Impact of Information Communication Technology on Secondary School Administration in Federal Capital Territory, Abuja, Nigeria

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Abstract: This study investigated impact of Information Communication Technology (ICT) on public secondary school administration in FCT, Abuja, Nigeria. The objectives of this study were to assess the impact of ICT on public secondary school administration in FCT, Abuja and also to find out the challenges preventing the use of ICT in public secondary school administration in FCT, Abuja, Nigeria. The study adopted survey research design. The population of the study consisted of all senior secondary school administrators (Principals, Vice-Principals, Heads of Departments and Administrative officers). The sample size of the study was 150 respondents. The multi-stage sampling technique was used to select the respondents for the study. The researcher developed an instrument for the study titled “Impact of ICT on Public Secondary School Administration Questionnaire” (IIPSSAQ). Reliability of instrument was ascertained by three lectures in Nasarawa State University and the Validity of the instrument was established using the Kinder Richardson Formula with index value of 0.83. The data collected was analyzed using simple descriptive statistics of mean and standard deviation to answer research questions. The findings of the study revealed that ICT makes school administration effective and efficient, makes the sending and replying of memo fast, makes storage of school data secured and retrievable, makes students registration, improves the planning, organizing, coordinating and controlling of school programme and ICT makes communication between principals and teachers fast and accurate. The result also indicated that shortage of funds, inadequate ICT facilities, unstable internet services, unstable power supply, poor ICT knowledge, poor implementation of ICT policies, high cost of ICT facilities and high cost of internet services were the challenges preventing the use of ICT in public secondary schools in FCT. Based on these findings, the study hereby recommends that government and other stakeholders of public secondary schools should ensure that principals are trained to improve their levels of competencies on the use of ICT so as to meet up with the global practices in school administration. Also government should ensure adequate funding and adequate ICT facilities with strong internet connectivity that can ensure effective and efficient secondary school administration. In addition there should be power backup in case of power failure. Again, the government should ensure that ICT policies are well implemented in public secondary schools.

Keywords: Administration, Information Communication Technology, Challenges, Public, Secondary.

Introduction

Post-Basic Education and Career Development (PBEC) is the education children receive after a successful completion of ten years of Basic Education and passing the Basic Education Certificate Examination (BEC) and Junior Arabic and Islamic Studies Certificate Examination (JAISCE). It includes: (i) senior secondary education, (ii) higher school; and (iii) continuing education given in Vocational Enterprise Institutions (VEIs) to either Basic Education graduates...
who are not proceeding to Senior Secondary Schools, or Senior Secondary graduates that are not proceeding to the tertiary level, as a means of preparing them for the world of work, wealth creation and entrepreneurship (Federal Republic of Nigeria, 2013).

The objectives of Post-Basic Education and Career Development (PBEC) are to: i. provide holders of the Basic Education Certificate and Junior Arabic and Islamic Studies Certificate with opportunity for education of a higher level, irrespective of gender, social status, religious or ethnic background; ii. offer diversified curriculum to cater for the differences in talents, disposition, opportunities and future roles; iii. provide trained manpower in the applied sciences, technology and commerce at sub-professional grades; iv. provide entrepreneurial, technical and vocational job-specific skills for self-reliance, and for agricultural, industrial, commercial and economic development; v. develop and promote Nigerian languages, art and culture in the context of world’s cultural heritage; vi. inspire students with a desire for self-improvement and achievement of excellence; vii. foster patriotism, national unity and security education with emphasis on the common ties in spite of our diversity; and viii. raise morally upright and well-adjusted individuals who can think independently and rationally, respect the views and feelings of others and appreciate the dignity of labor (Federal Republic of Nigeria, 2013).

The realization of the objectives of Post-Basic Education and Career Development (PBEC) depends on the effective school administration and planning. Administration is key to the realization of secondary school programme. Administration according to Akinwumi, Babalola, and Alegelele, (2021) involve processes such as; planning, organizing, directing, coordinating, controlling and evaluating performance against the stated objectives of the organization. Planning is the task of setting organizational goals and choosing the best ways of achieving them while organizing is the process of establishing orderly uses for all the organizational resources. According to Ogunode and Ajayi (2022) school administration takes different levels; these include: primary school administration, secondary school administration and tertiary education administration. Iggbusi and Iheanacho (2016) submitted that the success of secondary school education rests on a good administration involving the local communities, adequate and well qualified teachers, adequate funds for infrastructural facilities, together with interested parents supplying children’s material needs and parents providing home training to their children to supplement the efforts of the teachers at school. Ogounode and Ajayi (2022) viewed secondary school administration as the systematic arrangement and deployment of both human and materials resources for the implementation of secondary school programmed with the aims of realizing the various goals and objectives of secondary schools. Okeke (2014) also defined secondary school administration as involving the provision and maintenance of the necessary manpower to those who teach children with a view to bring about the desired change in the children’s behaviours.

The realization of secondary school administration hinges on availability of human and materials resources. Ogunode (2021) opined that the realization of the objectives of Post-Basic Education and Career Development (PBEC) depends on the availability of materials and human resources available in the educational institutions. The human resources is made up of the teaching and non-teaching staff and one of the material resources is Information Communication Technologies (Ogunode, Okwelogo, Danjuma & Olatunde-Aiyedun 2021).

Information and communication technologies (ICT) according to Ngozi, Ogunode, Olatunde-Aiyedun (2022) are technological devices like computers, internets, mobile phones and other communication networks designed for collection, dissemination, storing and management of data in an accurate and reliable manner. ICT are specialized items like computers, internets, mobile phones and other communication networks are the hardware and the software are programs that make sending, receiving, retrieving, storing, sharing of data possible among the user. Shobowale, (2019) is of the opinion that information and communication technology is a process of giving and getting information through the use of technologies like computers, internets, mobile phones and other communication networks. It includes all the technologies that help in collecting, processing, disseminating and using information by individuals and institutions.
Ngozi, Ogunode, Olatunde-Aiyedun (2022) observed that ICT is applicable to all the aspect of education. ICT is useful in the area of school administration and management, educational planning, supervision, inspection, quality assurance management, educational finance, school plant management, teachers’ management, students’ administration and research and development. The application of information and communication technologies in school administration in Nigeria and in African countries generally is increasing and dramatically growing. Over the years, ICT has turned out to be a step by step more imperative to schools at all levels and to the entire education system at large (Abubakar, 2016). Ngozi, Ogunode, Olatunde-Aiyedun (2022) submitted that Information communication technology have provided opportunities for the school administrators, teachers and students to achieve their goals. The school administrator is the head of the school and he/she is saddle with the responsibilities of managing the human and material resources of the school in the manner that school programmes and goals are to be realized. The school administrators use ICT for planning of school schedules and activities. The school administrators handle data collection, dissemination, compilation, computation and storage with ICT. They use ICT for recording and keeping of information in the schools. ICT are used for security purposes, students’ administration and teachers. ICT resources is an indispensable resources for school administrators. ICT resources is one of the crucial resources school administrators needs to carry out school programme.

Ngozi, Ogunode, Olatunde-Aiyedun (2022) carried out a study that assessed the effectiveness of ICT among school administrators and care-givers in the early child care education centres in Gwagwalada Area Council of FCT, Nigeria. The result collected and interpreted led to the conclusion that inadequate ICT facilities, unstable power supply, unstable internet services, high cost of internet services, poor implementation of ICT policies, poor ICT literacy of Care-giver, poor maintenance culture, corruption, high cost of ICT facilities and inadequate funding of ICT programme are the problems hindering effective use of ICT for school administration at the early child education centres in Gwagwalada area council of FCT, Nigeria.

Akinwumi, Babalola, and Alegebeleye, (2021) carried out a study that investigated information and communication technology use on effective administration of senior secondary schools and found out that ICT has a significant positive influence on the effective administrations of public senior secondary schools in Lagos State. Additionally, the study found that the level of ICT use for administrative purposes in public senior secondary schools in Lagos State was moderate. The ICT devices highly utilized were photocopiers and mobile telephones, while printer, computer systems, social media, e-mails services, internet, and scanners were moderately utilized. However, ICT devices like projectors and smart boards were rarely utilized. The study recommends the provision of the necessary ICT equipment and infrastructure in an enabling physical and psychological technological environment. Ogunode, and Hayab, (2021) conducted a study that investigated the perception of secondary school teachers on the factors responsible for inadequate Information Communication Technology facilities in Gwagwalada Area Council of FCT, Nigeria. The result revealed the factors responsible for inadequate Information and Communication Technology facilities in public Secondary schools in Gwagwalada. These factors include inadequate funding of ICT programme, poor ICT policies, among others. The result also showed the effects of inadequate ICT facilities in public Secondary schools in Gwagwalada which includes slowing down of school admission processes of students, e-presentation of lesson was not feasible among others.

Jegede, Diaka and Ogunode (2021) carried out a study that investigated the challenges preventing the use of information communication technology for the teaching and learning of Christian Religious Knowledge in public senior secondary schools in Federal capital Territory, Abuja, Nigeria. The result collected showed that inadequate ICT facilities, poor computer literacy of Christian Religious Knowledge teachers, poor computer literacy of Christian Religious knowledge students, unstable power supply, poor internet services, poor implementation of ICT policies, inadequate funding of ICT programme and high cost of ICT...
facilities were the challenges preventing effective use of information communication technologies for the teaching and learning of Christian Religious Knowledge in public secondary schools in Federal Capital Territory, Abuja.

Omotayo, Emiloju, Olawale and Nathaniel (2020) investigated teachers’ pedagogical knowledge of utilization of Information and Communication Technology in Kwara state, Nigeria. The study revealed that most ICT tools were not available for teaching; the few available ones are not frequently used; while teachers had low pedagogical knowledge of the use ICT tools for teaching. Another study carried out by Nwachukwu, and Ndunagu, (2020) investigated the perceived challenges of teaching and learning of Computer Studies in selected senior secondary schools in Owerri West LGA of Imo State. Challenges identified included, inadequate ICT facilities, non integration of ICT into the school curriculum, poor ICT policy implementation strategy in schools among others. Ewutl1, and Ali (2020) investigated the factors militating against utilization of Computer Hardware and internet applications in teaching computer study in secondary schools in Minna. The findings of the study among others were that: computer teachers in secondary school do not utilize computer hardware and internet applications in their lessons; teachers lack the required skills to operate ICT resources, secondary schools lack the necessary infrastructures required for utilization of the ICT resources and applications.

Mohammed, Muhammad and Garba, (2019) conducted a study that examined the effect of Information and Communication Technology tools on student learning in senior secondary schools in Sokoto South Local Government Area of Sokoto State, Nigeria. Results of the analyses of the data revealed that Information Communication Technology has tremendous impact on student learning in secondary schools. Bashar and Umar, (2019) carried out a study that sought to find out the adequacy, management activities, and challenges that affect the ICT facilities in higher education systems in Sokoto State and they found out that the institutions face many challenges in using the ICT facilities. Such challenges include unreliable electricity supply, poor maintenance attitude, insufficient personnel to man the ICT facilities, high cost of ICT equipment, lack of proper orientation, and inadequate funding. Abubakar (2016) conducted a research to assess how ICT is used in teaching and learning in Nigerian public secondary schools particularly those from the Northeastern States and the result shows that the use of ICT facilities are very low and this is attributed to the poor policy implementation, lack of basic social amenities and insecurity.

Method

This study was carried out in FCT, Abuja, Nigeria and the purpose was to investigate the impact of ICT on secondary school administration in public secondary schools in FCT, Abuja, Nigeria. The study adopted survey research design. The population of the study consisted of all senior secondary school administrators (Principals, vice-principals, Heads of Departments (H.O.Ds) and administrative officers) in the 98 public secondary schools in the FCT. Out of the entire population, 150 respondents were selected. A multi-stage sampling technique was used to select the respondents for the study. First a stratified sampling technique was used to stratify all secondary schools in the FCT according to Area Councils. There are six (6) Area Councils in the FCT. These are Abaji, Abuja Municipal (AMAC), Bwari, Gwagwalada, Kuje and Kwali. Second, a proportionate sampling technique was used to determine the proportion of the respondent in each Area Council. A systematic sampling technique was used to select the specific schools among the participating schools in each Area Council of the FCT. Finally, simple random sampling technique was used to select the respondents in each school. The researcher developed an instrument for the study titled “Impact of ICT on Public Secondary School Administration in Questionnaire” (IIPSSAQ). The instrument has two sections. Section A sort information on bio-data of respondents, while section B with fourteen (14) items collected information on the subject matter. Two research questions were raised for the study. The research instrument was validated by three lecturers from Nassarawa State University. Reliability of the instrument was established with index value of 0.83 using the Kinder Richardson Formula. The data collected were analyzed using simple descriptive statistics of
mean and standard deviation to answer the research questions. A mean cut-off point of 2.50 was used for decision making. Any mean score of 2.50 and above was accepted as been significant and any mean score below 2.50 was rejected as not been significant.

Research Questions

1. What is the impact of ICT on public secondary school administration in FCT?
2. What are the challenges preventing the use of ICT for school administration in public secondary schools in FCT?

Data Presentation

Research Question One: What is the impact of ICT on public secondary school administration in FCT?

Table 1: Impact of ICT on public secondary school administration in FCT

<table>
<thead>
<tr>
<th>S/N</th>
<th>Item Description</th>
<th>( \bar{x} )</th>
<th>SD</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ICT makes school administration effective and efficient</td>
<td>2.5</td>
<td>1.8</td>
<td>Agree</td>
</tr>
<tr>
<td>2</td>
<td>ICT makes the sending and replying of memo fast</td>
<td>2.6</td>
<td>1.7</td>
<td>Agree</td>
</tr>
<tr>
<td>3</td>
<td>ICT makes storage of school data secured and retrievable</td>
<td>3.1</td>
<td>1.8</td>
<td>Agree</td>
</tr>
<tr>
<td>4</td>
<td>ICT makes students registration</td>
<td>2.8</td>
<td>1.7</td>
<td>Agree</td>
</tr>
<tr>
<td>5</td>
<td>ICT improves the planning, organizing, coordinating and controlling of school programme</td>
<td>2.9</td>
<td>1.9</td>
<td>Agree</td>
</tr>
<tr>
<td>6</td>
<td>ICT makes communication between principals and teachers fast and accurate</td>
<td>2.7</td>
<td>1.7</td>
<td>Agree</td>
</tr>
<tr>
<td></td>
<td>Grand Mean</td>
<td>3.2</td>
<td>1.9</td>
<td>Agree</td>
</tr>
</tbody>
</table>

The results on table one disclosed that item 1 to 6 had the following mean scores 2.5, 2.6, 3.1, 3.1, 2.8, 2.9 and 2.7. The grand mean obtained was 3.2 which is greater than the cut-off point of 2.5. This implies that ICT makes school administration effective and efficient, makes the sending and replying of memo fast, makes storage of school data secured and retrievable, makes students registration, improves the planning, organizing, coordinating and controlling of school programme and ICT makes communication between principals and teachers fast and accurate.

Research Question Two: What are the challenges preventing the use of ICT for school administration in public secondary schools in FCT?

Table 2: Challenges preventing the use of ICT for school administration in Public secondary schools in FCT

<table>
<thead>
<tr>
<th>S/N</th>
<th>Item Description</th>
<th>( \bar{x} )</th>
<th>SD</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Shortage of funds</td>
<td>2.9</td>
<td>1.8</td>
<td>Agree</td>
</tr>
<tr>
<td>2</td>
<td>Inadequate ICT facilities</td>
<td>2.6</td>
<td>1.9</td>
<td>Agree</td>
</tr>
<tr>
<td>3</td>
<td>Unstable internet services</td>
<td>2.8</td>
<td>1.9</td>
<td>Agree</td>
</tr>
<tr>
<td>4</td>
<td>Unstable power supply</td>
<td>2.7</td>
<td>1.8</td>
<td>Agree</td>
</tr>
<tr>
<td>5</td>
<td>Poor ICT knowledge</td>
<td>2.6</td>
<td>1.6</td>
<td>Agree</td>
</tr>
<tr>
<td>6</td>
<td>Poor implementation of ICT policies</td>
<td>2.7</td>
<td>1.7</td>
<td>Agree</td>
</tr>
<tr>
<td>7</td>
<td>High Cost of ICT facilities</td>
<td>2.8</td>
<td>1.8</td>
<td>Agree</td>
</tr>
<tr>
<td>8</td>
<td>High cost of internet services</td>
<td>2.9</td>
<td>1.9</td>
<td>Agree</td>
</tr>
<tr>
<td></td>
<td>Grand Mean</td>
<td><strong>3.0</strong></td>
<td>1.8</td>
<td><strong>Agree</strong></td>
</tr>
</tbody>
</table>

Result from research question two on table two indicated that item 1 to 8 obtained had the following mean scores 2.9, 2.6, 2.8, 2.7, 2.6, 2.7, 2.8 and 2.9 with a cumulative score of 3.0. This mean that shortage of funds, inadequate ICT facilities, unstable internet services, unstable power supply, poor ICT knowledge, poor implementation of ICT policies, high cost of ICT facilities
and high cost of internet services challenges preventing deployment of ICT for school administration in Public Secondary Schools in FCT.

Discussion
The result collected from the study showed that ICT makes school administration effective and efficient, makes the sending and replying of memo fast, makes storage of school data secured and retrievable, makes students registration, improves the planning, organizing, coordinating and controlling of school programme and ICT makes communication between principals and teachers fast and accurate. Akinwumi, Babalola, and Alegbeleye, (2021) in their study revealed that showed ICT use has a significant positive influence on the effective administrations of public senior secondary schools. Additionally, the study found that the level of ICT use for administrative purposes in public senior secondary schools was moderate. The ICT devices highly utilized were photocopiers and mobile telephones. While printer, computer systems, social media, e-mails services, internet, and scanners were moderately utilized. However, ICT devices like projectors and smart boards were rarely utilized.

The result also disclosed shortage of funds, inadequate ICT facilities, unstable internet services, unstable power supply, poor ICT knowledge, poor implementation of ICT policies, high cost of ICT facilities and high cost of internet services were the challenges preventing the use of ICT for school administration in public secondary schools in FCT. This confirmed the findings of Ogunode (2020a); Ogunode, Abubakar, Abashi, Ireogbu, and Longdet (2021), Ogunode, Babayo, Jegede and Abubakar(2021), Ogunode, Adamu and Ajape (2021) and Jegede, Diaka and Ogunode (2021) who discovered that inadequate ICT facilities, poor computer literacy of Christian Religious Knowledge teachers, poor computer literacy of students, unstable power supply, poor internet services, poor implementation of ICT policies, inadequate funding of ICT programme and high cost of ICT facilities is preventing effective use of information communication technologies for the teaching and learning of Christian Religious Knowledge in public secondary schools in Federal Capital Territory, Abuja.

Conclusion
The study investigated the impact of ICT on secondary school administration in public secondary schools in FCT, Abuja, Nigeria. The result collected from the study revealed that ICT makes school administration effective and efficient, makes the sending and replying of memo fast, makes storage of school data secured and retrievable, makes students registration, improves the planning, organizing, coordinating and controlling of school programme and ICT makes communication between principals and teachers fast and accurate. The result also indicated that shortage of funds, inadequate ICT facilities, unstable internet services, unstable power supply, poor ICT knowledge, poor implementation of ICT policies, high cost of ICT facilities and high cost of internet services were the challenges preventing the use of ICT for school administration in Public Secondary Schools in FCT.

Recommendation
1) Government and other stakeholders of public secondary schools should ensure that principals are trained to improve their levels of competencies on the use of ICT so as to meet up with the global practices in school administration.
2) Government should ensure adequate funding and adequate ICT facilities with strong internet connectivity that can ensure effective and efficient secondary school administration. In addition there should be power backup in case of power failure. Again, the government should ensure that ICT policies are well implemented in public secondary schools.
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