the long time lags associated with previous “technological transformations” such as the conversion to steam power. Harris and Katz (1991) and Bender (1986) looked at data on the insurance industry from the Life Office Management Association Information Processing Database. They found a positive relationship between IT expense ratios and various performance ratios although at times the relationship was quite weak. Alpar and Kim’s (1991) study of 759 banks indicated cost reducing effects of IT. A 10% increase in IT capital was associated with 1.9% decrease in total costs.

ICT contribution to output and productivity is documented in several important studies, but whether or not this output growth is beneficial to profits and market value is not yet clear. In addition, some practitioners and researchers still believe that the full power of the computer in increasing national productivity has not yet unfolded. In this sense, the productivity paradox still awaits explanation.

2.8. ORGANIZATIONAL PERFORMANCE

The concept of performance has always been present in management literature covering various aspects such as efficacy, efficiency, competitiveness, relevance and financial viability. Marmouse (1997) highlighted that; organization's performance represents the manner in which the company is organized to reach its objectives and the way it manages to reach them.

According to Swanson (2000), Organizational Performance is the valued productive output of system in the form of goods service. It has to do with the actual output or results of an organization as measured against its intended outputs, goals and objective (Jon & Randy, 2009). Organizational performance basically can be defined as the outcome that indicate or reflect the organization efficiencies or inefficiencies in term of corporate image, competencies and financial performance (Khandekar& Sharma, 2006). Richardo (2009) went further to point out that organizational performance encompasses three specific areas of firm outcomes which includes:

- a. Financial performance (profits, return on assets, return on investment, etc.);
- b. Product market performance (sales, market share, etc.); and
- c. Shareholder return (total shareholder return, economic value added, etc.).

According to Sriwan (2004), Company performance should be judged against a specific objective to see whether the objective is achieved. Without an objective, the company has no criterion for choosing among alternative investment strategies and projects. For instance, if the objective of the company is to maximize its return on investment, the company would try to achieve by adopting investments with return on investment ratios greater than the company's current average return on investment ratio. However, if the objective of the company were to maximize its accounting profits, the company would adopt any investment, which would provide a positive accounting profit, even though the company might lower its current average return on investment ratio. Performance measurement is important for keeping a company on track in achieving its objectives.

2.9. INFORMATION TECHNOLOGY AND ORGANIZATIONAL PERFORMANCE

In the 1960's and 70's, information technology was widely employed by many firms mainly for achieving routine clerical and administrative activities such as processing data related to bookkeeping and accounting activities (Bird & Lehrman, 1993). It was used as a monitor of the firm's internal and external environment; in other words, as a support factor for the other organizational

system components (Blili& Raymond, 1993). However, the cost, the distribution, and the fact that it was generally applied to only simple tasks in its early stages discouraged its application to strategic uses in areas such as enhancing the organization's position against competitors, moving into new markets, and providing managers with better information for effective decision making. The advancement in the technological field along with other advancements have enhanced the economies of information technology and greatly expanded its applications (Bird & Lehrman, 1993).

Today, information communication technology has become not only a tool to process data and record transactions, but also a competitive weapon that can change an industry's structure. Galliers et al (1994) suggested that because of the rapid pace of technological advances and the impact of information technology on the changing competitive environment, organizations are forced to critically evaluate their management of information and technology resources in order to achieve their strategic objectives.

One of the strongest evidences of the impact of IT has been illustrated as coming from the firm-level analysis that is confirmed to a number of developed countries (OECD, 2003). Most of these studies use a combination of growth

accounting methods and econometric models to examine samples of industries and firms. For example, (Gretton et al, 2002), studying firm-level data from the Australian Business Longitudinal Survey, found positive and significant links between the use of IT and growth in both manufacturing and service industry. (Brynjolfsson&Hitt, 2003), investigating US firm-level data, proved that IT has a solid impact on productivity. (Pilat&Wolfl, 2004) examined the role of ICT-producer and key ICT-consumer sectors in explaining overall productivity growth in OECD (Organization for Economic Co-operation and Development) countries; they found that the impact of ICT-producer sectors is most significant in Finland, Ireland, and Korea whereas ICT-consumer sectors in some countries, remarkably US and Australia, had an impressive growth in the second half of the 1990s. (Hempell et al, 2004) analyzed comparable panel data of the Dutch and German firms in the service industry and found that ICT capital deepening and innovation have complementary impact on productivity.

The Massachusetts Institute of Technology group in 1991 concluded that information technology is the platform on which success can be built but organizational factors are crucial to realizing the benefits of automation and 'informating' process (Zuboff, 1988). Information technology can be considered

to be a series of innovations. Even though the innovations provide organization with new and different ways of solving problems and enhancing performance, there is still a great deal of research to be done and discussion among researchers and organizational theorists on how innovations should be implemented and managed and how they affect organizations on different levels.

It is widely accepted among many authors and researchers in the organizational field that information technology has a significant effect on the performance of the organization's activities (Bhattacharjee&Hirschheim, 1997; Morris & Westbrook, 1996; Porter & Millar, 1985). For example, information technology applications can be used to improve the level of efficiency of administrative functions in an organization and to enhance the effectiveness of managerial activities. These applications also can be used as tools to impose better organization on tasks and to provide better information to managers. Zuboff (1988) pointed out that information technology applications are strongly altering the way in which production operations are carried out in a variety of industries and thus using information technology to create and acquire a competitive advantage.

2.10. PRODUCTIVITY AND PERFORMANCE IN THE PUBLIC SECTOR

A number of international studies have been carried out addressing the issue of public sector productivity. Some of these studies examine ‘whole of government’ productivity and make comparisons between countries, some focus on sectors such as health, education, etc, while other studies aim to track productivity changes over time in public administration. But public sector productivity according to Wiwa, (2000), is difficult to measure. Assessing the productivity of policy-oriented organizations has proved particularly challenging, with gathered data being of questionable validity and/or reliability.

The performance of the public sector towards national development is no doubt the most tasking challenge that the government of Nigeria is facing today. The Public Sector reflects the state of the nation and no nation has been able to advance beyond its Public Service. Studies have shown that no nation can attain sustainable development for the enhancement of the living standard of the people without a properly organized public service to implement government policies. Hence, one can attempt to measure productivity and performance in the public sector, on the backdrop of citizens standard of living (Chukwuemeka, 2013).

Nigeria is an endowed nation blessed with material and human resources enough to drive her to socio-political and economic development. With a population of over 180 million hard working and very resilient Nigerians, a land mass of nearly one million square kilometers that hold great potentials for all forms of agriculture, the 7th largest producer of crude oil, the world's 5th largest proven natural gas reserve and a plethora of solid minerals, Nigeria possess (in potentials) what it takes to be among the world's most prosperous nations (Achimugu, Stephen and Aliyu, 2013).

These potentials and endowment notwithstanding, about 70% of its citizens today live on less than US \$1 per day as against 15% in 1960 (Achimugu et al, 2013). Indeed, this will be better understood within the knowledge that the country has earned well over US \$300 billion in the last three decades from crude oil alone (Wiwa, 2000). Nigeria Health Review (2007) asserted that of all Nigeria's power generation potentials, only 40% of its citizenry have access to electric power supply, which has never been stable, thereby denying majority of its citizenry electrical supply. The education sector is not left out in the dilemma, with a growing rate of illiteracy especially in the north, as well an ever increasing rate of unemployed graduates, the country has proven to be virtually

unproductive with a discouraging performance. This led the World Bank to describe Nigeria as a paradox. The San Francisco Chronicle (2007) in giving a clear picture of this Nigerian paradox, posited that ‘‘Nigeria is a rich nation floating on oil wealth but almost none of it flows to the people’’. All these are visible evidence confirming the fact that the public sector in Nigeria has been lagging behind in the performance of their duties, and as a result, has been less productive than expected.

For the public sector to perform effectively, it must operate under some core values such as integrity, meritocracy, discipline, professionalism, patriotism, impartiality and secrecy of government information, except where the information divulged conforms to the Freedom of Information Act. However, for strict compliance to the above core values in the public service, Max Weber in 1947 postulated the rule of ‘‘Bureaucracy’’ which must be adhered by the public service, and this gave birth to the existence of the General Order which sets out the rules and regulations guiding the activities of the public servants in Nigeria. Nevertheless in Nigeria, there is a gross breach of the above standing Bureaucratic rules by the public servants causing poor performance in the public sector

Several scholars have advanced a plethora of factors responsible for the appalling nature of public sector performance and productivity. Amongst which include the lackadaisical attitude of workers towards their duties and responsibilities which in turn is partly as a result of poor monitoring and inconsistent / unsatisfactory remuneration. The core values of the public service seem to have been thrown away. Bureaucratic rules of the public service has been neglected hence the public sector in Nigeria has not been able to efficiently and effectively perform its duties of meeting the needs of the Nigerian citizens who seem to be suffering in the midst of plenty.

Some other scholars have attributed reasons for poor performance of the public sector to unfavorable environmental factors such as corruption, favoritism, nepotism, constant political interference and other primordial factors such as geographical, ethnic, cultural and religious affiliation with its constitutional consequence of federal character principle or quota system.

Looking at the problem from a different point of view, Osawe (2015), added that another reason for the dwindling nature of performance and productivity in the public sector is the routine nature of work done. The rigid nature of the administrative process which pay little or no attention to

technological advancement, finding ways to innovatively take advantage of globalization. Making reference to the western world who has successfully automated virtually all of its work and administrative processes, he advanced that ICT can go a long way to simplify some cumbersome and tiring work processes, provide a means for appraising and accessing service delivery, as well as a channel for easier and faster service delivery. It can also be used for monitoring performance and checkmating corruption, wastefulness and abuse of public offices and properties, all to ensure improved productivity and performance. He went ahead to add that, until the public sector shift focus from the traditional administrative style, to a modernized and more technological administrative style, the goal of improved performance and productivity might not be easily achieved.

2.11. HISTORICAL DEVELOPMENT OF FEDERAL GOVERNMENT COLLEGES

Way back in the late '60's, the General Yakubu Gowon government had an overriding passion to heal the wounds of the just ended Nigerian civil war, hence the declaration of the 3 R's (Reconciliation, Restoration and Renovation). The essence of the 3Rs drive was to unify a nation whose fragmentation had been accentuated by a very divisive civil war. The principle of unity through education was put forward basically to build decent boarding schools, throw in young

unpolluted minds from across the nooks & crannies of Nigeria, and ignore the vagaries of tribes and tongue, which were bound to differ, in a multi-ethnic nation hurriedly put together by some adventurous Lord Lugard. Coming in the period when Kings & Queens Colleges Lagos were about the only schools that had some semblance of being “National schools”, the principle of unity through education couldn’t have been better timed.

Federal Government Colleges therefore, were conceived to be unifying institutions, bringing together young Nigerian teenagers from multifarious ethnic & religious divides with a view to instilling high quality education into the students in an environment of academic & developmental excellence devoid of ethnic, religious or social stratification that ruled Nigeria then and unfortunately continues to plague Nigeria till today.

The architects of the unity schools chose an appropriate pay-off to reflect their motive hence the “Pro-Unitate” (for Unity) sign-off that was part of the logo of all Federal Government Colleges. The first sets of Federal Government Colleges were sighted in true “Federal Character Spirit” with representation in the North, West and East. They were: Federal Government College Sokoto in the north, Federal Government College, Warri for the west, and Federal Government

College Okposi for easterners. These schools which functioned alongside the Kings and Queens Colleges established in the colonial era, were set up to provide high quality education to children from across the various areas of the country with teachers from across the world.

Today, Federal Government Colleges in Nigeria has increased greatly in number to be One Hundred and Four (104) secondary schools covering virtually all states and geo-political zones in Nigeria (Wikipedia, 2019). See the list in Table 1 below.

Table 1: List of Federal Government Secondary Schools in Nigeria, sorted by state.

ABIA	FSTC OHANSO (BOY& GIRLS) FGC OHAFIA (BOYS & GIRLS) FGGC UNUAHIA (GIRLS ONLY)
ADAMAWA	FGGC YOLA(GIRLS ONLY) FGC GANYE (BOYS & GIRLS)
AKWA-IBOM	FSTC UYO (GIRLS ONLY) FGC IKOT-EKPENE (BOYS & GIRLS) FGGC IKOT-OBIO-ITUNG (GIRLS ONLY)

ANAMBRA	FSTC AWKA (BOYS & GIRLS) FGC NISE (BOYS & GIRLS) FGGC ONITSHA (GIRLS ONLY)
BAUCHI	FGGC BAUCHI (GIRLS ONLY) FGC BAUCHI (BOYS & GIRLS)
BENUE	FSTC OTUKPO (BOYS & GIRLS) FGC VANDEIKYA (BOYS & GIRLS) FGGC GBOKO (GIRLS ONLY) FGC OTOBI (BOYS & GIRLS)
BORNO	FSTC LASSA (BOYS & GIRLS) FGC MAIDUGURI (BOYS & GIRLS) FGGC MONGUNO (GIRLS ONLY)
CROSS-RIVERS	FGGC CALABAR (GIRLS ONLY)S & GIRLS) FGC IKOM (BOY
DELTA	FGGC IBUSA (GIRLS ONLY) FGC WARRI (BOYS & GIRLS)

EDO	FSTC UROMI (BOYS & GIRLS) FGGC BENIN (GIRLS ONLY) FGC IBILLO (BOYS & GIRLS)
ENUGU	FGC ENUGU (BOYS & GIRLS)
IMO	FGGC OWERRI (GIRLS ONLY) FGC OKIGWE (BOYS & GIRLS)
JIGAWA	FGGC KAZAURE (GIRLS ONLY) FGC KIYAWA (BOYS & GIRLS)
KADUNA	FSTC KAFANCHAN (BOYS & GIRLS) FGC KADUNA (BOYS & GIRLS) FGGC ZARIA (GIRLS ONLY)
KANO	FGGC MIN-JIBIR (GIRLS ONLY) FGC KANO (BOYS & GIRLS ONLY)
KATSINA	FSTC DAYI (BOYS & GIRLS) FGC DAURA (BOYS & GIRLS) FGGC BAKORI (GIRLS ONLY)
KEBBI	FSTC ZURU (BOYS & GIRLS) FGC BIRNIN-YAURI (BOYS & GIRLS)

	FGGC GWANDU (GIRLS ONLY)
KOGI	FGGC KABBA (GIRLS ONLY) FGC UGWOLAWO (BOYS & GIRLS)
KWARA	FGGC OMU-ARAN (GIRLS ONLY) FGC ILORIN (BOYS & GIRLS)
LAGOS	QUEEN'S COLLEGE LAGOS (GIRLS ONLY) KING'S COLLEGE LAGOS(BOYS ONLY) FGC LAGOS (BOYS & GIRLS) FSTC, YABA (BOYS & GIRLS)
NIGER	FEDERAL GOVERNMENT ACADEMY SULEJA (BOYS & GIRLS) FGC MINNA (BOYS & GIRLS) FGGC BIDA (GIRLS ONLY) FGGC NEW BUSSA (GIRLS ONLY)
OGUN	FSTC IJEBU MUSHIN (BOYS & GIRLS) FGC ODOGBOLU (BOYS & GIRLS) FGGC SHAGAMU (GIRLS ONLY)

ONDO	FSTC IKARE-AKOKO (BOYS & GIRLS) FGC IDOANI (BOYS & GIRLS) FGGC AKURE (GIRLS ONLY)
OSUN	FSTC ILESA (BOYS & GIRLS) FGC IKIRUN (BOYS & GIRLS) FGGC IPETUMODU (GIRLS ONLY)
OYO	FGGC OYO (GIRLS ONLY) FGC OGBOMOSO (BOYS& GIRLS)
PLATEAU	FGGC LANGTANG (GIRLS ONLY) FGC JOS (BOYS & GIRLS)
RIVERS	FSTC AHOADA (BOYS &GIRLS) FGGC ABULOMA (GIRLS ONLY) FGC PORT-HARCOURT (BOYS & GIRLS)
SOKOTO	FGGC TAMB UWAL (GIRLS ONLY) FGC SOKOTO (BOYS & GIRLS)
TARABA	FSTC JALINGO (BOYS & GIRLS) FGGC JALINGO (GIRLS ONLY) FGC WUKARI (BOYS &GIRLS)

YOBE	<p>FGGC POTISKUM (GIRLS ONLY)</p> <p>FGC BUNI-YADI (BOYS& GIRLS)</p>
FCT	<p>FGGC ABAJI (GIRLS ONLY)</p> <p>FGBC APO GARKI (BOYS ONLY)</p> <p>FGC RUBOCHI (BOYS & GIRLS)</p> <p>FSTC OROZO (BOYS & GIRLS)</p> <p>FGC KWALI (BOYS & GIRLS)</p> <p>FGGC BWARE (GIRLS ONLY)</p>
BAYELSA	<p>FGC ODI (BOYS& GIRLS)</p> <p>FSTC TUNGBO (BOYS & GIRLS)</p> <p>FGGC IMTRINGI (GIRLS ONLY)</p>
EBONYI	<p>FGGC EZZAMBO (GIRLS ONLY)</p> <p>FGC OKPOSI (BOYS & GIRLS)</p>
EKITI	<p>FSTC USI-EKITI (BOYS & GIRLS)</p> <p>FGC IKOLE-EKITI (BOYS & GIRLS)</p> <p>FGGC EFON-ALAYE (GIRLS ONLY)</p>
GOMBE	<p>FGC BILIRT (BOYS & GIRLS)</p>

	FGGC BAJOGA (GLS ONLY)
NASARAWA	FGGC KEANA (GIRLS ONLY) FGC KEFFI (BOYS & GIRLS)
ZAMFARA	FGC ANKA (BOYS & GIRLS) FGGC GUSAU (GIRLS ONLY)

Source:http://ncee.assure.com.ng/The_104_Federal_Unity_Colleges_in_Nigeria.htm

These schools in recent times are known for the renowned innovation introduced by the federal government who successfully adopted and installed the use of Information and communication technologies as well as other electronic processes in their management, and administration, with the sole aim of boosting performance, increasing productivity, saving time and cost of rendering services, while improving on the speed of service delivery. It is on this note that the Federal government colleges in Edo state, precisely FGC Ibillo which is a mixed secondary school, and Federal Government Girls College, Benin, which happens to be a female school were selected as case study in determining the effect of the

application of ICT in the administrative process, on performance and productivity.

2.12. EDUCATION AND ICT

Information and communication technology as earlier stated has in the 21st century penetrated the educational system in several ways, notable of which is the use of computers and web applications such as School management systems in secondary schools. Using a school management web application developed by Primax ICT Consults as an example, the following are outlined as some of the features of the school management system.

- Online enrolment to students
- Online conduction of examinations
- Online result checking
- Online payment of fees
- Safer and easily retrievable student database
- Automated customer feedback system (via sms and emails)
- School events and information upload, management and update
- Monitor student academic performance

- Books, materials and assignment upload and review.
- Roster marking

All these features are believed to ensure easier and faster management and administration of schools adopting its use.

To better understand where the future of technology in education is headed, Evans & Wurster (2007) was of the opinion that it is important to establish a baseline for changes, by examining the advances in the educational sector over the last decade. On this note, the following were outlined by Galliers et al (1994) as some of the advantages ICT have introduced so far to the educational sector over the past few decades.

- a. Improved the rate of ICT compliance in Nigerian students
- b. Drastically reduced bulk paper work
- c. Faster and easier management and administration of schools and student (easily add, view, sort, arrange, update and delete student's records in database, manage class rosters).
- d. Life-time storage of information's (Reduced chances of records and information loss)

- e. Increase success rate of students in newly introduced computer based examination systems
- f. Improved teaching and learning as students can search, access and share information using resources such as online encyclopaedias, social network groups etc, either in the form of books/pdf's, videos and audio materials.
- g. Automated and run-time parent-student-teacher-administrator feedback system (making “traditional” services more customer-friendly and independent of opening hours in an office)
- h. Fast, safer and more convenient payment route (which saves time)
- i. Easier and faster result checking system
- j. Increase in organization’s revenue base
- k. Expand their current geographical reach, to interact to prospective students all around the world and to establish themselves as global education providers.
- l. Easy adaptation of schools to curriculum changes

Evans & Wurster (2007) however, went further to highlight some of the hiccups which might be experienced in the process of transforming the educational system into one that is fully ICT compliant. These included: Portal Hacking and Hijacking; Code confliction; Network and bandwidth traffic;

Current Level of ICT literacy; Internet service provision; Cost of acquiring necessary ICT gadgets.

Generally, the countries educational sector is gradually moving to a fully automated online education system where virtually all teaching and learning activities will be done online at the comfort of all stakeholders (students, parents, teachers and administrators); when classes will be simulated with projectors and recorded/stored for retrieval and revision purposes at the comfort of the students. (Evans & Wurster, 2007).

2.13. THEORETICAL FRAMEWORK

In an effort to determine the effect of Information Communication Technology (ICT) on organizational performance and productivity, this study will rely on the Technology Acceptance Model (Davis, 1989).

2.13.1. THE TECHNOLOGY ACCEPTANCE MODEL

Technology Acceptance Model (TAM) is one of the most successful measurements for computer usage effectively among practitioners and academics (Davis, 1989). TAM is consistent with (Rogers, 1983) theory on diffusion of innovation where technology adoption is a function of a variety of factors

including; relative advantage and ease of use. The model generally posits that emerging information technology cannot deliver improved organizational effectiveness if it is not accepted and used by potential users. Two particular beliefs are addressed through TAM; perceived usefulness and perceived ease of use. Perceived usefulness is defined as being the degree to which a person believes that the use of a system will improve his performance. Perceived ease of use refers to the degree to which a person believes that the use of a system will be effortless.

The Technology Acceptance Model (TAM) assumes that individuals are more likely to use computers if they see positive benefits from their use. Davis et al. (1989) found that perceived usefulness strongly affects the tendency for people to learn and use technology. With this in mind, staffs and of federal government unity schools who see benefits in using ICT for workplace success and improved organizational productivity would be more likely to develop more skills and to use the them more frequently.

Moreover, Venkatesh & Davis (1996) studied the antecedents of perceived ease-of-use and discovered that ICTs self-efficacy influenced ease-of use positively. Objective usability of the ICTs influenced the ease-of-use after users

had hands-on experience with these systems. In addition, Igbaria et al. (1997) examined the factors affecting ICTs acceptance in small firms in New Zealand. They found that, among the factors that directly influence ICTs acceptance were perceived ease of use and perceived usefulness. The findings indicate that perceived ease of use is a dominant factor in explaining perceived usefulness and system usage and it was also found that perceived usefulness is a strong antecedent of organizational productivity. TAM attempts not only for prediction but also for explanation to help researchers and practitioners identify why a particular system may be unacceptable and pursue appropriate steps.

The technology acceptance model therefore will aid the researcher to not only understand the role Information technology can play in improving organizational productivity and performance in the midst of other organizational components such as structure, people and strategy, but also explain why the adoption of ICT in the administrative system may not have yielded positive or expected result with respect to improved performance and productivity.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. RESEARCH DESIGN

This study adopted the survey method of research which according to Tonwe et al (2007:22), survey research has become popular in modern times as a scientific method of discovering the impact and inter–relationships of social and psychological variables from given populations. Survey research design can be descriptive or historical (Obasi, 1999:62). It is historical when it evaluates and explains past events with a purpose of gaining a deeper understanding of the present and attempting a reliable prediction of the future. It is descriptive when it unravels the major elements and characteristics of any phenomenon. More so, survey research studies large and small populations by selecting and studying samples drawn from the population to discover the relative incidence, distribution and inter – relations of sociological and psychological variables (Tonwe et al, 2007:22).

3.2. POPULATION OF THE STUDY

The study population comprises members of staff and students of the 104 Federal Government Colleges, who have experienced the adoption, use or application of Information Technology in the administrative system of their school, whether as workers (administrators), or as beneficiaries.

3.3. SAMPLE SIZE

The study concentrated on a total sample size of 250 respondents made up of staff and students of Federal Government College in Benin City. While the staffs make up 50 respondents which is approximately one-third of the workers in Federal Government Girls College Benin, students will constitute a total of 200 respondents out of an approximated population of 2000 students who are in the senior secondary school.

3.4. SAMPLING TECHNIQUE

The study adopted the non-probability sampling method, relying specifically on the convenience sampling technique in selecting the 250 respondents to be used for the research.

3.5. METHOD OF DATA COLLECTION

This study made predominant use of a well-structured close ended questionnaire, combining such with one-on-one interview with key administrative veterans, all tailored towards eliciting relevant information which helped draw conclusions on the effect of Information Communication Technology (ICT) on organizational performance and productivity.

3.6. DATA PRESENTATION AND ANALYSIS

This research utilized the simple percentage technique in the analysis of data collected from the field using the questionnaire, coupled with a qualitative desk analysis of information gathered via one-on-one interview. Hence, the following formula was applied:

$$\% = \frac{\%}{N} = \frac{PC}{1} \times 100$$

Where:

PC(F) = Percentage compliance;

N = Total number of respondents;

100 = Common base of simple percentage

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1. FREQUENCY DISTRIBUTION OF RESEARCH VARIABLES

SECTION A: INDEPENDENT VARIABLES

The tables in section A of this study present the socio-economic (bio data) characteristics of respondents which makes us understand the respondents better. The other tables of section B presents the responses of the research subjects as regards the questions which borders on the subject matter of the study.

TABLE 1.0: Gender distribution of respondents

GENDER DISTRIBUTION	RESPONDENTS	% RESPONDENTS
MALE	14	5.6
FEMALE	236	94.4
TOTAL	250	100

Source: Field Survey; 2019.

Table 1.0 above shows that 94.4% representing 236 respondents are males while 5.6% covering 114 respondents are females. This is to say that, from the above analyses more males participated in the study than females.

TABLE 1.1: school designation of respondents

SCHOOL DESIGNATION	RESPONDENTS	% RESPONDENTS
TEACHER	31	12.4
STUDENT	200	80.0
ADMINISTRATOR	19	7.6
TOTAL	250	100

Source: Field Survey; 2019.

Also, from the above table, 12.4% of the respondents were teachers covering 31 sampled respondents, 80% were students representing 200 of the total respondents, while 7.6% were administrators covering the remaining 19 sampled respondents of the research study. This insinuates that students were more active in this study, followed by teachers, and lastly, respondents in the administrative cadre.

TABLE 1.2: ICT literacy level of respondents

LEVEL OF ICT LITERACY	RESPONDENTS	% RESPONDENT
BEGINNER	56	22.4
INTERMEDIATE	109	43.6
ADVANCED	85	34.0
TOTAL	250	100

Source: Field Survey; 2019.

Table 1.2 above shows that 22.4% of the respondents representing 56 of the study sampled respondents are ICT beginner literate, 43.6% of the respondents covering 109 respondents are ICT intermediate literate, while 34.0% representing 85 sampled respondents were advanced ICT literate. Therefore, the analyses indicate that more ICT intermediate literate respondents took part in this study.

SECTION B

ITEM 1

Table. 1.3: My school is e-compliant especially in the use of computers; Internet / Website; Student web portal (School management system) etc.

Responses	Teachers	Students	Administrators	Total	% Total
Yes	27	164	16	207	82.8%
No	4	36	3	43	17.2%
Total	31	200	19	250	100%

Source: Field Survey; 2019.

It can be seen from table 1.3 that 27 teachers representing 10.8% of the respondents agreed that federal government girls college is e-compliant especially in the use of computers; Internet / Website; Student web portal (School management system) and on the same light, 164 students covering 65.6% also agreed to the aforementioned assertion, on the same page also, 16 administrators representing 6.4% of the total sampled population also agreed that, federal government girls college is e-compliant especially in the use of computers; Internet / Website; Student web portal (School management system)

making a total of 82.8% agreement. On the contrary, 4 teachers representing 1.6%, 36 students covering 14.4% of the total sampled respondents disagreed with the above statement while 3 administrators representing 1.2% of the respondents equally disagreed. That brings the total percentage of the disagreement to 17.2% of the total respondents.

ITEM 2

Table 1.4: The use of computers, Internet and several other technological processes, has been incorporated in our school administrative system for over 2 years now.

Responses	Teachers	Students	Administrators	Total	% Total
Yes	22	154	14	190	76%
No	9	46	5	60	24%
Total	31	200	19	250	100%

Source: Field Survey; 2019.

The above table 1.4 shows that, 22 teachers representing 8.8%, 154 students covering 61.6% and 14 administrators representing 5.6% of the respondents all agreed that, the use of computers, Internet and several other

technological processes, has been incorporated in our school administrative system for over 2 years now. Bringing the total percentage of agreed to 76% of the total sampled population. While on the contrary, 9 teachers representing 3.6%, 46 students covering 18.4% of the total sampled respondents disagreed with the above statement while 5 administrators representing 2% of the respondents equally disagreed. That brings the total percentage of the disagreement to 24% of the total respondents.

ITEM 3

Table 1.5: The ICT unit/department is constantly managed by skilled, professional and well trained personnel

Responses	Teachers	Students	Administrators	Total	% Total
Yes	21	159	13	193	77.2%
No	10	41	6	57	22.8%
Total	31	200	19	250	100%

Source: Field Survey; 2019.

It can be seen from table 1.5 that 21 teachers representing 8.4% of the respondents agreed that, the ICT unit/department is constantly managed by skilled, professional and well trained personnel, 147 students covering 63.6% also agreed to the aforementioned assertion, and on the same page also, 13 administrators representing 5.2% of the total sampled population also agreed that, the ICT unit/department is constantly managed by skilled, professional and well trained personnel making a total of 77.2% agreement. On the contrary, 10 teachers representing 4%, 41 students covering 16.4% of the total sampled respondents disagreed with the above statement while 6 administrators representing 2.4% of the respondents equally disagreed. That brings the total percentage of the disagreement to 22.8% of the total respondents.

ITEM 4

Table. 1.6: The introduction of ICT has increased the speed in the performance of administrative tasks.

Responses	Teachers	Students	Administrators	Total	% Total
Yes	26	163	15	204	81.6%
No	5	37	4	46	18.4%

Total	31	200	19	250	100%
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Source: Field Survey; 2019.

The above table 1.6 shows that, 26 teachers representing 10.4%, 163 students covering 65.2% and 15 administrators representing 6% of the respondents all agreed that, the introduction of ICT has increased the speed in the performance of administrative tasks. Bringing the total percentage of agreed to 81.6% of the total sampled population. While on the contrary, 5 teachers representing 2%, 37 students covering 14.8% of the total sampled respondents disagreed with the above statement while 4 administrators representing 1.6% of the respondents equally disagreed. That brings the total percentage of the disagreement to 18.4% of the total respondents.

ITEM 5

Table. 1.7: The use of Information and communication technologies has improved on accuracy in the administrative work process

Responses	Teachers	Students	Administrators	Total	% Total
Yes	20	144	14	178	71.2%

No	11	56	5	72	28.8%
Total	31	200	19	250	100%

Source: Field Survey; 2019.

It can be seen from table 1.7 that 20 teachers representing 8% of the respondents agreed that, the use of Information and communication technologies has improved on accuracy in the administrative work process, 144 students covering 57.6% also agreed to the aforementioned assertion, and on the same view, 14 administrators representing 5.6% of the total sampled population also agreed that, the use of Information and communication technologies has improved on accuracy in the administrative work process making a total of 71.2% agreement. On the contrary, 11 teachers representing 4.4%, 56 students covering 22.4% of the total sampled respondents disagreed with the above statement while 5 administrators representing 2.0% of the respondents equally disagreed. That brings the total percentage of the disagreement to 28.8% of the total respondents.

ITEM 6

Table. 1.8: The introduction and use of ICT in the school management process has considerably improved the teaching and learning process.

Responses	Teachers	Students	Administrators	Total	% Total
Yes	28	168	17	214	85.6%
No	3	32	2	36	14.4%
Total	31	200	19	250	100%

Source: Field Survey; 2019.

The above table 1.8 shows that, 28 teachers representing 11.2%, 168 students covering 67.2% and 17 administrators representing 6.8% of the respondents all agreed that the introduction and use of ICT in the school management process has considerably improved the teaching and learning process bringing the total percentage of agreed to 85.6% of the total sampled population. While on the contrary, 3 teachers representing 1.2%, 32 students covering 12.8% of the total sampled respondents disagreed with the above statement while 2 administrators representing 0.8% of the respondents equally

disagreed. That brings the total percentage of the disagreement to 14.4% of the total respondents.

ITEM 7

Table. 1.9: Familiarity with Information Technology, has given Federal Government Secondary School students an edge in the currently computerized admission seeking process.

Responses	Teachers	Students	Administrators	Total	% Total
Yes	21	151	13	188	75.2%
No	7	49	6	62	24.8%
Total	31	200	19	250	100%

Source: Field Survey; 2019.

It can be seen from table 1.9 that 24 teachers representing 9.6% of the respondents agreed that, familiarity with Information Technology, has given Federal Government Secondary School students an edge in the currently computerized admission seeking process, 151 students covering 60.4% also agreed to the aforementioned assertion, and on the same view, 13 administrators representing 5.2% of the total sampled population also agreed that, familiarity

with Information Technology, has given Federal Government Secondary School students an edge in the currently computerized admission seeking process making a total of 75.2% agreement. On the contrary, 7 teachers representing 2.8%, 49 students covering 19.6% of the total sampled respondents disagreed with the above statement while 6 administrators representing 2.4% of the respondents equally disagreed. That brings the total percentage of the disagreement to 24.8% of the total respondents.

ITEM 8

Table. 1.10: The cost of running the school system has appreciably reduced since information technology was ushered into the administrative system.

Responses	Teachers	Students	Administrators	Total	% Total
Yes	23	139	11	173	69.2%
No	8	61	8	77	30.8%
Total	31	200	19	250	100%

Source: Field Survey; 2019.

The above table 1.10 shows that, 23 teachers representing 9.2%, 139 students covering 55.6% and 11 administrators representing 4.4% of the

respondents all agreed that, the cost of running the school system has appreciably reduced since information technology was ushered into the administrative system, bringing the total percentage of agreed to 69.2% of the total sampled population. While on the contrary, 8 teachers representing 3.2%, 61 students covering 24.4% of the total sampled respondents disagreed with the above statement while 8 administrators representing 3.2% of the respondents equally disagreed. That brings the total percentage of the disagreement to 30.8% of the total respondents.

ITEM 9

Table. 1.11: The introduction of ICT in the school management process has made information transfer, processing, storage and transmission easier.

Responses	Teachers	Students	Administrators	Total	% Total
Yes	26	157	14	197	78.8%
No	5	43	5	53	21.2%
Total	31	200	19	250	100%

Source: Field Survey; 2019.

Table 1.11 shows that 26 teachers representing 10.4% of the respondents agreed that, the introduction of ICT in the school management process has made information transfer, processing, storage and transmission easier, 157 students covering 62.8% also agreed to the aforementioned assertion, and on similar view, 14 administrators representing 5.6% of the total sampled population also agreed that, the introduction of ICT in the school management process has made information transfer, processing, storage and transmission easier making a total of 78.8% agreement. On the contrary, 5 teachers representing 2.0%, 43 students covering 17.2% of the total sampled respondents disagreed with the above statement while 5 administrators representing 2.0% of the respondents equally disagreed. That brings the total percentage of the disagreement to 21.2% of the total respondents.

ITEM 10

Table. 1.12:Information and communication technology has ushered into the school's administrative system, a faster means of transferring, processing and storing information.

Responses	Teachers	Students	Administrators	Total	% Total
Yes	25	157	12	194	77.6%
No	6	43	7	56	22.4%
Total	31	200	19	250	100%

Source: Field Survey; 2019.

Table 1.12 above shows that, 25 teachers representing 10%, 157 students covering 62.8% and 12 administrators representing 4.8% of the respondents all agreed that, Information and Communication Technology has ushered into the school administrative system, a faster means of transferring, processing and storing information, bringing the total percentage of agreed to 77.6% of the total sampled population. While on the contrary, 6 teachers representing 2.4%, 43 students covering 17.2% of the total sampled respondents disagreed with the above statement while 7 administrators representing 2.8% of the respondents equally disagreed. That brings the total percentage of the disagreement to 22.4% of the total respondents.

ITEM 11

Table. 1.13:Information transfer, processing and storage has been better since the introduction of ICT in the school management process.

Responses	Teachers	Students	Administrators	Total	% Total
Yes	25	157	12	194	82.8%
No	6	43	7	56	17.2%
Total	31	200	19	250	100%

Source: Field Survey; 2019.

The above table 1.13 just like table 1.10 shows that, 25 teachers representing 10%, 157 students covering 62.8% and 12 administrators representing 4.8% of the respondents all agreed that, information transfer, processing and storage has been better since the introduction of ICT in the school management process, bringing the total percentage of agreed to 77.6% of the total sampled population. While on the contrary, 6 teachers representing 2.4%, 43 students covering 17.2% of the total sampled respondents disagreed with the above statement while 7 administrators representing 2.8% of the respondents

equally disagreed. That brings the total percentage of the disagreement to 22.4% of the total respondents.

ITEM 12

Table. 1.14: The use of electronic processes in the administrative system has increased transparency both in the work process and in service delivery.

Responses	Teachers	Students	Administrators	Total	% Total
Yes	24	156	15	195	78%
No	7	44	4	55	22%
Total	31	200	19	250	100%

Source: Field Survey; 2019.

It can be seen from table 1.14 that 24 teachers representing 9.6% of the respondents agreed that, the use of electronic processes in the administrative system has increased transparency both in the work process and in service delivery, 156 students covering 62.4% also agreed to the aforementioned assertion, and on similar view, 15 administrators representing 6% of the total sampled population also agreed that, the use of electronic processes in the administrative system has increased transparency both in the work process and in

service delivery making a total of 78.0% agreement. On the contrary, 7 teachers representing 2.8%, 44 students covering 17.6% of the total sampled respondents disagreed with the above statement while 4 administrators representing 1.6% of the respondents equally disagreed. That brings the total percentage of the disagreement to 22.0% of the total respondents.

ITEM 13

Table. 1.15: Investment in ICT is sine-qua-non to organizational effectiveness

Responses	Teachers	Students	Administrators	Total	% Total
Yes	26	161	16	203	81.2%
No	5	39	3	47	18.8%
Total	31	200	19	250	100%

Source: Field Survey; 2019.

The above table 1.15 shows that, 26 teachers representing 10.4%, 161 students covering 64.4% and 16 administrators representing 6.4% of the respondents all agreed that, investment in ICT is sine qua non to organizational effectiveness, bringing the total percentage of agreed to 81.2% of the total sampled population.

While on the contrary, 5 teachers representing 2.0%, 39 students covering 15.6% of the total sampled respondents disagreed with the above statement while 3 administrators representing 1.2% of the respondents equally disagreed. That brings the total percentage of the disagreement to 18.8% of the total respondents.

ITEM 14

Table. 1.16:An organization can boast of increased efficiency after adopting the use of ICT in its administrative system.

Responses	Teachers	Students	Administrators	Total	% Total
Yes	21	152	12	185	74%
No	10	48	7	65	26%
Total	31	200	19	250	100%

Source: Field Survey; 2019.

It can be seen from table 1.16 that 21 teachers representing 8.4% of the respondents agreed that, an organization can boast of increased efficiency after adopting the use of ICT in its administrative system, 152 students covering 60.8% also agreed to the aforementioned assertion, and on the same view, 12 administrators representing 4.8% of the total sampled population also agreed that,

an organization can boast of increased efficiency after adopting the use of ICT in its administrative system making a total of 74.0% agreement. On the contrary, 10 teachers representing 4.0%, 48 students covering 19.2% of the total sampled respondents disagreed with the above statement while 7 administrators representing 2.8% of the respondents equally disagreed. That brings the total percentage of the disagreement to 26.0% of the total respondents.

ITEM 15

Table. 1.17: The use of Information and communication technologies has helped to eliminate doggedness and excess paper work in the administrative system.

Responses	Teachers	Students	Administrators	Total	% Total
Yes	30	171	19	220	88%
No	2	29	0	31	12%
Total	31	200	19	250	100%

Source: Field Survey; 2019.

Also, it can be seen from table 1.17 that 30 teachers representing 12% of the respondents agreed that, the use of Information and communication technologies

has helped to eliminate doggedness and excess paper work in the administrative system and on the same light, 171 students covering 68.4% also agreed to the aforementioned assertion, on the same page also, all 19 administrators also agreed that the use of Information and communication technologies has helped to eliminate doggedness and excess paper work in the administrative system making a total of 88% agreement. On the contrary, 2 teachers representing 0.8%, 29 students covering 11.6% of the total sampled respondents disagreed with the above statement while none of the administrators disagreed on this. That brings the total percentage of the disagreement to 12% of the total respondents

4.2 MARCHING RESEARCH QUESTIONS WITH FIELD ANALYSIS

Assumption One:

What is the extent of ICT compliance in FGGC Benin?

To test this assumption, items 1 and 2 on the questionnaire as represented in the tables below.

Table. 1.3: My school is e-compliant especially in the use of computers; Internet / Website; Student web portal (School management system) etc.

Responses	Teachers	Students	Administrators	Total	% Total
Yes	27	164	16	207	82.8%
No	4	36	3	43	17.2%
Total	31	200	19	250	100%

Source: Field Survey; 2019.

It can be seen from table 1.3 that 27 teachers representing 10.8% of the respondents agreed that federal government girls college is e-compliant especially in the use of computers; Internet / Website; Student web portal (School management system) and on the same light, 164 students covering 65.6% also agreed to the aforementioned assertion, on the same page also, 16 administrators representing 6.4% of the total sampled population also agreed that, federal government girls college is e-compliant especially in the use of computers; Internet / Website; Student web portal (School management system) making a total of 82.8% agreement. On the contrary, 4 teachers representing 1.6%, 36 students covering 14.4% of the total sampled respondents disagreed with the above statement while 3 administrators representing 1.2% of the

respondents equally disagreed. That brings the total percentage of the disagreement to 17.2% of the total respondents.

ITEM 2

Table. 1.4: The use of computers, Internet and several other technological processes, has been incorporated in our school administrative system for over 2 years now.

Responses	Teachers	Students	Administrators	Total	% Total
Yes	22	154	14	190	76%
No	9	46	5	60	24%
Total	31	200	19	250	100%

Source: Field Survey; 2019.

The above table 1.4 shows that, 22 teachers representing 8.8%, 154 students covering 61.6% and 14 administrators representing 5.6% of the respondents all agreed that, the use of computers, Internet and several other technological processes, has been incorporated in our school administrative system for over 2 years now. Bringing the total percentage of agreed to 76% of the total sampled population. While on the contrary, 9 teachers representing 3.6%,

46 students covering 18.4% of the total sampled respondents disagreed with the above statement while 5 administrators representing 2% of the respondents equally disagreed. That brings the total percentage of the disagreement to 24% of the total respondents.

Assumption Two:

What impact does ICT have on the productivity of FGGC Benin as a public sector organization?

To test this assumption, Item 6 in the questionnaire was considered.

ITEM 6

The introduction and use of ICT in the school management process has considerably improved the teaching and learning process.

Responses	Teachers	Students	Administrators	Total	% Total
Yes	28	168	17	214	85.6%
No	3	32	2	36	14.4%
Total	31	200	19	250	100%

Source: Field Survey; 2019.

The above table 1.8 shows that, 28 teachers representing 11.2%, 168 students covering 67.2% and 17 administrators representing 6.8% of the respondents all agreed that the introduction and use of ICT in the school management process has considerably improved the teaching and learning process bringing the total percentage of agreed to 85.6% of the total sampled population. While on the contrary, 3 teachers representing 1.2%, 32 students covering 12.8% of the total sampled respondents disagreed with the above statement while 2 administrators representing 0.8% of the respondents equally disagreed. That brings the total percentage of the disagreement to 14.4% of the total respondents.

It can be concluded from this analysis, that since a large percentage of respondents agreed that introduction of ICT has considerably improved the teaching and learning process in FGGC Benin, then deductively, it must have as well improved productivity.

Assumption Three

Has the investment in ICT affected the performance of staff in terms of teaching, efficiency of works and release of results through internet facilities?

To answer the question above, Items 14 and 15 in the questionnaire as represented in the table below, will help draw a conclusion.

ITEM 14

An organization can boast of increased efficiency after adopting the use of ICT in its administrative system.

Responses	Teachers	Students	Administrators	Total	% Total
Yes	21	152	12	185	74%
No	10	48	7	65	26%
Total	31	200	19	250	100%

Source: Field Survey; 2019.

It can be seen from table 1.16 that 21 teachers representing 8.4% of the respondents agreed that, an organization can boast of increased efficiency after adopting the use of ICT in its administrative system, 152 students covering 60.8% also agreed to the aforementioned assertion, and on the same view, 12 administrators representing 4.8% of the total sampled population also agreed that, an organization can boast of increased efficiency after adopting the use of ICT in its administrative system making a total of 74.0% agreement. On the contrary, 10 teachers representing 4.0%, 48 students covering 19.2% of the total sampled respondents disagreed with the above statement while 7 administrators

representing 2.8% of the respondents equally disagreed. That brings the total percentage of the disagreement to 26.0% of the total respondents.

ITEM 15

The use of Information and communication technologies has helped to eliminate doggedness and excess paper work in the administrative system.

Responses	Teachers	Students	Administrators	Total	% Total
Yes	30	171	19	220	88%
No	2	29	0	31	12%
Total	31	200	19	250	100%

Source: Field Survey; 2019.

Also, it can be seen from table 1.17 that 30 teachers representing 12% of the respondents agreed that, the use of Information and communication technologies has helped to eliminate doggedness and excess paper work in the administrative system and on the same light, 171 students covering 68.4% also agreed to the aforementioned assertion, on the same page also, all 19 administrators also agreed that the use of Information and communication technologies has helped to

eliminate doggedness and excess paper work in the administrative system making a total of 88% agreement. On the contrary, 2 teachers representing 0.8%, 29 students covering 11.6% of the total sampled respondents disagreed with the above statement while none of the administrators disagreed on this. That brings the total percentage of the disagreement to 12% of the total respondents.

Summarizing the above tables, if the use of ICT has led to stagnation or decrease in organizational productivity and performance after the adoption of ICT (If any) in FGGC Benin, one can therefore conclude that that the application of electronic processes has instead led to organizational productivity and increase in the performance of staff in FGGC Benin.

4.3 DISCUSSION OF FINDINGS

Information Technology (IT) is clearly considered as a key growth area in this century, specifically, in a dynamic and highly competitive business environment which requires utilizing advanced IT tools to improve efficiency, cost effectiveness, and deliver high quality products and services to customers (Allen & Morton, 2004). IT is also considered as a tool of marketing, contacting customers and looking for possible customers, as well as presenting IT services as distinguished potential services for customers (UNDP, 2001; Werthner&

Klein, 2005). Organizations are increasingly using information technology to develop solutions to business problems, to improve both the efficiency and effectiveness of the decision-making process, to enhance productivity and service quality, to achieve dynamic stability, and compete for new markets.

Thus, in analyzing our findings from this research work, it was discovered that federal government girls' college Edo State is e-compliant especially in the use of computers; Internet / Website; Student web portal (School management system). As 82.8% sampled respondents agreed to the assertion as against 17.6% sampled respondents who disagreed.

Also, stemming from the above survey, it was observed that there is noticeable evidence of the usage of computers, internet and several other technological processes, been incorporated in federal government girls' college, Edo State school administrative system for over 2 years now. This stand was strongly supported by 76% sampled respondents in opposition to 24% sampled. And in consonance with the aforementioned fact, the researcher discovered that, over the last two (2) years, the administrative system in the school has taken a drastic turn for the better in terms of effectiveness and efficiency.

Again, it was observed by the reason of the study that, the ICT unit/department is constantly managed by skilled, professional and well trained personnel. This particular notion can be deemed correct base on the nature and pattern of the study case area which has been developing over the years based on the skilled professionals who constantly man the ICT unit. And this particular assertion was rightly corroborated with 77.2% agreement and 22.8% disagreement. It is worthy to mention that some of the 22.8% who voiced their feelings out in an oral interview, mentioned that reason for their disagreement is on the bases that they only have few staffs on-site, managing the IT department (basically 3 individuals), hence hindering optimization of efficiency.

The study also discovered that, the introduction of ICT has increased the speed in the performance of administrative tasks. This statement according to the field survey was seen as true in the sense that, the output of ICT since its introduction into the federal government girls' college has been tremendous and has optimize the speed in the performance of the administrative task in the college. And this assertion was supported by 81.6% sampled respondents as against 8.4% respondents who were of contrary view. Students orally confirmed that they now check their results online with ease,

enrol and pay school fees online, check school organograms, time table and notifications online, amongst others, all of which have helped to reduce some paper and bureaucratic processes.

Another part of the findings was that, the use of Information and Communication Technology has improved on accuracy in the administrative work process. As being seen by the researcher in the process of the field work, the issue of accuracy and ease in the administrative work process has been in an optimized position. This is observed in the various administrative process such as student's enrolment into the school, enrolment for external examination bodies like WAEC and NECO and the computation of student's terminal results, all of which are done with built in functions that ensure accuracy and objectivity. And this fact was corroborated by 71.2% sampled support and 28.8% sampled respondents who disagreed with the aforementioned assertion on the grounds that the ICT processes have inherent shortcomings.

Again, it was discovered that, the introduction and use of ICT in the school management process has considerably improved the teaching and learning process. With the introduction of e-libraries for example, both teachers and students now have free and unlimited access to materials which

ultimately help them gain proper insight into any subject matter to be discussed, and widen their horizon of knowledge while carrying out research. The internet, as well several learning gadgets now used in schools has made the entire process of teaching and learning less boring and more fun. Hence the 85.6% agreement and 14.4% disagreement to this assertion.

Furthermore, it was also discovered by the researcher that, familiarity with Information Technology, has given Federal Government Secondary School students an edge in the currently computerized admission seeking process. And judging from the sampled research respondents, it was observed that, 75.2% of the total sample respondents took a positive stand on this, while the remaining 24.8% sampled respondents were not in agreement with the assertion. Most of the respondents who had a negative stand, in an oral interview attributed reasons for their disagreement to the fact that they are yet to be computer literates, hence see no advantage yet in computerized processes.

Flowing along with the supporting respondents, it can be seen as a noticeable fact that, the federal government girls' college students, has an edge comparatively to other schools as regard current admission seeking process. They don't see the current Online Jamb and Post UTME examination as a

worrisome exercise as they have been previously exposed to this to an appreciable extent.

Going forward, it was also discovered that the cost of running the school system has reduced considerably since information technology was ushered into the administrative system. Field survey showed that 69.2% of sampled respondents were in support of this, as against 30.8% respondents who were not in agreement with the above mentioned. Furthermore, it is of the view of majority (69.2%) of the sampled respondents that, due to the introduction of ICT in the college, cost maximization and efficiency has been ushered into the administration system of the college.

Speaking with few administrators on this in an oral interview, they mentioned that there has been a decrease in the level of paper consumption as a bulk of their work is done online, more so, through the sale of scratch cards as some point, the school generated some funds used for further development. Some books can now be accessed online as opposed to buying and stocking them offline; to some extent, computers can now painlessly do a bulk of jobs for which staffs were previously paid for, with online payment of school fees, as well as child enrolment, the stress and risk of running around for such is greatly reduced,

and when online test and school examination is introduced, the cost of conducting same offline is drastically reduced. The school can now interact with other schools, sharing knowledge and collaborating among themselves via e-communication channels with ease.

Also, the study observed that, the introduction of ICT in the school management process has made information transfer, processing, storage and transmission easier. The researcher discovered by reason of popular support by the sampled respondents that information can be easily accessed anywhere by anyone due to the introduction of ICT in the administrative system of federal government girls' college, Benin City. This was noticed in the form of a fully functional web site of the school and other internet platforms. School data storage, processing and transmission were also discovered as a viable product of the introduction of ICT into the administrative system of the college. Vital documents and information are now saved online and on drives, protecting them against disasters of fire, flood, pest etc, easily transferred from one computer or location to another, and also spooled for presentation using programming functions without stress. This view was largely supported by 77.6% sampled respondents as against 22.4% sampled respondents (see table, 1.13).

The field research findings also discovered that the use of electronic processes in the administrative system has increased transparency both in the work process and in service delivery. As a noticeable fact, the introduction of ICT in the administrative system has led to transparency in the sense that all transactions and businesses are being done online without meeting a particular individual for assistance or inducement which use to serve as an avenue for exploitation.

In terms of service delivery, the ICT mechanism has made service rendering very easy as students can now pay their school fees online, enroll for admissions online, check results online, access learning materials online amongst others. Hence 78% of total respondents agreed to this while 22% disagreed.

It was also a discovery through this study, that investment in ICT is sine-qua-non to organizational effectiveness. 81.2% of the total sampled respondents affirmed this, while 18.8% sampled respondents were of the contrary opinion. This is to invariably say that organizations can boast of an increased level of efficiency after adopting the use of ICT in its administrative system.

Lastly, the study established that the use of Information and Communication Technology (ICT) has helped to eliminate doggedness and

excess paper work in the administrative system. Addressing the issue of doggedness and excess paper work, the researcher noticed that prior to the introduction of ICT in the administrative system of Federal Government Girls College, Benin, the issue of excess paper work has been the order of the day which has created lots of difficulties in collation, storage, management and general administration. Thus, on this, 88% sampled respondents were in consonance with the assertion, while 12% felt otherwise.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1. Conclusion

The study sought to evaluate the Effect of Electronic Administration on Organizational Performance and Productivity, using Federal Government Girls College in Benin City as a case study. The objectives were to ascertain the extent of ICT compliance in the administrative system of modern organizations, especially Federal Unity Colleges, to figure out the positive and/or negative effects (if any) of administrative use of ICT, on organizational performance and productivity in Federal Unity Colleges, to Pinpoint reasons for stagnation or decrease in organizational productivity and performance after the adoption of ICT (If any) in the Federal Unity Colleges, and to recommend ways through which Information and communication technology can improve or increase organizational performance and productivity in modern organizations. The research design that was employed in this study is the survey research design. The study population is members of staff and students of the 104 Federal Government Colleges. The study used both primary and secondary data. Primary data was collected using structured questionnaires. Collected raw data was

cleaned and edited for completeness and consistency. Data was analysed by use of the simple percentage.

The study found out amongst others that, federal government girls' college Edo State is e-compliant especially in the use of computers; Internet / Website; Student web portal (School management system), and there are noticeable evidence of its adoption for over 2 years now.

It was also discovered in the course of the study that ICT has ushered in several positive changes in the administrative processes of FGGC Benin City. There has been increased speed and accuracy in the performance of administrative tasks and duties, information storage, processing and transfer has been made a whole lot easier and faster, the school running cost has as well reduced considerably, doggedness and excess paper work has been curbed to a large extent, the administrative system now seems to be more transparent than before.

Generally, teaching and learning processes has drastically improved and FGGC Benin students seem to have an edge in the currently computerized admission seeking process.

However, the study also found out that irrespective of the above, a lot more can be done to further improve on the impact of ICT in organizational performance.

Though the ICT Unit / Department of FGGC Benin is manned by skilled and well trained staffs, it was observed through this study that the number of core ICT staffs employed for this purpose is generally poor, hence will go a long way to reduce efficiency.

Irrespective of the above, one can deductively conclude that based on this study, the introduction of ICT in the school management and administrative process, has gone a long way to improve performance and productivity in FGGC Benin City.

5.2. Recommendations

Looking at the present level of ICT adoption in the organizational practices of developed countries, one can easily conclude that the ICT sector is still like a virgin field yet to experience optimum utility in developing countries like Nigeria. Hence, constant research in this direction should be encouraged by the government to discover and fashion out better ways through which ICT can be of help to the development and/or improvement of administrative practices of

not just schools in Nigeria, but organizations and parastatals in general, both public and private.

When and where necessary, organizations should ensure that the IT department or ICT unit is constantly equipped with capable hands in good quantity, improving and updating their skills via training and re-training, as this goes a long way to determine their level of efficiency.

Furthermore, organizations (private and public), who have chosen to adopt or implement technology in their administrative process, should never overlook the performance of the ICT unit, but adequate and quarterly check – ups should be done, to check-mate possible loop-holes, reviewing against the backdrop of stipulated aims and objectives of ICT adoption. Focus should be on upholding standard, on improving efficiency and effectiveness, upgrading the teaching and learning pattern and processes in the case of schools, via information and communication technology.

In terms of enlightenment, the federal government should endeavour to properly inculcate all individuals in the system including students, teachers and administrators alike to the need and benefit of engaging in ICT development.

Students, teachers and even administrators should constantly undergo compulsory training, which can be done quarterly, so as to enlighten them on

new technologies, expose them to their use, teaching them to work and learn with such, all to be sure of proper handling, efficient and effective service delivery.

More research should be carried out in this field, with focus on discovering new technological process capable of improving performance and productivity in organizations and better ways the school administrative system, organizations and parastatals as a whole will benefit more from the adoption of ICT, in terms of increased performance and productivity.

There should be increased collaboration and partnership between governments, NGOs and even the private sector, to not only encourage, but also improve on the use of ICT which has come to stay, in reducing workloads, cutting down bureaucratic processes, and increasing organizational efficiency and effectiveness which in turn improves organization performance, productivity and service delivery.

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APPENDIX
QUESTIONNAIRE

Department of Public Administration,
Faculty of Social Sciences,
University of Benin,
Benin City.

November 2019

Dear Respondents,

REQUEST FOR THE COMPLETION OF QUESTIONNAIRE

I am a postgraduate student of the above mentioned department and university. I am carrying out a research on Information Communication Technology (ICT) and its Implications for Educational Productivity among Unity Schools in Nigeria: the Case of Federal government Girls College in Benin City, as part of the requirements for the completion of my programme.

I hereby solicit your response to these questions. Your assistance in supplying the necessary information will be highly appreciated. Also the information supplied by you will be used purely for academic purpose and be treated with utmost confidentiality.

Thanks for your anticipated cooperation.

Yours faithfully,

Researcher

SECTION A: BIODATA

Please **TICK** the option that best suit your description.

SEX: Male [] Female []

POSITION: Teacher [] Student [] Administrator []

LEVEL OF ICT LITERACY: Beginner [] Intermediate [] Advanced
[]

SECTION B:

Please **TICK** the option that best represents your opinion.

1. My school is e-compliant especially in the use of computers; Internet / Website; Student web portal (School management system) etc. Yes []
No []
2. The use of computers, Internet and several other technological processes, has been incorporated in our school administrative system for over 2 years now. Yes [] No []
3. The ICT unit/department is constantly managed by skilled, professional and well trained personnel. Yes [] No []

4. The introduction of ICT has increased the speed in the performance of administrative tasks. Yes [] No []
5. The use of Information and communication technologies has improved on accuracy in the administrative work process. Yes [] No []
6. The introduction and use of ICT in the school management process has considerably improved the teaching and learning process. Yes [] No []
7. Familiarity with Information Technology, has given Federal Government Secondary School students an edge in the currently computerized admission seeking process. Yes [] No []
8. The cost of running the school system has appreciably reduced since information technology was ushered into the administrative system. Yes [] No []
9. The introduction of ICT in the school management process has made information transfer, processing, storage and transmission easier. Yes [] No []
10. Information and communication technology has ushered into the school administrative system, a faster means of transferring, processing and storing information. Yes [] No []

11. Information transfer, processing and storage has been better since the introduction of ICT in the school management process. Yes [] No []
12. The use of electronic processes in the administrative system has increased transparency both in the work process and in service delivery. Yes [] No []
13. Investment in ICT is sine qua non to organizational effectiveness. Yes [] No []
14. An organization can boast of increased efficiency after adopting the use of ICT in its administrative system. Yes [] No []
15. The use of Information and communication technologies has helped to eliminate doggedness and excess paper work in the administrative system. Yes [] No []

Thanks for your cooperation.

**LIST OF FEDERAL GOVERNMENT SECONDARY SCHOOLS IN
NIGERIA, SORTED BY STATE**

ABIA	FSTC OHANSO (BOY& GIRLS) FGC OHAFIA (BOYS & GIRLS) FGGC UNUAHIA (GIRLS ONLY)
ADAMAWA	FGGC YOLA(GIRLS ONLY) FGC GANYE (BOYS & GIRLS)
AKWA-IBOM	FSTC UYO (GIRLS ONLY) FGC IKOT-EKPENE (BOYS & GIRLS) FGGC IKOT-OBIO-ITUNG (GIRLS ONLY)
ANAMBRA	FSTC AWKA (BOYS & GIRLS) FGC NISE (BOYS & GIRLS) FGGC ONITSHA (GIRLS ONLY)
BAUCHI	FGGC BAUCHI (GIRLS ONLY) FGC BAUCHI (BOYS & GIRLS)
BENUE	FSTC OTUKPO (BOYS & GIRLS) FGC VANDEIKYA (BOYS & GIRLS) FGGC GBOKO (GIRLS ONLY)

	FGC OTOBI (BOYS & GIRLS)
BORNO	FSTC LASSA (BOYS & GIRLS) FGC MAIDUGURI (BOYS & GIRLS) FGGC MONGUNO (GIRLS ONLY)
CROSS-RIVERS	FGGC CALABAR (GIRLS ONLY)S & GIRLS) FGC IKOM (BOY
DELTA	FGGC IBUSA (GIRLS ONLY) FGC WARRI (BOYS & GIRLS)
EDO	FSTC UROMI (BOYS & GIRLS) FGGC BENIN (GIRLS ONLY) FGC IBILLO (BOYS & GIRLS)
ENUGU	FGC ENUGU (BOYS & GIRLS)
IMO	FGGC OWERRI (GIRLS ONLY) FGC OKIGWE (BOYS & GIRLS)
JIGAWA	FGGC KAZAURE (GIRLS ONLY) FGC KIYAWA (BOYS & GIRLS)

KADUNA	FSTC KAFANCHAN (BOYS & GIRLS) FGC KADUNA (BOYS & GIRLS) FGGC ZARIA (GIRLS ONLY)
KANO	FGGC MIN-JIBIR (GIRLS ONLY) FGC KANO (BOYS & GIRLS ONLY)
KATSINA	FSTC DAYI (BOYS & GIRLS) FGC DAURA (BOYS & GIRLS) FGGC BAKORI (GIRLS ONLY)
KEBBI	FSTC ZURU (BOYS & GIRLS) FGC BIRNIN-YAURI (BOYS & GIRLS) FGGC GWANDU (GIRLS ONLY)
KOGI	FGGC KABBA (GIRLS ONLY) FGC UGWOLAWO (BOYS & GIRLS)
KWARA	FGGC OMU-ARAN (GIRLS ONLY) FGC ILORIN (BOYS & GIRLS)
LAGOS	QUEEN'S COLLEGE LAGOS (GIRLS ONLY) KING'S COLLEGE LAGOS(BOYS ONLY)

	FGC LAGOS (BOYS & GIRLS) FSTC, YABA (BOYS & GIRLS)
NIGER	FEDERAL GOVERNMENT ACADEMY SULEJA (BOYS & GIRLS) FGC MINNA (BOYS & GIRLS) FGGC BIDA (GIRLS ONLY) FGGC NEW BUSSA (GIRLS ONLY)
OGUN	FSTC IJEBU MUSHIN (BOYS & GIRLS) FGC ODOGBOLU (BOYS & GIRLS) FGGC SHAGAMU (GIRLS ONLY)
ONDO	FSTC IKARE-AKOKO (BOYS & GIRLS) FGC IDOANI (BOYS & GIRLS) FGGC AKURE (GIRLS ONLY)
OSUN	FSTC ILESA (BOYS & GIRLS) FGC IKIRUN (BOYS & GIRLS) FGGC IPETUMODU (GIRLS ONLY)
OYO	FGGC OYO (GIRLS ONLY) FGC OGBOMOSO (BOYS& GIRLS)

PLATEAU	<p>FGGC LANGTANG (GIRLS ONLY)</p> <p>FGC JOS (BOYS & GIRLS)</p>
RIVERS	<p>FSTC AHOADA (BOYS & GIRLS)</p> <p>FGGC ABULOMA (GIRLS ONLY)</p> <p>FGC PORT-HARCOURT (BOYS & GIRLS)</p>
SOKOTO	<p>FGGC TAMBUNWAL (GIRLS ONLY)</p> <p>FGC SOKOTO (BOYS & GIRLS)</p>
TARABA	<p>FSTC JALINGO (BOYS & GIRLS)</p> <p>FGGC JALINGO (GIRLS ONLY)</p> <p>FGC WUKARI (BOYS & GIRLS)</p>
YOBE	<p>FGGC POTISKUM (GIRLS ONLY)</p> <p>FGC BUNI-YADI (BOYS & GIRLS)</p>
FCT	<p>FGGC ABAJI (GIRLS ONLY)</p> <p>FGBC APO GARKI (BOYS ONLY)</p> <p>FGC RUBOCHI (BOYS & GIRLS)</p> <p>FSTC OROZO (BOYS & GIRLS)</p> <p>FGC KWALI (BOYS & GIRLS)</p>

	FGGC BWARE (GIRLS ONLY)
BAYELSA	FGC ODI (BOYS& GIRLS) FSTC TUNGBO (BOYS & GIRLS) FGGC IMTRINGI (GIRLS ONLY)
EBONYI	FGGC EZZAMBO (GIRLS ONLY) FGC OKPOSI (BOYS & GIRLS)
EKITI	FSTC USI-EKITI (BOYS & GIRLS) FGC IKOLE-EKITI (BOYS & GIRLS) FGGC EFON-ALAYE (GIRLS ONLY)
GOMBE	FGC BILIRT (BOYS & GIRLS) FGGC BAJOGA (GLS ONLY)
NASARAWA	FGGC KEANA (GIRLS ONLY) FGC KEFFI (BOYS & GIRLS)
ZAMFARA	FGC ANKA (BOYS & GIRLS) FGGC GUSAU (GIRLS ONLY)