



## **Deployment of Educational Management Information System (EMIS) in Administration of Public Secondary Schools in Nigeria**

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**Abstract:** This paper examined the challenges that have hampered the full deployment of the Education Management Information System (EMIS) in Nigerian public secondary schools. We adopted the use of both primary and secondary data in the paper. The secondary and primary data were obtained from print and online publications. The paper concluded that inadequate funding, unstable power supply, poor implementation of information and communication technology (ICT) policy, corruption, poor internet services, shortage of ICT personnel, high cost of maintenance, and poor ICT literacy of students and teachers as factors that have militated against the full deployment of Education Management Information System (EMIS) in the Nigeria public secondary schools. To address these challenges, the paper came up with the following suggestions. The federal and state government should increase the funding of public secondary schools across the country. This will help to develop Education Management Information System (EMIS) in Nigerian public secondary schools. The government needs to reform the energy sector to ensure an adequate supply of energy across the country by making heavy investment in the sector. The government should ensure that the ICT national policy is fully implemented across the federation.

**Keywords:** Administration, Secondary schools, Information Communication Technology.

### **Introduction**

The administration of the education system is shared mainly among the education ministries at the federal and state levels, as well as statutory bodies referred to as commissions. There are commissions established for different sub-sectors of the education system and are charged with various responsibilities for the educational developments. The federal ministry of education (FME) is responsible for the coherence of the national policy and procedures for ensuring that the states' policies operate within the parameters of the national policy as adapted for local needs (Atiga, & Ogunode, 2021; Moja, 2000). Coordination of policy at the political level is handled by the National Council of Education, the highest policy-making body chaired by the Federal Minister of Education and includes all the State Commissioners of Education. This body is advised by the Joint Consultative Committee on Education, which consists of all the Federal and State Directors of Education, Chief Executives of education statutory bodies, and Directors of University Institutes of Education (Ogunode, 2021; NEEDS, 2014). The state-level education ministries are responsible for the development and implementation of educational policies, management and supervision of educational institutions in their respective states. Specifically, the responsibilities for maintaining all public elementary and secondary schools are vested in the education ministry. Such responsibilities include: determining the salaries of teachers; recruitment, appointment, promotion and discipline of staff; and provision of guidelines on the establishment of new schools and training and re-training of teaching

and non-teaching staffs. The oversight functions of the Ministry of Education are carried out through several agencies. For instance, the State Universal Basic Education Board (SUBEB) is responsible for the management of basic education, while the Teaching Service Commission takes charge of senior secondary education at the state level (Ogunode & Atiga, 2021; NOUN, 2012; NEEDS, 2014). Secondary schools are directly under the state government. The State Ministry of Education handles planning, administration, supervision and other fundamental functions relating to schools. The State Ministry of Education has different departments/units that are entrusted with various functions to ensure the achievement of the goals of secondary education. In addition to the departments in the Ministry of Education, there are other parastatals and regulatory agencies that are involved in secondary school administration, such as the Teaching Service Commission (TESCOM) (Ogunode, 2021; NOUN, 2012).

Secondary school education also known as post-Basic Education and Career Development (PBECD) is viewed as post-basic education meant for preparing children for specialization. Secondary Education is the education that children receive after basic education and before tertiary education. Based on the 6-3-3-4 system of education, secondary education comprises six years duration but is given in two stages: a junior secondary school stage and a senior secondary school stage, each to run for three years duration. Post-Basic Education and Career Development (PBECD) is the education children receive after the successful completion of ten years of Basic Education and passing the Basic Education Certificate Examination (BECE) 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 (PBECD) are to: 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; to offer diversified curriculum to cater for the differences in talents, disposition, opportunities and future roles; to provide trained manpower in the applied sciences, technology and commerce at sub-professional grades; to provide entrepreneurial, technical and vocational job-specific skills for self-reliance, and for agricultural, industrial, commercial and economic development; to develop and promote Nigerian languages, art and culture in the context of world's cultural heritage; to inspire students with a desire for self-improvement and achievement of excellence; to foster patriotism, national unity and security education with emphasis on the common ties in spite of our diversity; and to 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 labour. The realization of the objectives of Post-Basic Education and Career Development (PBECD) depends on the availability of materials and human resources available in educational institutions. The human resources are made up of the teaching and non-teaching staffs while the materials resources include ICT resources among others. The adoption of ICT in educational institutions is to aid effective school administration and management.

### **Secondary School Administration**

School administration is the process of arranging all educational resources by putting each resource where it ought to be used and coordinating both the human and materials resources for purpose of realizing the objectives of the school. School administration also deals with the effective and efficient utilization of school resources to actualize the school programmes. School administration looks at the effective allocation, supervision and organization of school resources to realize the objectives of the educational institutions (Ogunode, Ahmed, Gregory, & Abubakar, 2020). There are many forms of school administration. Basic, post-basic or secondary school education administration, and higher education administration etc.

Secondary school education administration deal with all activities planned and organized to realize the objective of a secondary school within a time-frame. The secondary school administration is the practical arrangement of both human and material resources to actualize the programme of secondary schools. Secondary school administration covers all aspects of the school. The objectives of school administration according to Gounod, Ahmed, Gregory & Abu-Bakr (2020) include; planning the educational program, designing policies to direct the implementation of the educational program, organizing the curriculum for the school, eliminating educational waste, ensuring effective allocation of education resources, ensuring effective supervision of educational resources and to ensure delivery of quality education. Also, Etuk (2007) outlined the following listed functions of school administration to include; staffs personnel administration, student personnel administration, finance, physical resources, and school community relationship management.

Due to the complexity of the administration and management of secondary schools today, many ICT facilities have been integrated into the school system to make the administration and management effective and efficient. Educational management information systems have been adopted into the Nigerian educational system to enable fast management of data for effective planning, forecasting and decision-making in the school.

### **Educational Management Information (EMIS)**

**Educational management information** is the use of information technology in educational institutions for data processing, recording, storing and producing information that school administrators can use to make decisions, forecasts and plan for the development of education. The purpose of EMIS is to extract educational data from educational institutions and derive insights that drive educational development. An educational Management information system (EMIS) is an organized system consisting of hardware and software that are used for data management in education. An EMIS gathers data from multiple online and offline source as inputs, process and analyzes the data, and reports the output information to aid in management decision-making, and planning. EMIS is the science of educational data. EMIS provides up-to-date and accurate data on a variety of education departments, including students, staff, finance, Inventory, Personnel, and Project time-lines. EMIS is useful in early childhood education, primary school education, secondary school education and higher education. EMIS is used for educational planning, and administration, supervision, research, budgeting, quality control, monitoring and evaluation (Guru, 2016).

An educational Management information system (EMIS) is an organized integration of hardware and software technologies, data, processes, and human elements deploys in the educational system for easy planning, administration and quality control. EMIS is a software system that focuses on the management of information technology to provide efficient and effective strategic decision-making in schools. Education Management Information System (EMIS) refers to a system for the collection, integration, processing, maintenance and dissemination of data and information to support decision-making, planning, policy analysis, monitoring and evaluation of all levels of the education system. EMIS is a system of people, technology, models, methods, processes, procedures, rules and regulations that function together to provide a comprehensive, integrated set of relevant and timely educational Data to planners, decision-makers and managers of education at all levels (Guru, 2016).

Education Management Information System (EMIS) is an education database that aims to ensure timely, accurate and appropriate educational data and information are available for decision-making. It is a global concept for educational management that encompasses the application of modern information and communication technology in the collection, collation, storage and analysis of education (Guru, 2016). Education Management Information System (EMIS) is a system that monitors the performance of education programs offered by the institute and manages the distribution and allocation of educational resources. It manages, plans, and strategizes to implement work processes that execute the education system smoothly. Of course, in the field of education, education MIS has specific roles to help an educational institution grow. Initially, the primary purpose and use of management information systems (MIS) were to make school office activities more efficient. MIS

provides administrators and teachers with the information they need for effective planning, policy development, and evaluation (Guru, 2016).

The objectives of the Education Management Information System (EMIS) according to Matthews (2016) include; strengthening the education statistical system in Nigeria by linking and assembling different existing information systems, integrating and synthesizing them in one single system of all education data quantitatively and qualitatively; and to produce more relevant, reliable and timely data needed at every tier of government for strategic planning, policy formulation and decision support initiative in education in Nigeria

### **Benefits of Educational Management Information (EMI) in the Administration of Secondary Schools**

The importance of the educational management system in the administration of schools according to Matthews (2016) includes:

- a) Facilitates Monitoring and Evaluation for the education system by providing information needed to improve efficiency and effectiveness, etc.
- b) Allows for setting of new policies, and revising old ones, based on evidence instead of self-perceptions.
- c) Stakeholders such as parents require information about educational institutions and student outcomes to make decisions about education choices and opportunities
- d) Strengthens capacities in collecting, processing, storing, analyzing, management, planning and dissemination of information at all levels of the education system
- e) Coordinates, disperses and makes efforts to acquire, process, analyze and disseminate all education management information
- f) Decision-makers need to understand how resources are translated into learning outcomes, especially the efficiency and effectiveness of existing processes
- g) Helps provide analysts and decision-makers with information to understand how educational inputs are transformed into educational outputs
- i) Access to quality and timely data helps improve decision-making and ensure that limited resources are targeted to areas in most need and where returns will be highest.

Education Management Information System (EMIS) also help in the following areas: increase students satisfaction, improve quantity and quality of school record keeping, improve quality and quantity of school decisions; operational efficiency and flexibility of the schools; quality of communications within and outside the school; quality of educational planning; quality of school administration and improve the quality of supervision and inspections.

### **Educational Management Information Systems for Effective Public secondary school Administration in Nigeria**

Effective adoption of an Educational management system for the administration of secondary schools will lead to effective school administration, staff administration and student administration.

According to Prashant, (2019) management information system (SMIS), provides the necessary information required to manage a school or institution effectively. It provides provision for recording and collecting information and also manages the school's strategic goals and direction. The student software also manages student and staff academic activities, finance and other important administrative information.

### **School Administration**

For school administration, EMIS can aid effective secondary school administration in Nigeria. Thompson & Anachuna (2019) and Nwangwu, Emme & Obike, (2013) submitted that Management

Information System is designed to assist managers in performing their work through an organized and effective mode of information collection, processing, storage and retrieval model. It is the application of modern technologies and computerized methods of imputing, processing, storing and retrieving organizational information for effective administration. Thompson & Anachuna (2019) and Madiha (2013) observed that Management information system (MIS) is being used by schools to support a range of administrative activities including attendance monitoring, assessment records, reporting, financial management, and resources and staffs allocation. Musa (2016) opined that MIS can provide administrators and teachers with the information required for informed planning, policy-making, and evaluation. MIS has changed school management in the areas of leadership, decision-making, workload, human resource management, communication, responsibility, and planning. These systems can assist the school manager in determining the aims of the school, formulating strategic plans, distributing resources, and evaluating staff performance as well as organizational success.

### **Students Administration**

EMIS also aid effective student administration in schools. Thompson & Anachuna (2019) opined that student personnel administration connotes a series of managerial and administrative services of school leaders and staff aimed at promoting students' academic achievement. Thompson & Anachuna (2019) and Ejeh, Okenjomand & Chizi-Woko (2016) acknowledged that student personnel administration refers to all the activities and services that are rendered to students by the school and its staff, outside the normal classroom instructions for the achievement of the educational objectives. Thompson & Anachuna (2019) and Akpan & Onabe, (2016) agreed that it involves all the activities and services that are rendered to students for the achievement of the educational objectives. There is a growing demand for educational services across all levels of the school system. The enormous rise in the number of students in schools as well as the multiplicity of programmes coupled with the complexity of administering a given secondary school has made school principals handle large volumes of data which they must process speedily to provide information to the Ministry of Education, the school boards, the teaching and learning personnel within the precincts of the school, as well as the general public (Asiabaka, 2010). Thompson & Anachuna (2019) observed that MIS is used for numerous activities of student personnel administration which include processing admission, monitoring students' attendance in school, computation of students' results, and transmitting information to students and parents using email and websites among others. According to Prashant, (2019) Student behaviour can be largely tracked through the EMIS. EMIS stores crucial student data such as personal data, exam records, and even hostel and library details. Additionally, it keeps track of the day-to-day progress of students. For Instance, the system can suggest the regions that attract the majority of students, the gender ratio, mode of registration (social media/website) which could help the institution further optimize online admission campaigns. These insights can be eventually used to analyze and monitor the improvements or retrogression in the students over time. According to a study conducted in East Asia and the Pacific on "Review of EMIS that Track Individual Students Data." By UNICEF (2020), nations interested in pursuing individual Student Tracking would benefit from a defined strategy and implementation plan that takes into account capacity-building requirements at all levels of government. Student Tracking systems were also utilized in the nations studied to monitor students in and out of school and manage dropout problems. Student Tracking was shown to offer better statistical data for national education statistics in the nations studied. There is also evidence that Student Tracking systems in government environments with high levels of interoperability between sector information systems, such as those in health, education, and social welfare, can provide a more holistic picture of each child's well-being and help determine whether a child is participating in mandated and essential services."

### **Staff administration**

One of the cardinal goals of school administration is to coordinate the activities of personnel and ensure every staff in the school realizes their goals. The staffs need to be properly organized and supervised. One of the resources to realize such is the Educational management information system. According to Madiha (2013), a Management information system (MIS) is used by schools to support a

range of administrative activities including attendance monitoring, assessment records, progress reporting, financial management, and staff allocation.

### **Data Management**

Education Management Information Systems aims to help countries improve data collection, data banking and management, and data use in decision-making, thereby improving different elements of the education system and contributing to the end goal of improving learning for all children and youth. By using an EMIS, school administrators can analyze and utilize data to improve their education systems. When implemented effectively, an EMIS can also potentially support both management and planning by principals and administrators, as well as teaching and learning in the classroom. An EMIS helps generate several value-added components to improve educational quality, including quality data, efficient expenditures, institutionalized data systems, enhanced management practices, data-driven policies, smart investments, and targeted instruction (World Bank, 2016).

### **Decision Making**

The importance of MIS in decision-making can be realized from its aims and objectives. MIS aims to develop a viable system to maximize the effective use of modern data approaches to management practices. It is also aimed at assisting managers and operating personnel, to produce timely and accurate information not only to decide present and future operations but also to pinpoint potential problems that need to be rectified. Bright & Asare (2019) submitted that management information system supply decision-makers with facts, likewise, it supports and enhances the overall decision-making process. MIS also enhance job performance throughout an institution. At the most senior level, it provides the data and information to help the board and management to make strategic decisions (top management decisions or long-lasting decisions) and at other levels of management. Management information systems help to provide the necessary information to make decisions with effectiveness and efficiency, and as far as accuracy, comprehensiveness and timeliness in providing information increase the efficiency of those decisions, which leads to improved performance (Al Tai, 2005).

### **Deployment of Educational Management Information (EMI) in Administration of Public Secondary Schools and Challenges in Nigeria**

Many problems have confronted the full deployment of education management information systems in Nigeria's public secondary schools. Some of these challenges include; Inadequate Funding, unstable power supply, poor implementation of ICT policy, corruption, poor internet services, shortage of ICT personnel, high cost of maintenance, and poor ICT literacy of students and teachers.

#### **Inadequate Funding**

Adequate funding is critical in the development of ICT infrastructural facilities in educational institutions. The funding provided for the ICT programme in public secondary schools is inadequate to ensure the successful development of EMIS in the educational sector across the country. ICT programme like the EMIS drives its budgetary allocation from the general budgetary allocation to the secondary school education in the respective state. The allocation has been described as inadequate for the sector by Ogunode (2021). Ogunode, Lawal & Olubunmi (2021) and Ogunode (2021) identified inadequate funding as one of the major problems facing the administration of secondary school education in Nigeria. The budgetary allocation for the administration and management of secondary school education in Nigeria is inadequate. Ogunode, Musa, Yahaya & Ajapa (2021) identified a lack of political will to adequately fund secondary schools, corruption, poor implementation of financial strategic plans for funding secondary schools, increase in population, poor support from private sectors, demand from other sectors, inflation and regional conflict and insecurity as the factors responsible for inadequate funds for the administration of public secondary schools in Nigeria. Mohammed, Ogunode, & Yahaya (2021) observed that the inability of secondary school administrators to access adequate funds to manage and administer the secondary school across the country is affecting their performance and purchasing ability. The development of new computerized-based information systems is a problem for many public secondary schools in Nigeria due to the cost

factor and it creates problems because with the change of time there is a need for up-to-date information systems.

### **Unstable Power Supply**

The problem of unstable power supply in Nigeria has affected the full deployment of Education management information systems in public secondary schools in Nigeria. Nigeria as a country is faced with the problem of energy crises. Ogunode & Ayoko (2022) described the concept of energy (power) that "without access to reliable electricity, education becomes very difficult and the quality of services delivered becomes poor. Equipment like information communication technologies and computers also require energy to be used in the respective offices. Constant energy supply is critical for the development of the educational institutions. Energy keeps moving the educational sector forward". However, the energy available across the states and local government is not adequate and is not stable to guarantee the effective use of ICT facilities like the Education management information system in Nigerian schools. Many educational institutions due to the power problems have decided to seek alternative power generators. This has increased the administrative cost of the schools. About 40% of Nigerians have access to stable electricity from the national grid while majorities are left out. The electric power supply is not stable, and many communities in rural areas lack (power) electric. The worse halted are the rural communities because of the absence of infrastructure. This has made many Post-Basic Education and Career Development (PBECD) with ICT facilities unable to use them regularly. Osakwe, (2012) and Olatunde-Aiyedun, Ogunode, & Eyiolorunse-Aiyedun, (2021) identified unstable power supply among the major problems that have militated against the effective use of ICT facilities in schools.

### **Poor Implementation of ICT Policy**

For the effective development of ICT in public secondary schools across the country, the Federal government of Nigeria enacted the National policy on ICT. Poor implementation of ICT policies in the public Post-Basic Education and Career Development (PBECD) in Nigeria hindered the full deployment of ICT facilities for teaching and learning in majorities Post-Basic Education and Career Development (PBECD) Nigeria. The National Policy on Education (2013) section states that Government shall provide appropriate information technology (IT) facilities to support the educational system. Government shall provide facilities and necessary infrastructure for the promotion of Information Technology (IT) at all levels of education. The Federal Ministry of Education, recognizing the need to reposition the education sector in Nigeria to meet global standards and competitiveness, developed the National Policy on Information and Communication Technologies (ICT) in Education in collaboration with relevant stakeholders. The policy was subsequently approved by the Federal Executive Council in April 2010 for implementation across the Federation. The policy aims at ensuring qualitative education for the enhancement of sustainable socio-economic development, global competitiveness and the individual's ability to survive in the contemporary environment. The Policy also provides the needed guidelines on expectations for the entire process of ICT integration in education to all stakeholders. Its implementation is expected to lead to a speedy transformation of teaching, learning and educational administration in Nigeria. The implementation of National policy on information communication technology in public secondary schools in Nigeria is faced with many problems such problems include Inadequate funding, fall in national revenue, insecurity, corruption, inadequate ICT Expertise, shortage of infrastructural facilities, political instability and policies instability identified as the problems hindering effective implementation of National Policy on Information Communication Technology in public secondary schools in Nigeria according to (Okwelogu, Usman, & Ogunode 2021)

### **Corruption**

Corruption in the administration of education especially the public institutions in Nigeria have militated against the full development of ICT programme in educational institutions like public secondary schools. Funds provided for infrastructure facilities development in schools are mismanaged and looted by some officials (Akinola & Ogunode 2022). Corruption has penetrated the Nigerian

educational system (Godwin 2017; Gift, 2018; Ogunode Josiah & Ajape (2021); Ogunode & Stephen (2021); Ogunode & Johnson, 2021). Transparency International report revealed that 66 per cent of the money Nigerian governments allocate to education is stolen by corrupt officials. According to the report, corruption is commonplace in education systems across the Economic Community of West African States (ECOWAS). "This affects education access, quality, inclusion and learning outcomes with devastating consequences, not only for national economic growth but also for the life chances of children, their families and communities," the report said. The report highlighted "Resource misallocation, corrupt procurement, exchange of sex for grades, examination malpractices, fake qualifications, teacher absenteeism, and corrupt recruitment practices" as the various corruption risks and challenges facing education systems in all countries (Premiumtimes 2020). UNESCO 2014 reports on Teaching and Learning: Achieving Quality Education for All show that Nigeria is among the 37 countries that are losing money spent on education because children are not learning. UNESCO disclosed that the menace is already costing governments USD 129 billion a year. It stressed further that despite the money being spent, the rejuvenation of primary education is not so soon because of poor-quality education that cannot ensure that children learn (NEEDS, 2014). Corruption in educational institutions has resulted in a shortage of funds, teachers, instructional materials, poor quality of teaching and a shortage of infrastructural facilities including ICT (Akinola & Ogunode, 2022).

### **Poor Internet Services**

Poor internet services across the country have affected the use of ICT for administration in public secondary schools across the federation. The internet services are very weak and of poor quality. It takes time to download and even to send emails. The problem of poor internet services and distribution mostly affected those public secondary schools in rural areas because of the absence of internet services in the areas. Ogunode, Okwelogu, & Olatunde-Aiyedun, (2021); Ogunode, Adamu & Ajape (2021) submitted that internet service is what gives life to other ICT facilities to functions. In the absence of stable and quality internet service, other ICT facilities are useless. Internet services can be described as the fuel that the ICT needs to operate or move. Internet service is very important to the operation and utilization of ICT facilities in educational institutions. In Nigeria, the quality of internet services is poor and ineffective. The various internet service providers have not invested in the provision of quality services. The federal government agencies regulating the activities of the internet service providers are very weak, and this is responsible for the ineffectiveness of the internet service provision. Ogunode, Okwelogu, Yahaya, & Olatunde-Aiyedun, (2021) observed that many educational institutions are not covered properly with internet services and this is affecting the application of ICT for teaching. Many teachers with ICT facilities cannot effectively use them because of weak internet services (Abara, Ogunode, & Olatunde-Aiyedun 2022) and Ogunode & Josiah 2022). In some public educational institutions across the country, ICT facilities have been provided in the lectures halls and classrooms to aid in delivering lectures through ICT, but because of absent or poor internet services such ICT facilities are abandoned by the teachers and students who are supposed to be using them for the implementation of teaching and learning programme. Bonnie, & Tijani, (2020) study investigated the availability, awareness, and use of electronic resources by Students at Federal University, Lafia, and Nasarawa State University, Keffi. The study reveals a Lack of advanced searching skills, navigation problems, library staff indifference, poor internet connectivity, technological constraint, lack of ICT skills, student poor orientation, frequent breakdown of the system, lack of personal laptops and other electronic gadgets, erratic power supply, and lack of awareness and use of electronic information resources by some students.

### **Shortage of ICT Personnel**

Nigerian educational institutions are faced with a shortage of ICT personnel to handle the various ICT programme within the school for them. The failure of the higher institutions to produce enough ICT professionals has affected the development of ICT usage in schools. Ogunode (2020) and Dada, Atobauka, & Ogunode (2021) observed that many schools even with the provision of ICT facilities do not have adequate hands to manage the facilities for the schools. This problem has led to poor use of



EMIS in secondary schools across the country. Salako, (2012) submitted that considerable knowledge and skills are required to build, maintain and use an EMIS. The lack of available human resource capacity significantly limits EMIS development. Building human resource capacity has long been known as a critical factor in the success of EMIS development. Limited capacity for more effective use of data in management and decision-making, particularly at the school level is often cited by local educators and external evaluators as a critical factor limiting the development of EMIS in Nigeria. Several categories of knowledge and skills are often referenced as deficient: (i) knowledge and skills to lead and manage EMIS development; (ii) knowledge and skills to use technology; and (iii) knowledge and skills to use data effectively for decision-making, policy analysis and planning (AEPM, 2007).

### **High Cost of Maintenance**

Another challenge facing the deployment and usage of EMIS in public secondary schools in Nigeria is the problem of the high cost of maintenance. ICT facilities like EMIS need proper maintenance that required huge financial commitment which many secondary schools do not have. Many ICT facilities in many schools have stopped functioning because of a lack of maintenance culture. The ICT facilities since supplied to the schools have not been handled properly and maintained as the facilities demanded. Salako, (2012) acknowledged that how to fund EMIS development and maintenance is no doubt the biggest challenge facing some countries including Nigeria. This is an issue beyond the scope of the current review. Inadequate funding has prevented most schools from having well-equipped computer laboratories. Ogunode, Jegede, & Musa, (2020); Ogunode, Abubakar, Abashi, Ireogbu, & Longdet (2021) identified the high cost of maintenance as an obstacle to the effective application of ICT facilities in educational institutions.

### **Poor ICT literacy of Students and Teachers**

The poor ICT skills and knowledge of students in public secondary schools especially those in rural areas have prevented the full deployment of Education management information systems in the schools. Most of the students do not know how to operate these facilities provided for them within the schools to support their learning programme. Also, the teachers in most secondary schools do not have the full knowledge and skills of using the various ICT facilities provided for them to implement the teaching programme in their respective schools. The inability of both the students and teachers to fully used the ICT facilities have militated against the deployment of the Education management information system in the public secondary schools in Nigeria. Ogunode, Adamu & Ajape (2021) and Ogunode, Babayo, Jegede & Abubakar (2021) identified poor computer literacy among the teachers and students of Post-Basic Education and Career Development (PBECD) also constituted a setback for the deployment of ICT facilities for teaching and learning in some Post-Basic Education and Career Development (PBECD) in Nigeria. Findings by Olatunde-Aiyedun (2021) noted that the typical African school environment provides neither opportunity nor training in using ICTs and that 75 per cent of responding teachers have no or very limited experience and expertise regarding ICT educational applications. Jegede & Abashi (2019) opined that the effective utilization of ICT facilities depends largely on the teacher's and student's capacity to use the ICT facilities to aid in teaching and learning. The application of ICT facilities in educational institutions depends largely on the number of ICT instructors or teachers the schools have at a particular time. Inadequate ICT manpower in educational institutions is affecting the effective utilization of ICT facilities in schools. Research has it that the shortage of professional ICT teachers is preventing the effective implementation of Computer education in schools in Nigeria.

### **Conclusion and Recommendations**

This paper looked at the challenges that have prevented the full deployment of the Education management information system in public secondary schools in Nigeria. The paper identified inadequate funding, unstable power supply, poor implementation of ICT policy, corruption, poor internet services, shortage of ICT personnel, high cost of maintenance, and poor ICT literacy of students and teachers as factors that have hindered the full deployment of Education Management

Information System (EMIS) in the Nigeria public secondary schools. To address these challenges, the paper came up with the following suggestions:

1. The federal and state government should increase the funding of public secondary schools across the country. This will help to develop Education Management Information System (EMIS) in Nigerian public secondary schools.
2. The government needs to reform the energy sector to ensure an adequate supply of energy across the country. The government should invest heavily in the energy sector.
3. The government should ensure the ICT national policy is fully implemented across the federation.
4. The government should adopt effective monitoring and evaluation system in the monitoring of financial allocation to the ministry of education in Nigeria. Also, the various anti-corruption agencies should be deployed to monitor the financial activities of all agencies and commissions under the ministry of education especially schools.
5. The government should set up a target for institutions saddled with internet services provision across the country. This will help to improve the quality of internet services.
6. The federal and state government should employ more ICT professionals and deploy them to secondary schools across the country.
7. School administrators and ICT personnel in secondary schools should be trained on good maintenance culture and more allocation should be provided for annual maintenance of ICT facilities in schools across the country.
8. ICT training should be provided for teachers and students in public secondary schools to improve their ICT knowledge and skills. This will help to increase ICT usage in schools across the country.

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