

**Information Communication Technology (ICT) Literacy and Service Delivery in
Industrial Training Fund**

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ABSTRACT

There is a growing concern in recent times for effective and efficient (ICT) diffusion or usage in many Nigeria organisations - public or private in order to improve and enhance their service delivery and effectiveness capacities. The state of ICT in any organisation has a significant influence on the quality and quantity of its production of goods and services and also determines its competitive advantage. Therefore, this study examines the relationship between ICT literacy and service delivery in Nigeria and its impacts on productivity improvement and competitiveness in Industrial Training Fund (ITF), Jos and the role of ITF in manpower training and development in Nigeria. Furthermore, the study examines the benefits of ICT application and the effectiveness of ICT policies and strategies in Nigeria as it relates ICT diffusion in organisations as well as the challenges of ICT diffusion/usage in ITF and organisations. More so, the study also find out that there are several benefits and impact of ICT usage and it also revealed a myriad of challenging factors inhibiting effective ICT usage in ITF. Again, the study also uses both primary and secondary method of data collection and the Likert' method of variables. In addition, a theoretical framework was adopted for analysis and understanding of ICT usage in organisations. Finally, the study also made some recommendations for effective and efficient ICT application and/or diffusion for service delivery in ITF and other public organisations in Nigeria.

Keywords: Information, communication, technology, literacy, service, delivery, industrial, training, funds.

INTRODUCTION

Information and Communication Technology (ICT) has received a great deal of attention from both the academic and business world, because of its increasing deployments, and these technologies plays a crucial role in the present knowledge based economy, hence, organisations both large and small, public or private tend to rely heavily on ICT solutions in order to develop and grow their businesses and increase competitiveness as

well as productivity (Asgarkhani & Young, 2010)[1]. With its rapid growth and continual evolution, ICT has provided the impetus for economic innovation, Cultural Revolution and social reform in almost all sectors of a country's economy. However, several researches or studies have shown that the revolution in the use of ICTs has profound implications for economic and social development of these nations, and has pervaded every facet or aspect of human life [2].

More importantly, ICTs are being integrated into procedures, systems, structures and products throughout businesses, governments and communities, and the use of ICT is widespread and regarded as an essential tool for the efficient administration or management and effective productivity improvement of an organisation as well as in the delivery of services to clients (Schware, 2003)[3]. Specifically, ICTs are being introduced in organisations in order to increase operational efficiency or productivity level, quality, profitability, competitiveness and transparency.

Unfortunately, in Nigeria, information and communication technologies (ICTs) impacts on organizational productivity have received little (research) attention over time, and within the domain of ICT and productivity, there is a dearth of theoretical and empirical studies and efforts in order to enhance ICT application, and to establish the level of effectiveness of ICT facilities as it relates to other complementary factors and the returns of production (Egwali and Osasere, 2012)[4]. Many organisations have invested a great deal of ICTs and yet the actual efficiency level of ICT in the production process and strategies in organisations is a baffling issue in productivity improvement and production science[5],[6].

Since Information Technology (IT) became commercial in the early 1990s, it has diffused rapidly in developed countries but generally slowly in developing countries notably African countries and Nigeria in particular. This has led to a widening gap known as "*digital divide*" between the two groups (Achimugu, Oluwagbemi, Oluwaranti and Afolabi, 2009)[7]. At the same time, the gap between organisations in Africa, especially the ones in Nigeria is also expanding in terms of their access to ICTs facilities. Besides, the question of this digital divide has appeared in organisations

frequently as impacting negatively on the productivity level of such organisations. The digital divide, which is a disparity in the access to ICTs facilities between and among organisations, institutions, communities or countries has variously been affected by many factors, ranging from inadequate infrastructure, high cost of access to ICTs, inappropriate or weak (ICT) policy regimes, maintenance of status quo and conservatism of most organisations to access ICT facilities, inefficiency in the provision of telecommunication networks, language divide and lack of locally created content (Mutula, 2004)[8]. This is exacerbated by the fact that Information Technologies (IT) has not effectively been integrated in the development agenda of most developing countries including Nigeria[8].

Moreover, national economies and organisations are increasingly tightly tied together globally by this ultra-speed information networks era called globalization (Achimugu, Oluwagbemi, Oluwaranti and Afolabi, 2009)[7]. Therefore, organisation or country that lags behind finds it difficult to catch up with the state-of-art information and communication technology. Nonetheless, organisations and countries need to plan, design and implement a National Information Infrastructure (NII) policies and strategies as engine for economic growth and development; hence, the need for research.

STATEMENT OF THE PROBLEM

Information and Communication Technologies have become key tools and has a revolutionary impact of how we see the world and how we live (Dabesaki, 2005)[9]. There is an overwhelming awareness that there are great potentials in the availability, application and use of ICTs. They have the capacity and/or potential to be a major driving force behind the economy of any nation, and also have a strong reconstructing impact on existing socio-economic structures or activities and the ability to affect them in a variety of ways.

However, empirical studies have indicated that ICT diffusion or usage in Nigeria is challenged with myriad of organizational, environmental and socio-economic problems and this have raised doubt about the country's ability to participate in the

current global ICT - induced knowledge economy (Ogunsola, 2005)[10]. Therefore, these maladies or problems among other things include the dearth of ICT infrastructure and facilities in most Nigerian organisations as well as conservatism on the part of the management to provide such facilities [11],[12].

There is also dearth of well-trained and qualified personnel in ICT skills and a general low level of computer culture, illiteracy and ignorance [9], [13].

ICT adoption or diffusion in most Nigerian (public) organisations is challenged by the lack of functional and weak ICT policy, and poor government interest and support towards ICT relevance, as well as non-inclusion of ICT programmes in workers' training and development curricula [14],[15],[16].

There is a relatively high cost of ICT equipment such as computers, mobile telephone lines, internet facilities, multi-media systems, fax machine, bandwidth and satellites as well as problems associated with technical or mechanical support for internet connection [15].

Many parts of Nigeria and the public sector in general still experienced epileptic or inconsistent power supply despite the tremendous efforts made by both past and present administration in the power sector. Unfortunately, this serious malady has inhibited ICT efficacy or effectiveness, and consequently affects the level of productivity in most organisations in the country [17],[18].

Inadequate funding and harsh economic realities in the country are also a major factor affecting ICT adoption and application, and these have posed a serious constraint to the overall productivity level (output) of most organisations in Nigeria (Ajayi, 2002; Okiy, 2003; Akanni, S. B. 2008).[17][19],[20]. More so, most management of these organisations lacks the culture of maintenance and repairs in which several ICT facilities have been abandoned due to minor technical or mechanical fault, thus leading to waste of resources, time and finance [21].

RESEARCH QUESTIONS

For the purpose of this study, the research questions are stated as follows:

1. How does ICT literacy application enhance service delivery in ITF?
2. What are the major benefits of ICT usage in ITF?
3. How effective and efficient is the adoption and application of ICT resources in ITF?
4. What kind of strategies or measures can be adopted for improving and enhancing ICT usage in ITF and other Nigerian organisations?

OBJECTIVES OF THE STUDY

The objective of this study is to examine the relationship between ICT and organizational productivity in ITF (Nigeria). The study also seeks to examine the following:

1. First, to find out whether ICT literacy application has improved service delivery in ITF, Nigeria.
2. To know the benefits of ICT usage in ITF.
3. To ascertain effective and efficient in the adoption and application of ICT resources in ITF.
4. Lastly, to proffer recommendations for proper and effective ICT usage in ITF and other organisations in Nigeria.

SIGNIFICANCE OF THE STUDY

This research work is timely, considering the fact that Information and Communication Technologies (ICTs) are a major driving force behind the economic growth and development of a nation, and are tools for efficient and effective organizational productivity in many organisations the world over. Thus, this study will enable government(s) which is a major stakeholder of ICT infrastructure provision in the country to know areas that need improvement and re-adjustment of ICT policies in the economy and also guide in the formulation of new and relevant (ICT) policies for better ICT resources availability and utilization in organisations or institutions and the economy as a whole.

This study will enable organisations or institutions to know and implement proper strategies, policies and programmes geared towards effective and efficient use of ICTs in order to improve productivity level. Again, it will also enable organisations/institutions to realize the usefulness or benefits derived from ICT diffusion, especially in productivity improvement and performance.

Finally, the study will serve as a blueprint for organisations/institutions, information managers or information scientists and researchers to chart the right course of action for the use of ICTs, and also advocate new methods or approaches for stimulating and enhancing productivity through policy adoption, formulation and implementation.

LITERATURE REVIEW

Information and Communication Technologies (ICTs) has become the rare of the moment in global socio-economic affairs. It has become important that every country, organisation or institution no matter how highly or lowly placed want to identify and embrace it. Moreover, ICTs are widely perceived as a major tool for kick-starting ailing economies and consequently assist developing societies 'catch-up' with the developed world including those groups that have lost out of the mainstream of development (Obijiofor, Tidd, & Stevenson, 2005)[22],[23],[24]. Thus, ICT revolution is the central and driving force for globalization and the dynamic change in all aspects of human existence and in this age of knowledge economy, the importance of ICTs to people or society in general and organisations in particular cannot be over-emphasised. This is true because ICTs facilitates quick and easy access to wide range of information resources in societies and organisations worldwide.

Hence, information and communication technology (ICT) as a generic term or concept, have been variously viewed in different ways by different authors and scholars the world over. Accordingly, information and communication technology combine three comparative complementary concepts- information, communication and technology

which describes its described and all encompassing meaning and the area of coverage. Therefore, information in this context, refers to the message, idea or feeling that is transmitted and received in the process of communication. This message, idea or feeling is shared by both the receiver and sender at the same time. It is simply the vehicle by which we attempt to provoke or evoke a human response Alam, S. S. & Noor, M. K. (2009)[25]. Communication on the other hand, is any process in which people share the same information, ideas and feelings. It involves spoken and written words, body languages, personal mannerism and style, etc. (Akinyele & Akpan-Obong, 2007)[26],[27]. While Weihrich and Koontz (2005)[28] opine that communication is the transfer of information from a sender to a receiver with the information being understood by the receiver. And technology is the systematic application of tools and arts, or methods, materials and devices used to solve practical problems[29] .

ICT is defined “as advances in technology that provides a rich global resources and collaborative environment for dissemination of ICT literacy materials, interactive discussions, research information and international exchange of ideas which are critical for advancing meaningful educative initiative, training high skilled labour and understanding issues related to socio-economic development” (Olulube, Ubogu & Ossai, 2006)[30]. In short, Chisenga (2006)[31] asserts that ICT encompasses a range of rapidly evolving technologies and they include telecommunications technologies (telephony, cable, satellite, TV and radio, computer mediated conferencing, video conferencing) as well as digital technologies (computers, information networks, internet, World Wide Web, intranets and extranets) and software applications. Again, Ayo (2001)[32] further buttress that ICT is the use of computer system and telecommunications equipment in information handling, consisting of essentially three (3) basic components viz: electronic processing using the computer; transmission of information using telecommunications equipment; and dissemination of information using multimedia.

Thus, ICT in this context is simply defined as a diverse set of technological tools and resources used to communicate and create, disseminate, store, and manage information in order to enhance productivity of an organization. In other words,

computers and other ICT resources provides the processing, storage and retrieval capabilities of information in the organization, while telecommunications provides the capabilities for the transfer and/or communication of data (information) from one work station to another in the organisation. To this end, information technologies found in most Nigerian organisations today is a combination of computers, storage media and telecommunications facilities.

THEORIES/MODELS OF ICT ADOPTION AND IMPLEMENTATION IN ORGANISATIONS

Basically, there are several theories for the understanding of ICT application or usage in organisations. However, this study will examine the following theories or models.

TECHNOLOGY ACCEPTANCE MODEL (TAM)

This theory is one of the most cited in information and communication technology study. Alao (2010)[33]. presented a theoretical model aiming to predict and explain ICT usage behaviour that is, what causes potential adopters to accept or reject the use of information technology. Theoretically, TAM is based on the Theories of Reasoned Actions (TRA) developed by Ajzen & Fishbein, (1975)[34]., and Theory of Planned Behaviour (TPB) developed by Anie (2011)[35]. to explain or define the links between the beliefs, attitudes, norms, intentions and behaviours of individuals, organisations or society towards ICT use. Thus, in TAM, two theoretical construct - perceived usefulness and perceived ease of use are the fundamental determinants of system use, and predict attitudes toward the use of the system[36].

DIFFUSION OF INNOVATIONS MODEL (DOI)

Indeed, Annan (2003)[37] developed this theory in his book "Diffusion of Innovations" and was the single most cited individual work in ICT innovations, receiving over 286 citations. Diffusion of Innovation Model (DOI) is a general theory of how new ideas are spread and adopted in a community or organisation, and it seeks to explain how communication channels and opinion leaders or managers shape adoption

of such technologies (ICTs). Again, Annan (2003)[37] the main proponent of DOI proposed the first process model, a five-stage model of the adoption and implementation of innovation in organisations in order to enhance productivity and competitiveness (knowledge, persuasion, decision, implementation and confirmation). Moore and Anyakoha (1991)[38] also used DOI to develop 'an instrument designed to measure the various perceptions that an individual/organisation may have of adopting an information technology (IT) innovation.' The instrument was intended to be a tool for the study of the initial adoption and diffusion of IT innovations within organisations cited in [36].

UNIFIED THEORY OF ACCEPTANCE AND USE OF TECHNOLOGY (UTAUT)

This model was developed by Venkatesh, Morris & Davis (2003) after reviewing eight models which explains ICT usage namely TRA, TAM, the motivational models, TPB, a model combining TAM and TPB, the model of Personal Computer (PC) utilization, DOI and the social cognitive theory. The purpose of UTAUT is to explain a user's intentions to use ICT and the subsequent user behaviour towards ICT resources. The model considers four constructs as direct determinants of user acceptance and usage behaviour, namely, performance expectancy, effort expectancy, social influence, and facilitating conditions. There are also four key moderating variables in UTAUT: gender, age, experience and voluntariness of use. Proponents of this theory stated that UTAUT provides a tool for managers to assess the likelihood of success of technology introductions and to design interventions which include e.g. training and development or marketing (Korpelainen, 2011). Moreover, UTAUT focuses on users who may be less willing to adopt and use new systems/technologies (ICTs) in order to improve their service delivery and competitiveness.

INFORMATION SYSTEMS SUCCESS MODEL (ISSM)

This theory was developed based upon the review of prior research or study on information technology by Arvanitis and Loukis (2010)[39], and thus introduced a comprehensive taxonomy of factors contributing to the success or otherwise of information systems in an organisation. Arvanitis and Loukis (2010)[39], the main

exponents of this theory examined the literature on information system (IS) success and categorized success measures recorded in ICT adoption and implementation in organisations into six major categories: system quality, information quality, use, user satisfaction, individual impact and organizational impact. These categories are interrelated and interdependent and provide a comprehensive view of IS success in such organisations. Therefore, the target of this model is to guide future research or study efforts and information technology systems success in organisations towards high service delivery and competitiveness [36].

In conclusion, most of these (ICT) theories/models focus on both the individual and organizational levels as well as on the level of social system. Though, TAM (i.e. TRA and TPB) and UTAUT focus on the individual level in ICT adoption or application in organisations, while IT implementation process focus on the organizational level or on the level of social system, and DOI focuses on a group or organizational level. In the information systems success process model, the focus of the analysis is on critical success factors in ICT implementation in organisations. Notwithstanding, these theories can all be applied at any time in organisations in order to improve and enhance service delivery, efficiency and competitiveness in these organisations including the Industrial Training Fund (ITF).

ICT AND ORGANISATIONAL PRODUCTIVITY IN NIGERIA

The benefits or importance of ICT adoption and application in organisations and the economy at large cannot be over-emphasized, as they are the backbone of the knowledge-based economy and most organisations' productivity performance and in recent years, have been recognized as an effective tool for promoting economic growth and sustainable development Attama and wolabi (2008)[40]. Presently, the extensive use of ICT is changing the way people or organisations work. Researchers like Kapurubandara an Lawson (2006); Majumdar, Carare and Chang, (2010). And Aroge. (2012)[41],[42][43], refer to ICT as a very important tool for innovation in the present era of globalization and/or knowledge-based economy. Thus, the benefits of ICT for a firm/organisation includes saving of inputs, general costs reductions, higher flexibility

and improvement in product quality and quantity (Avgerou. 2001; Bloom, Gamicano, Sadun, and Reenan 2009)[44], [45]. Again, Nwabueze, Ozioko and Baro (2011)[46], [47], ascertain that ICTs play a major role in networking and communication as firms use these technologies to facilitate communication among employees and reduce coordination costs. To Hanna (2003)[48] ICT enhances the production process in organisations as monitoring technologies and could be used to reduce the number of supervisors required in the process. Arvanitis and Loukis (2009)[39] also advocate that the use of ICT has direct implications for firms, and it helps in areas such as information gathering and dissemination, inventory control and quality control.

Besides, Olugbenga (2006)[49] argues that ICTs are being used for strategic management, communication and collaboration, customers' access, managerial-decision making, data management and knowledge management since it helps to provide an effective means of organizational productivity and service delivery. Brynjolfsson and Hitt (2003)[50], assert that there is a substantial long-term productivity gain with the use of ICT in organisations. Ehikhamenor (1993)[51] also notes that the application of ICT in businesses causes fundamental changes that can provide powerful strategic and tactical tools for organisations if properly applied and used. This could have great impact in promoting and strengthening service delivery and competitiveness.

THE CHALLENGE OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) DIFFUSION/USAGE IN NIGERIA

According to Daniels (2002), ICTs have become within a very short-time, one of the basic building blocks of modern society. Many countries and organisations/institutions now regard the understanding and mastering the basic skills and concept of ICT as part of the core values and engine for socio-economic advancement and organizational efficiency and effectiveness. However, researches and studies have shown that while ICT has already invaded and dominated various sectors in the developed world, its invasion into the systems of most developing nations and Africa in particular has been a serious challenge (Liverpool, 2002)[52]. More so, Morales-Gomez and Melesse (1998)[53],

reported that the access to ICT also varies enormously from continent to continent, and from country to country as well as from organisation to organisation. This is particularly evident when comparing developed and developing countries representing a stark of digital divide.

Furthermore, most organisations in Nigeria and the economy as a whole are being challenged by the lack of functional ICT policies and adequate funds to support ICT diffusion and also embark on full scale computerization in the (Ajayi, 2002; Okiy, 2003; Akanni, S. B. 2008).[17][19],[20]. Moreover, Nigeria is also short of manpower for effective software and hardware maintenance and/or installation. Thus, qualified programmers, engineers and technicians are equally difficult to find and whenever they are found, the public sector cannot afford to retain them as competition from the private sector is fierce.

Other factor that contributes to the under use of ICTs in Nigeria is culture. It is clear to discerning minds that the rise of information technology and the pervading, if not debilitating effects of global cable international networks, had wrought unquantifiable damages to the lore and norms of African societies with Nigeria in focus and the entire nation the hardest hit. Most of the cultural strings that had held the country together in the past are now in shreds. The respect for culture and tradition and respect for traditional stools are now debased. Even the indigenous language itself is threatened; all of these attributed to the rise and usage of ICT and the international cable networks [54].

THEORETICAL FRAMEWORK

The study adopts the Integrated Model of Contextualist and Structural Analyses in order to analyse ICT application or diffusion in Nigeria. As Polinaidu (2004)[55] noted, ICTs application in developing countries is “directed toward developing general knowledge for the implementation of information technology innovation without considering in a systematic way variations of the organizational and the broader context within which the innovation is embedded”. In reality, Polinaidu argues the extent to which any organisation achieves increased production through Information Systems (IS)

innovation will be determined by its context and structure. Indeed, evaluate research of ICT centred strategies for development implemented in and by developing countries and development agencies in the height of the ICTID discourse showing differing outcomes (Thioune, 2003)[56]. The explanation of some of this diversity is often framed in terms of the argument that it is too early to evaluate projects of ICTs in development (ITU, 2006). However, it is clear that a contextualist approach provides a more accurate explanation for these ambiguities than a structuralist analysis.

Avgerou adopts a contextualist analyses and compares the IS innovations in Cyprus with the Emilia Romagna region in Italy, showing how the same strategies produce different outcomes. She argues that innovations should not be implemented without attention to the specific context. The thrust of this argument is that the context of IS innovation in developing countries is very significant because it “involves the transfer of technologies and organizational practices which were originally designed and proved useful in other socio-organisational contexts” (African Journal of Library and Information Science). In turn, Ige (1995)[58]. contributes to the discourse by drawing attention to the ways a contextual approach allows for the articulation of a particular phenomenon in a complex environment where historical precedents have a pivotal role in the “development of understanding and the qualitative confirmation of hypotheses.” However, critics such as Ishaq (2002)[59]. argued that technology cannot be transferred from one domain to the other with the expectation that its applications will produce the same outcomes, and many others in recent times also argues that technology embodies socio-cultural and ideological symbols and meanings (Kalu, 2000 and Krishnaveni, R. & Meenakumari, J. (2010)[60],[61]. Thioune (2004) equally argues that while ICT “are credited with the ability to transform, and deep significant changes are expected from their widespread use in Africa” and Nigeria in particular, there are challenges such as “adopting ICTs to local conditions and uses in these entities and allowing each to understand these innovations and adjust them to their development needs.”

Structuralist analysis on the other hand is rooted in Giddens’s body of work on the “relationship between human agency or action and the creation of order and social

institutions” (Prokepenko (1996)[62]. It highlights “the processes through which ICTs are shaped under the influence of and at the same time contribute to the shaping of the social relations of the organisations within which eventually become new forms of existence or social order. It bridges the binarity between human agency and structure by elaborating ways in which the interaction between agency and structure create new realities.

Nevertheless, the integrated model of contextualist and structural analyses extends the discussion by facilitating an examination of the outcomes of contextual and structural application of innovation in organisations (UNESCO (2002)[63]. Therefore, one can make the assumption that the unintended outcomes lead to new forms of realities and utility in the harnessing of ICTs either as tools for socio-economic development or simply as means of communication and information gathering, as well as improving productivity and competitiveness. The process-actions, reactions and interactions of actors and iterative practices within various contexts - creates new technological forms that have new functionalities to meet the specific needs of users [64].

On the whole, an integrated model that captures both elements of the two analytical approaches highlights two major issues in the study which are as follows:

- a) It shows how the context shapes certain ICT usage in organisations and the country as a whole. This context includes not only the infrastructural constraints but also the policy framework. The policies created the environment for ICT usage primarily by deregulating the ICT sector through the establishment of institutional mechanisms. The models also raised the priority level of ICT acquisition and usage as tools in the achievement of macro socio-economic goals and enhance organizational productivity. It can be argued that while Nigeria’s ICT sector is mainly private-driven, it would not have developed as rapidly as it has done without a clear and intentional policy framework.
- b) An integrated model highlight the new realities in usage of technologies (ICTs) and how these changed the nature of the technologies available in organisations and the society at large (Yesufu, T. M. (2000)[65]. The conceptualized model is represented by the diagram below.

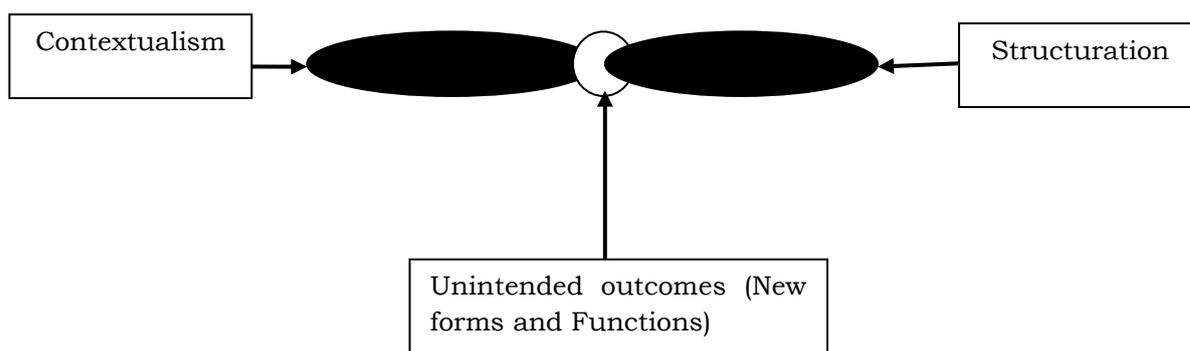


Figure 1: An Integrated Model of Contextualist and Structural Analyses.

PRESENTATION AND ANALYSIS OF DATA

The study will make use of the simple percentage table and the Likert’s method of variables/rating scale so as to allow for better presentation and analysis of all data collected through the questionnaire method.

RESEARCH QUESTION ONE

ICT application has improved and enhanced service delivery in ITF?

Table 1: ICT Application to Improve and Enhance Service Delivery in ITF

Variables	No. of Respondents	Percentage of Respondents (%)
Strongly agreed	21	26.25
Agreed	26	32.5
Undecided	9	11.25
Disagreed	14	17.5
Strongly disagreed	10	12.5
Total	80	100

Source: Field Survey, 2017

Clearly, table 1 show that 47 respondents representing 58.75% agreed that ICT application has improved and enhanced service delivery and optimum productivity in ITF; while 24 respondents representing 30% disagreed with the position, and 9 representing 11.2% were undecided about the position.

This shows that ICT application has improved and enhanced service delivery and productivity in ITF since majority of the respondents agreed with the position. Though,

there is a significant percentage of the responses that disagreed with the position and this indicates that ICT application does not adequately improved service delivery and productivity despite the adoption of ICT in ITF.

RESEARCH QUESTION TWO

ITF has the necessary manpower capacity and strategies to handle ICT facilities for optimum service delivery in ITF.

Table 2: Manpower Capacity and Strategies in ICT and Optimum Service Delivery in ITF

Variables	No. of Respondents	Percentage of Respondents (%)
Strongly agreed	19	23.75
Agreed	28	35
Undecided	6	7.5
Disagreed	17	21.25
Strongly disagreed	10	12.5
Total	80	100

Source: Field Survey, 2017

Table 2 reveals that 19 respondents representing 23.75% agreed that ITF has the necessary manpower capacity and strategies to handle ICT facilities for optimum productivity. On the contrary, 28 respondents representing 35% disagreed with the statement, and 6 respondents representing 7.5% were not sure and undecided about the statement. 17 respondents representing 21.25% disagreed, while 10 respondents representing 12.5% strongly disagreed. Thus, this shows that ITF has the necessary manpower capacity and strategies to handle ICT facilities for optimum productivity.

It is however revealed that ITF does not have enough manpower to handle such task since some of the respondents disagreed with the statement.

RESEARCH QUESTION THREE

Most organisations in Nigeria especially ITF has effective ICT training policies and strategies for optimum service delivery

Table 3: Effective ICT training policies and strategies for optimum service delivery

Variables	No. of Respondents	Percentage of Respondents (%)
Strongly agreed	7	8.75
Agreed	14	17.5
Undecided	8	10
Disagreed	19	23.75
Strongly disagreed	32	40
Total	80	100

Source: Field Survey, 2017

More so, table 3 shows that 7 respondents representing 8.75% strongly agreed that most organisations in Nigeria and ITF in particular has effective ICT training policies and strategies for optimum productivity. However, 14 respondents representing 17.5% hold a contrary view about the statement; 8 respondents representing 10% were undecided pertaining the statement, 19 respondents representing 23.75% strongly disagreed while 32 respondents representing 40% strongly agreed. Hence, this clearly reveals that most organisations in Nigeria particularly ITF has dismal or ineffective ICT training policies and strategies for service delivery.

RESEARCH QUESTION FOUR

How can you rate the level of ICT literacy and application for optimum service delivery in ITF?

Table 4: Level of effectiveness of ICT literacy and application in ITF (Nigeria)

Variables	No. of Respondents	Percentage of Respondents (%)
Very high	11	13.75
High	16	20
Average	32	40
Low	13	16.25
Very low	8	10
Total	80	100

Source: Field Survey, 2017

Table 4 reveals that 11 respondents representing 13.75% said that the level of ICT adoption and application effectiveness in ITF (Nigeria) is very high; 16 respondents representing 20% said that it is just at a high level. However, 32 respondents

representing 40% rates the level of ICT adoption and application effectiveness as average. Further, 13 respondents representing 16.25% rates it low and very low by the remaining 8 respondents representing 10%.

Clearly, the foregoing shows that the level of ICT adoption and application effectiveness in ITF (Nigeria) has been at average level over time.

RESEARCH QUESTION FIVE

Which of these are the major benefits of ICT application in ITF?

Table 5: Major Benefits of ICT Application in ITF

Variables	No. of Respondents	Percentage of Respondents (%)
Improves access to information, its storage and dissemination	16	20
Enhances production process, inventory and quality control and transparency	17	21.25
Increases organisations' competitiveness and effectiveness	15	18.75
Reduces operational inefficiency and improves decision making and coordination	14	17.5
Enhances effective training, skills acquisition and capacity building	18	22.5
Total	80	100

Source: Field Survey, 2017

Table 5 shows that 16 respondents representing 20% asserts that the major benefits of ICT application in ITF, Nigeria is; it improves the access to information as well as its storage and dissemination. However, 17 respondents representing 21.25% opines that it enhances production process, inventory and quality control and transparency; while 15 respondents representing 18.75% believes that ICT usage in ITF increases the organisations' competitive advantage and effectiveness. Furthermore, 14 respondents representing 17.5% holds that ICT application reduces operational inefficiency and improves decision-making and coordination in ITF, and finally, 18 respondents representing 22.5% says that it enhances better training, skills acquisition and capacity building in the organisation and the country as a whole.

RESEARCH QUESTION SIX

Which of these strategies or measures can be adopted for improving and enhancing effective ICT usage in ITF and other Nigerian organisations?

Table 6: Measures being Adopted Towards Effective ICT Usage in ICT and Other Organisations in Nigeria.

Variables	No. of Respondents	Percentage of Respondents (%)
Strengthening and formulation of new and all-encompassing IT policies in Nigeria	14	17.5
Adequate provision and utilization of ICT infrastructures and resources in the organizations	19	23.75
Proper funding and support from both the government and management towards effective ICT diffusion	19	23.75
Effective workers' training in ICT/computer skills and capacity building	20	25
Total overhaul of the power sector and provision of alternative source of power supply in organizations	8	10
Total	80	100

Source: Field Survey, 2017

Table 6 shows that 14 respondents representing 17.5% said that lack of functional IT policies in Nigeria to support ICT diffusion or application is the main factor that pose a serious challenge to effective ICT usage in many organisations today. On the contrary, 19 respondents representing 23.75% believes that the major challenge has to do with inadequate ICT infrastructures and facilities or resources in most organisations including ITF; while another 19 respondents representing 23.75% said that the problem has to do with the lack of proper funding and high costs of ICT facilities and connectivity problem. However, 20 respondents representing 25% asserts that the main problem affecting effective ICT application in ITF are Ignorance and the lack of basic ICT/computer skills among personnel as well as inadequacy of systems programmers or designers. And the final 8 respondents representing 10% suggests that a total overhead of the power sector and provision of alternative source of power supply will effectively enhance and improve the level of ICT diffusion in Nigerian organisations.

On the whole, it is glaring here to state that all the aforementioned factors in one way or the other affects ICT usage in ITF and several other organisations.

RESEARCH QUESTION SEVEN

Can ICT permit the transmission of images and their reproduction on paper at a remote receiver in your organisation?

Table 7: Transmission of Images and the Reproduction on Paper in Organisation

Variables	No. of Respondents	Percentage of Respondents (%)
Yes	65	81.25
No	15	18.75
Total	80	100

Source: Field Survey, 2017

Table 7 reveals that 65 respondents representing 81.25% said yes that ICT permits the transmission of images and their reproduction on paper at a remote receiver in their organisation; while 15 respondents representing 18.75% said No that ICT do no.

RESEARCH QUESTION EIGHT

Does ITF have effective and efficient ICT facilities in place?

Table 8: ITF have Effective and Efficient ICT Facilities

Variables	No. of Respondents	% of Respondents
Yes	35	43.75
No	30	37.5
Not sure	15	18.75
Total	80	100

Source: Field Survey, 2017

Table 8 shows that 35 respondents representing 43.75% said yes, that ITF have effective and efficient ICT facilities in place. However, 30 respondents representing 37.5% hold a contrary view about the statement; while 15 respondents representing 18.75% were not sure about it. This reveals that ITF have an average effective and efficient ICT facilities.

RESEARCH QUESTION NINE

Can ICT impact on economic activities of an organisation like ITF?

Table 9: ICT Impact on Economic Activities in ITF

Variables	No. of Respondents	Percentage of Respondents (%)
Yes	45	56.25
No	35	43.75
Total	80	100

Source: Field Survey, 2017

Table 9 reveals that 45 respondents representing 56.25% are in support that ICT can impact on economic activities of ITF; while 35 respondents representing 43.75% are not in support of the fact.

RESEARCH QUESTION TEN

Do you think ITF can increase the level of ICT performance?

Table 10: Increase in the Level of ICT Performance in ITF

Variables	No. of Respondents	Percentage of Respondents (%)
Yes	55	68.75
No	15	18.75
Not sure	10	12.5
Total	80	100

Source: Field Survey, 2017

Table 10 finally shows that 55 respondents representing 68.75% thinks that ITF can increase the level of ICT performance; while 15 respondents representing 18.75% do not think so and finally 10 respondents representing 12.5% are not sure.

This shows that ITF is capable of increasing the level of ICT performance since majority of the respondents thinks that they can and this indicates that ITF can improve service delivery in the organisation through ICT.

Therefore, this indicates that all the above measures stated will go a long way to improving and enhancing effective ICT application/usage in virtually all organizations in Nigeria and ITF inclusive.

RELEVANCE OF FINDINGS

Based on the presentation and analysis of all responses by the various respondents, the following findings were discovered.

That Information and Communication Technology (ICT) has a very significant correlation with organizational productivity in ITF (Nigeria) which majority of the findings indicated. Accordingly, that effective application or diffusion of ICT resources/equipment in any organization is a *sine quo non* for optimum productivity and competitiveness. Thus, ITF as an organization can equally attain a high level of productivity so desired if there are effective and appropriate ICT infrastructures or facilities available in the organization.

Unfortunately, the findings clearly reveals that most public organizations in Nigeria particularly ITF lacks effective and functional training policies and better strategies for optimal workers'/organizational productivity. Presently, ITF as one of Nigeria's leading training centre or organisation has been variously challenged by the lack of functional training policies or programmes and up-to-date facilities to cater for manpower or organisations' training needs in the country compared to other countries of the world. To this end, many scholars and advocates such in the country (Okoye, 2005, Chisenga (2006), etc. have lamented for an urgent formulation and implementation of training policies/programmes and other strategies especially in ICT in order to curtail the problem of low productivity in organisations and the economy as a whole.

Nevertheless, the findings also reveals that proper or appropriate ICT application or diffusion in ITF (Nigeria) will invariably enhance workers'/Organizational productivity optimally, and that ITF or any other organization in Nigeria can benefit immensely from ICT usage in a variety of ways. These include:

- i. Better manpower training and skills acquisition in ICT or computer operation and applications;
- ii. Effective and efficient products and service delivery cut across the country;
- iii. Quick decision-making and improves management practices such as planning, organizing, controlling, budgeting, coordinating and reporting, etc; and

iv. Proper accountability and transparency in the organisation, etc.

Again, ITF as one of the leading organisation responsible for manpower training and development in the country for both public and private organisations, the findings indicated that ITF has an average ICT application and user effectiveness and efficiency when compared to other private organisations in Nigeria and in other African countries like South Africa and Tanzania or even Ghana (Ishaq, 2002).

Notwithstanding, the findings also indicated that there is a high level of ICT application and user effectiveness and efficiency in ITF, since most organisations in the country - public or private, students on Industrial Attachment (SIWES) and individuals frequently registered or applied to ITF for their training needs and capacity building which is theoretically and practically ICT-based.

Furthermore, the finding reveals that effective training and development, skills acquisition and capacity building of workers or the organisation and at large can be attributed to ICT application in ITF. Moreover, the finding also indicates other benefits of ICT adoption and application in ITF and any other organisation in the country. These benefits among other things include:

- i. Enhancement of production process, inventory and quality control and transparency;
- ii. Increase in organizational competitiveness and effectiveness as well as performance; and
- iii. Reduction in operational inefficiency and improvement in decision-making process and coordination, etc.

Thus, the benefits of ICT application in organisations cannot be over-emphasized, and if properly adopted and diffused in all aspects of the organisations' functions and processes, optimum productivity will be ensured and maintained.

Over time, these challenges has been lamented by several authors or scholars in Nigeria, such as Chisenga (2000); Ajayi (2002); Dabesaki (2005); Okiy (2006); and Chiemeké and Longe (2007), etc. Therefore, there is the need for total overhaul of the

ICT sector and its application in organisations to ensure and achieve optimal productivity in the economy as a whole.

Finally, the finding shows that several suggestions were made in order to strengthen and enhance ICT effectiveness and appropriateness in organisations and the country at large. More importantly, it was suggested that effective workers' training in ICT/computer knowledge/skills and capacity building will guarantee the proper manpower needs to handle major operations that is ICT-based and thus, ensure optimum productivity of the organisation.

Again, the finding also indicates that other strategies or measures for improving ICT application and diffusion were recommended and are multifarious in nature and scope. These include the following:

- i. Strengthening and formulation of new and all-encompassing IT policies in Nigeria in order to enhance and improve ICT effectiveness and usage for optimal organizational productivity.
- ii. Adequate provision and utilization of ICT infrastructures and resources in the organisation including ITF.
- iii. Proper and enough funding and support from both the government and management of organisations towards effective ICT application or diffusion.
- iv. Total overhaul of the power sector and provision of an alternative source of power supply e.g. generators, solar panels, etc in the organisation to enhance and improve productivity.

By and large, the aforementioned suggested strategies and measures if effectively adopted and implemented, will invariably guarantee ICT effectiveness and efficiency and thereby ensures optimum productivity of many organisations in Nigeria and ITF in particular.

This study has examined the effects or impacts of ICT application or diffusion on organizational productivity in ITF (Nigeria). Therefore, it is pertinent at this point to give a summary of all the major findings, which are as follows:

- i. Effective and appropriate ICT diffusion and organizational productivity has significant relationship in ITF, Nigeria in a variety of aspects. For instance, better access to information, operational effectiveness, decision-making, quality control and increase in productivity are easily achieved using ICTs.
- ii. ICT application and user effectiveness and efficiency in ITF, Nigeria, is at an average level compared to other (private) organisations in Nigeria and in other African countries like South Africa and Tanzania due to several challenges within the Nigerian system. Contrastingly, at some point, ICT application and user effectiveness in ITF is also at a higher level because many corporate organisations, individuals and students visit or registered with ITF for their training needs and skills acquisition which is ICT-based.
- iii. ITF and many other organisations in Nigeria lack effective and functional training policies or programmes and strategies for improved and optimal manpower/organizational productivity compared to other countries of the world.
- iv. Proper and effective ICT application will enhance and ensure optimum workers'/organizational productivity in ITF and any other organisation in the country. And ICT application can be beneficial in manpower training in computer/ICT skills, effective products and service delivery, decision-making and accountability and transparency, etc.
- v. There are several ICT application potential benefits in ITF and many organisations in Nigeria. These benefits include improved training and development, skills acquisition and capacity building; better access and dissemination of information; optimum productivity; quality control; competitiveness and operational effectiveness, etc.
- vi. Finally, proper and effective manpower training in ICT skills and capacity building, strengthening or review and formulation of new IT policies; adequate provision and utilization of ICT facilities or resources; sufficient funding and revamping of the power sector and alternative provision of power supply will thus

guarantee ICT effectiveness and appropriateness and thereby ensuring optimum productivity in the organisation (ITF) and the country at large.

CONCLUSION

It has been commonly accepted and proven that Information and Communication Technology (ICT) is the engine of growth and development of the 21st century and beyond; as it will chart with the economic, political, religious, cultural, legal and social life of nations, particularly that of the developing countries and Nigeria inclusive (Ukodie, 2004). More so, ICT has impacted on different sectors of the Nigerian economy. Its application or usage has facilitated speedy and wider information transmission, high level decision-making, reduces cost in resources and organization management and as well, opens vast opportunities for information sharing among individuals, organizations and governments. It is a truism that ICT is very indispensable to Nigeria's sustainable development drive. Today, ICT has been successfully integrated in the process of State administration, workers' training and development, productivity improvement as well as teaching and learning processes, etc.

Finally, ICTs offer innumerable benefits in enriching the quality of production and employee training and development in most organisations in Nigeria. Despite the prevalent nature of ICT application in virtually every aspect of human endeavours, they have not been widely integrated into the production and management processes in most organizations in Nigeria and ITF in particular. The integration will not only revolutionize productivity in organizations, it will engender the development of workers' abilities, potentials and capabilities. To this end, all stakeholders must be inducted into the provision and/or utilization of ICTs to effectively develop the needed skills in the application or use of ICT and to also develop positive attitudes towards optimum productivity and better management practices and research using ICTs.

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