

The Application of Information, Technology and Communication for Supervision of Secondary Schools in Nigeria: An Implication for Quality Control, Assurance and Administrative Efficiency

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ABSTRACT: *This paper considers the operationalization of Inspection/Supervision Services of the Ministry of Education, Science and Technology with application of Information Communication and Technology (ICT) tools while undertaking inspection /supervision activities in the Secondary Schools. The use of information communication and technology in teaching, learning and research had changed the nature, processes and outcome of educational services worldwide. The design for the study used questionnaire and direct conversation method of data collection and analyzed with Frequency distribution, Descriptive statistics and Percentages using Statistical Packages for Social Sciences (SPSS). The findings revealed significant correlation between infrastural facilities, basic knowledge of computer, intention and application. This study also revealed that job security, phobia for technology and dwindling resources of State Government was responsible for non-usage by the Ministry of Education, Science and Technology.*

Key words: *Technology (ICT), Application, Inspection/Supervision Services, Technology Acceptance Model (TAM) and Nigeria.*

INTRODUCTION

It is estimated and statistical assumed judging from the ease of access to information on-line education and cashless policy in banking industry worldwide that seventy-seven percent (77%) of the workforce now use information communication and technology (ICT) in their jobs and the demand for such will continue to increase. Information Communication and Technology implies the collection of improved tools such as computer hardware, software, telecommunication networks, smart chips, workstations (Yekini & Lawal (2011).

World Bank (2002) asserted that information communication and technology (ICT) holds the opportunity to revolutionize pedagogical methods, expands access to quality education system. An important element of educational industry like the inspection services department of the ministry of education, science and technology cannot but be equipped with 21st century skills (higher order skills). It must be emphasized that the basic foundation on which inspection and

supervision rests upon is information from educational institutions visited. The justification for the States and Federal Government to provide infrastructural facilities in human and non-human resources for an important organization that monitors and control quality of instructions and educational systems to build central data center for processing irrespective of human capacity at the helm of administration.

FME, ETF Project (2005) reported that the usefulness of Computer and other technological tools that information technology and communication has been identified worldwide as a way of improving our knowledge and service delivery. Considering the policy of intra transfer and exit from service or work due to informal and formal reasons by workforce and organizational goals and transformations, one could expect distortion of information or data noting well that higher order skills are possessed by few individual in a workforce, Information Communication and Technology will find and coordinate formal reasoning and level of projection, units of completion and next tasks of completion

The inspection/supervision agency in the ministry of education, science and technology will provide reliable and qualitative data for planning and provision of educational resources and ensure integration of states and national policy which can be evaluated scientifically, modified and improved.

Computer assisted instruction is the order of the today's activities most especially in the developed countries. The information technology and communication has changed how people live, work, study, feels people opinions and perception, respond to policy and program (Kalu&Ekwueme 2003).

BACKGROUND TO THE STUDY

The distortion, loss and dearth of statistics of inspection reports, developmental or corrective strategies and nature of identified deficiencies and its rate of frequencies of improper behaviours to address is not available for planning or development. Requiring such information for research studies and analysis is worrisome and unreliable as an organization, state or the country for integrating national development. As important equipment and facilities are unavailable by occupiers of certain positions and responsibilities, so also necessary information or data fundamental to build-up, improvement and reformation/transformation.

The Globalisation of the society which brings the world closer to our doorposts cannot be ignored if we are to be relevant in the educational and national growth and development. Therefore, we need to be compulsorily information communication and technology literate because an informed person, organization and country should be adequate and efficient in awareness, knowledge and interaction with computer in order to be able to perform basic task of application (Yekini&Lawal (2011).

STATEMENT OF THE PROBLEM

The usage of consultants to collect data or information on the number of secondary school students in the public schools in the state is a wastage of resources and redundancy of the department of schools services to be confirmed by inspectorate services department or record department of Ministry of Education, Science and Technology whose function was solely saddled with that responsibility is an indication of system breakage which application of computer and other allied equipment will address for accountability and quality management and staff management. One pertinent question that needs be asked is that, "is an individual or private organization more qualified and equipped than state 'organ of workforce'?" This had resulted in falsification of data or information for supplying and payment of fund.

Beside the above reason, is the criticisms of the school inspection services by the education inspectors from the Ministry of Education, Science and Technology for its inadequacy to assist classroom teachers to improve their performance (Tuoyo, 1999). West Burnham (1994) viewed inspection as an external imposition to rejection of teachers as most of the education inspectors behave as small-gods (Ijaiya, 1991). The use of information communication and technology will state expected criteria and expected performance and immediate feedback to adjust for efficiency and development which inspectorate services and staff development ought to do in a scientific and measurable without use of official authority because their orientation and background is authoritative and rigidity to the core.

The need to enhance productivity and minimize wastages has led to a shift from quality control to quality assurance and quality management (Cole, 1996, Bush & Colemann, 2000). For quality assurance in inspection services and administrative efficiency, the following variables such as attitude, interest and application is very crucial for adoption, implementation and successes.

SCOPE OF THE STUDY

The main focus of this study is the comprehensive and application of information communication and technology to operations and procedural activities of the department of inspection services and teacher development of the Ministry of Education, Science and Technology. A better transfer of knowledge, skills, and methodology from one person to another, organization and other stakeholders ultimately rests on reliable information communication and technology (ICT) tools mostly computers and internet facilities.

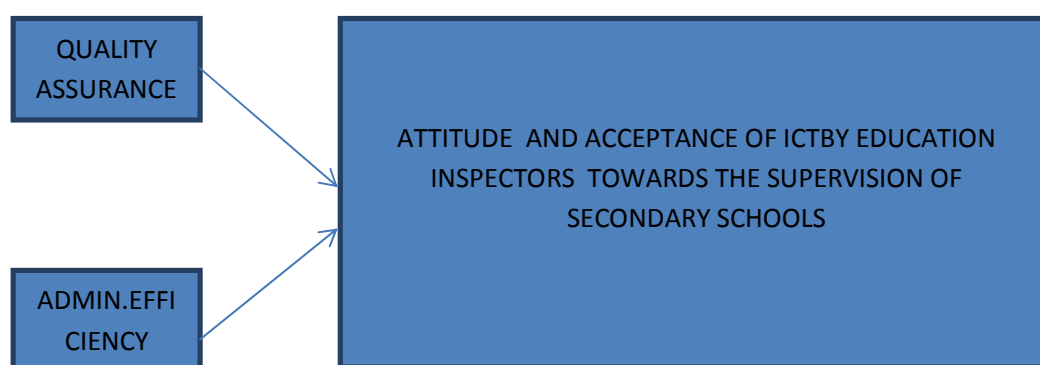
OBJECTIVES OF THE STUDY

1. To find out the extent of inspection department's awareness of information regarding secondary schools activities, parent ministry, and outside world.

2. For the staff of inspectorate services department to be knowledgeable on computer and other communication tools.
3. To establish application of information communication and technology in daily transaction of inspection/supervision.
4. To institute culture of continuity in educational programme and policy.
5. To identify the relationship of attitude and acceptance of supervision personnel towards application of information communication and technology for achieving quality assurance and administrative efficiency.

Therefore, the author proposes this model adapted from Leena&Luna International to serve as guide in the application of information communication and technology (ICT) to inspection services of secondary schools.

Figure 1: Leena and Luna International, oyama, Japan copy right@2012.



RESEARCH QUESTIONS

1. To what extent can ICT improve inspection/supervision reports?
2. To what extent is the availability of information communication and technology (ICT) facilities in Zonal Ministry of Education, Science and Technology?
3. What is the role of attitude and acceptance of information communication and technology towards achieving quality control, assurance and management as well as administrative efficiency of inspection/supervision of secondary schools?

SIGNIFICANCE OF THE STUDY

1. To provide information/data to educational planners.
2. To give credibility and scientific results to inspection/supervision outcomes.
3. For arriving at meaningful decisions regarding provision of learning materials including computer facilities to school libraries to improve student academic performance in public examination in Nigeria and outside Nigeria.
4. To serve as a road map for other ministries of the State Government and Federal Government to adopt information communication and technology (ICT) tools in inspection and teacher development.

THEORETICAL FRAMEWORK AND LITERATURE REVIEW

2.1 THEORETICAL FRAMEWORK

The theoretical framework for this paper is scientific management theory and systems theory. In system theory, the attitude and acceptance (inputs) from the education inspectors/supervisors of the Ministry of Education, Science and Technology will determine the realization quality assurance and administration efficiency (output) of department of inspectorate services and teacher development towards improving the quality of education in Ogun State, Nigeria.

2.2 Literature review

A survey of research findings on the usefulness and application of information communication and technology to education and related bodies revealed the followings; The association for education communication and technology in the United State of America(AECT)define educational technologies as complex, integrating processes comprising personnel, procedures/methodologies,devices,ideas and organization for dissecting problems/challenges/difficulties,designing, implementing, evaluating and management/administration of strategic solutions to problems in all aspects of learning and administration.

Johnnes,Guntenberg Microsoft Student,(2008) commented on a handset printing press to establish significant relevance and application between education and technology from Sophist of the 15th Century BC and Johnnes Guntenberg' 20th Century.

Christensen (2004) added that information communication and technology (ICT) is the use of hardware, software, services and supporting infrastructures. That information communication and technology is a means of receiving, processing, storing, retrieving and dissemination of information with the use of computer and internet facilities.

Thinking skills are the kind of skills that people need to make decisions (Ennis, 1996). This is the skill for the new century, for workers of the future, changes in the acquisition and delivery of education and evaluation strategy changes which are driven by the development of information communication and technology.

Swartz, (2001) asserted "The need to produce new knowledge workers for the new knowledge economies.

Eggleston et al, (2002) argued that information communication and technology (ICT) make markets more efficient and lower transactions costs by making information more available, accurate and reliable.

Bhatnager (2000) wrote about the importance of sustained to all levels of education including managers, administrators, and inspectors/supervisors. The emphasis as regards this paper should be on education supervisors because of their responsibility in ensuring compliance to curriculum of instruction and hold the map for improvement based on information and reports at their disposal while on visitation and assessment of secondary schools.

Dill Teixeira, (2000) proposed that Government educational policies in information communication and technology (ICT) should be with the intention of stimulating research and spurring innovation.

Castells (1996). The world today is more connected than it ever has been, in our network society; countries have no choice but to learn to use information communication and technology (ICT) in order to interact with other countries in this Globalised age, to examine relationship between technology and society to see how they can benefit from each other.

METHODOLOGY/RESEARCH DESIGN

This is a qualitative research design with a population sample of one hundred (100) of education inspectors as participants out of the total population of two hundred education inspector officers in Ogun State. The method of sampling was randomly stratified as twenty five (25) education inspector officers were selected among the four geographical distribution of the state. The author used questionnaires with a format of five (5) point Likert Scale whose reliability is .685 from alpha reliability scale calculated using Statistical Packages for Social Sciences (SPSS 20.0 VERSION) while the validity of the questionnaires was ascertained by Tests and Measurement Experts at one of the state university known as Olabisi Onabanjo University, Ago - Iwoye, Ogun State, Nigeria. Other method of collecting data were direct conversation with two participant each to make total of eight (8) respondents for opinions concerning application of ICT and observation to assess availability of information communication technology (ICT) facilities in their operation.

DATA COLLECTION

A total of one hundred completed questionnaires were collected on the spot and crossed- check that all spaces were responded to and thereafter keyed into Statistical Packages for Social Sciences (SPSS) for scientific analysis.

DATA ANALYSIS, RESULTS AND DISCUSSIONS

1. To what extent can ICT improve inspection/supervision reports?

A frequency distribution of 88% and Mean value of 4.12 agreed in support of usefulness of new approach to operation of their services. All the eight respondents supported introduction and application of ICT if they were trained on the job and provided with tools for usage. This is in agreement with Suleiman, (2012)The incorporation of information communication and technology (ICT)into teaching and learning,educationa,and stakeholders, education inspectors who are involved in the provision of educational services, monitoring, and ensuring of quality management has been a veritable component of service delivery throughout all areas of education.

In addition to the above support from empirical review is (UNESCO, 2002&Christensen, 2004) that there should be strategic training of education of educational workers (education inspectors/supervisors) before commencement of service delivery (inspection /supervision of secondary schools)to give opportunity to learn contents, methods in a positive relationship of guidance and development.

Information communication and technology tools help to accomplish tasks quickly, makes work easier and improves productivity on disseminating information to teachers, school authorities and monitor individual teacher on diagnostics, corrective and developmental strategies in a less tension atmosphere.

2. To what extent is the availability of information communication and technology (ICT) facilities in Zonal Ministry of Education, Science and Technology?

S/N	VARIABLES	FREQUENCY	YES %	NO %
1	COMPUTER		30	70
2	INTERNET		20	80
3	PROJECTOR		00	00
4	AUDIO-VISUAL		00	00

From the above ,the number of respondents having contact with computer and internet are very few by the number of “NO PERCENTAGES”.A greater amount of these two information communication and technology were owned personally as only the secretary and head of each zonal ministry has computer for secretarial operation and correspondence while the internet

facility is from mobile sophisticated handset which were configured to access internet materials depending on level of education and exposure and to collate write-up for official presentation during school activities and has been used for personal benefits. This is in agreement to Reeves,(1998)that there is already an evidence that access to technology at home enhances educational achievement. Castells (1996) asserted that the world today is more connected than before in our network society. Countries have no choice but to learn to use information communication and technology (ICT) in order to interact with other countries in this Globalised age and to see how they can benefit from each other.This also in agreement with Avgerou (1990) which says that the idea of information technology can help developing countries is intriguing to many because of the benefits that had been realized in the west or developed countries.

Above all, twenty (20%) of the computers used by the secretaries were in good condition while majority (80%) of them were non-functioning thus resort to the use of obsolete typewriters. This is connected to level of certification of secretaries (below secondary school certificate/primary school leaving certificate) and poor maintenance culture and higher levels of skill require to operate projector and other audio-visual materials. The absence of information communication and technology (ICT) engineers within the premises of education inspectors' offices was also responsible for non-functioning of office computers as was confirmed during direct conversations and personal observation of ICT tools

3. What is the role of attitude and acceptance of information communication and technology towards achieving quality control, assurance and management as well as administrative efficiency of inspection/supervision of secondary schools?

The level of attitude for incorporation of information communication (ICT) by the education inspectors was seventy-five percent "YES"(75% YES) and twenty-five percent" NO"(25% NO).This implies that the level of attitudinal change is higher for achieving quality assurance and efficiency required by the society.

This is in agreement with Quibra et al,(2003)who opined that if a country is to exploit potential opportunities arising from information communication and technology (ICT),they must develop secondary and tertiary institutions for sciences and technologies. Davis (1989) emphasized that user of acceptance of technology within organizational settings possess attitudinal behavior which they believe may increase their job performance which is further modified by Tung & Chang 2007 to explain the meaning of acceptance, the higher the level of attitude, the higher the level of acceptance to use information communication and technology (ICT) tools since attitude has higher correlation value to acceptance.

SUMMARY

The dependence on information communication and technology (ICT) for organizational work like the education inspectors/supervisors and the Ministry of Education, Science and

Technology, and high requirements from users of information collated during inspection/supervision of secondary schools. Any meaningful decisions regarding Planning,examination,payment,recruitment,administrative,managerial and operational matters contain elements and nature of information communication and technology. There is a dire need to produce new knowledge workers for the new knowledge economies, says Swartz(2001).

Thinking skills are the kind of skills that people need to make decisions (Ennis, 1996).This is the skills for new century, for workers of the future, changes in the acquisition and delivery of education and evaluation strategy changes which are driven by the development of information communication and technologies.

CONCLUSION

Accessibility and routine usage of information communication and technology improve subject knowledge, develop skills in planning, research and coaching, constant and continuous review of curriculum and improvement in standard of inspection/supervision practices as well as building positive relationship between each other and ultimately improve the quality of life. As the findings revealed positive and high relationship between attitude and acceptance, it is correct to conclude that staff of the department of inspection services of the Ministry of Education, Science and Technology in Ogun State is ready (intention) for application of information communication and technology (ICT) facilities to change the landscape of inspection/supervision in the State and Nigeria as well as Globalised personnel and operation to the world for exchange of ideas and practices for better performances as affirmed by Tung. &Chang, S. 2007.

RECOMMENDATIONS

The followings are put forward for consideration and implementation with a view to have a consolidated scheme and programme in revolutionizing inspection/supervision practices in Ogun State, Nigeria.

1. Improve academic and professional qualifications of education inspectors/supervisors.
- 2.It should be mandatory for medium (education officers) and higher (executive officers) ranking staff of inspectorate department to acquire up-to-date knowledge in computer application before moving to higher posts of responsibility to keep it up.
3. There should be institutionalization of computer and information communication and technology (ICT) courses in the training and production of university graduates. This will be addressed by the National Institute of Educational Policy and Administration, Ondo-State, Nigeria in collaboration with National Council of Education in Nigeria and other stake holders.
4. Large scale provision and usage of computer and internet facilities in the headquarter and zonal ministry of education, science and technology.

5. In-service training and workshop on ICT related fields should be delivered to staff of inspectorate department of ministry of education, science and technology from time to time as new knowledge and information are continually being discovered from time to time for relevance, appropriateness and up-to-date.

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