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## MANAGING ICT FOR EFFECTIVE SECONDARY SCHOOL STUDENTS ACADEMIC PERFORMANCE AND SUSTAINABLE DEVELOPMENT IN KOGI EAST EDUCATION ZONE

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### Abstract

*The paper investigated managing ICT for effective secondary school students' academic performance and sustainable development in Kogi East Education Zone of Kogi State. Concepts of management, ICT, secondary school, academic performance and sustainable development were respectfully examined. Effects of management on the effectiveness of ICT Kogi east education zone, effects of ICT on secondary school students' academic performance in overall subjects and education, effects of ICT on sustainable development globally were also examined. Management areas of strength and weakness in secondary education and ICT facilities provision in Kogi state were ex-rayed. It was concluded that proper management of ICT, is the one that anchor secondary school students' academic performance and sustainable development in Kogi east education zone. Regrettably, the functionality and proliferation of ICT centres have been halted by the government and the management of secondary education making the beneficiaries to swim in their ignorance and backwardness. This makes the entirety (students and inhabitants) of the area to be handicapped in the exploration of their world and allow secondary school students' academic performance and sustainable development in the area to be in a stagnated position. Some recommendations were made, they are (1) ICT facilities should be sufficiently provided by the government to all their secondary schools in Kogi east education zone. (1)The available ICT facilities should be properly managed by the school management, staff and students to ensure its consistent functionality. (3)Conferences, seminars, workshop, symposium amongst others should always be organized by the government for both students and indigenes on the importance of ICT for sustainable national development. (4) There should be proliferation of ICT centres everywhere in Kogi state by the government. (5) Computer education should be introduced and made compulsory for every literate member of the area.*

**Key Words:** Management, Information and Communication Technology (ICT), Secondary school, Students' academic performance, Sustainable development.

### Introduction

ICT stands for information and communications technology is an umbrella term that includes any communication device, encompassing radio, television, cell phones, computer and



network hardware, satellite systems and so on, as well as the various services and applicative with them

such as video conferencing and distance learning. "ICT are often spoken of a particular context such as ICTs in education, health care, or libraries" (Margaret Rouse, September, 2005). "ICT (information and communications technology or technologies) is an umbrella term that includes any communication device or application, encompassing: radio, television, cellular phones, computer and network hardware and software, satellite systems and so on, as well as the various services and applications associated with them, such as videoconferencing and distance learning". ICTs are often spoken of in a particular context, such as ICTs in education, health care, or libraries" (Abe and Adu, 2007).

Concerns over educational relevance and quality coexist with the imperative of expanding educational opportunities to those made most vulnerable by globalization developing countries in general; low-income groups, girls and women, and low-skilled workers in particular. "Global changes also put pressure on all groups to constantly acquire and apply new skills". The International Labour Organization defines its requirements for education and training in the new global economy simply as "basic education for all", core work skills for all and "lifelong learning for all". Information and communication technologies (ICTs) which include radio and

television, as well as newer digital technologies such as computers and the Internet have been touted as potentially powerful enabling tools for educational change and reform. "When used appropriately, different ICTs are said to help expand access to education, strengthen the relevance of education to the increasingly digital workplace, and raise educational quality by, among others, helping make teaching and learning into an engaging, active process connected to real life". Odanw (2008) conceptualised ICT media as computer, cell phones, photocopiers, scanners, printers, duplicating machines, tape and recorder, film stripe, projectors, slides, internet facilities, and other offices equipment, which are to be available in schools. Earthman and William (2002) stated that these ICT facilities are used in the classroom, laboratories, offices, workshops, cafeteria, toilet, laundry and for sport etc in school. Information and Communication Technology (ICT) are part of school facilities for effective instructional delivery in schools which have positive influence on teaching and learning. ICT in this context, are those electronic and internet facilities which most easily, facilitate effective instructional delivery as well as learning in educational institution.

With regards to management of ICT, the seemingly poor quality of its resources available in our tertiary institutions of learning limits teachers and students from carrying out meaningful research (Diso and Njoku, 2007). Diso and Njoku further noted that the hitherto abundant Information and Technology resources has been affected by brain drain syndrome that has led to many experts migrating to all parts of the world in search of greener pasture due to an unfavourable working climate in Nigeria. They observed that the available ICT facilities in library are inadequate and outdated, little electronic journals, poor interlibrary loan, poor electronic databases, inadequate library webpage, poor photocopiers with useful information and a noisy library environment. The seemingly poor state of these ICT facilities may not be unconnected with the poor funding of the education sector.

The poor funding of education sector was reiterated by Akinsolu (2011) when he asserted that finance is positively related to the quality of education. In his study on input-output analysis in Nigerian secondary school system, Akinsolu observed that recurrent expenditure on maintenance and repair positively affects the quality of secondary education in Ogun state.

The researcher also observed that the management of available ICT facilities for the attainment of educational objectives in schools is in vague.

The poor situation of available ICT facilities was reiterated by Ekundayo (2010) when he reported that the school physical facilities have not been in good shape. Ahmed (2003) observed that in most of the nation's secondary schools, teaching and learning take place under the most uncondusive environment and having inadequate ICT facilities. Ahmed added that these deteriorating conditions have encouraged incessant complaint from students and teachers. Ahunanya and Ubabudu (2006) submitted that there is a positive relationship between school facilities like ICT and school effectiveness; they emphasized that the availability and adequacy of these facilities contribute to students' achievement while non availability of these facilities contribute to poor performance of both teachers and students. Oyedeji added that when the school facilities are effectively managed, they would have positive impact on the comfort, safety and academic performance of students and teachers in schools. Arong and Ogbadu (2010) added that the quality of these facilities and the management of the available school facilities depict the quality of educational attainment by both teachers and students in school. 'Computer Aided Instruction' as an aspect of ICT has been seen to slightly "improve student performance on multiple choice, standardized testing in some areas Computer Aided (Assisted) Instruction (CAI)", which refers generally to student self-study or tutorials on PCs, has been shown to slightly improve student test scores on some reading and math skills, although whether such improvement correlates to real improvement in student learning is debatable( Muhammed et al, 2015).

Management as a body is an essential aspect of educational system because they are the decider of the policy for the institution. Secondary education in Kogi state is regulated by Ministry of Education (MOE) which is the bigger umbrella controlling the entirety of education affairs in the state. Teaching Service Commission (TSC) and Science Teachers' Education Board (STEB) are parastatals under MOE in Kogi state responsible for managing secondary education in Kogi state. Teaching Service Commission (TSC) Takes care of all the government established secondary schools and grant aided community and missionary secondary schools while STEB take care of all the science based secondary schools in Kogi state. Management of secondary education in Kogi state can be examined under TSC and STEB. Management of secondary education under TSC include chairman, permanent member 1, 2 and 3, Permanent secretary administration, Director of Administration and Finance (DAF), Director of Examinations, Director of Project Monitoring (DPM), Director of sport, Director of Planning, Research and Statistics. Management of Secondary school under STEB include Executive Director, part time chairman, permanent member 1, 2 and 3, permanent secretary administration, Director of

Administration and Finance (DAF), Director of Examinations, Director of Project Monitoring (DPM), Director of sport, Director of Planning, Research and Statistics. Both TSC and STEB are answerable to Ministry of Education where Hon. Commissioner for education is the head in Kogi state. Principals of all secondary schools perform management functions at micro level in kogi state (Shaibu and Isah, 2018).

Other members though extended management include board members which include Zonal Directors, Principal Officers, senior teachers, Representatives of the community and



Chairman, Parent Teachers' Association (PTA). They perform the following functions such as Planning, Organizing, Staffing, Leading, Controlling (Krishna, 2006). Krishna further explained them as: Planning is setting goals and deciding how best to achieve them. Planning is predetermining the future actions. Planning is deciding in advance on what to do, how to do it, when to do it and who is to do it. Organizing is establishing structure. It includes grouping tasks, producing authority – responsibility structures, creating channel of communication, and creating coordinating mechanism. Staffing is hiring and assigning people to carry out tasks. It is filling and keeping filled positions in the organization structure. It is human resource management. Leading is influencing, communicating and motivating people to perform tasks for goal achievement. Controlling is maintaining, comparing and correcting organizational performance toward goal achievement (Krishna, 2006).

The principal of a school is a planner, director, controller, coordinator, organizer, adviser and a problem-solver (Maduabuchi, 2002). He identifies and set goals and objectives of the school, which of course, must be in line with the national objectives, analyses tasks and share responsibilities to the staff according to specialization and expertise (Ugochi, 2007). The status of secondary school principal is not gender discriminating. Principal is the administrative head of secondary school who perform management functions for the actualization of educational objectives at this level of education. The principal has an important management role of recommending and supplying the needed ICT facilities that ought to be available in the school for staff and students consumption. He does this by applying to the government, Non Governmental Agencies (NGOs), the philanthropist and through levy, aimed at enhancing effective academic performance in schools. The principal uses principles of administration such as delegation of responsibility, delegation of authority, communication, line structure, economy, human relations, democracy and employment of staff to incorporate students for the actualization of educational objectives. Secondary school comprises of students, staff which include academic and non academic. The students are the raw materials of the schools. There cannot be school without the students. These students are expected to work with the principals to deliver the goals and objectives of education at this level effectively and efficiently especially in the intensification of learning efforts. Academic staff are teachers who perform the functions of instructional delivery in school. Non academic staff which also known as supportive staff include the bursars, librarians, laboratory and workshop attendants, clerical staff (personal secretaries, typists, and computer operators), security staff, cleaning staff, maintenance staff and medical staff.

Secondary school level is the bridge between the primary and tertiary levels. Secondary education is the education children receive after primary education and before the tertiary stage within the range of 12 to 18 years (FRN, 2004). The broad goal of secondary education is to prepare the individual for useful living in the society and for higher education (FRN, 2004). Secondary school is divided into various administrative units and each unit in most cases is manned by the specialist. The unit include administrative unit which is manned by vice principal administration, academic unit is manned by vice principal academic, guidance and counselling unit which is manned by guidance counsellor, examination unit which is manned by examination officer, students' affair unit which is manned by the person designated by the principal, ICT unit which is manned by the computer specialist and library unit which is manned by the college librarian respectively.

It is hoped that management of secondary education would yield better students' academic performance among secondary school but observations and research findings elsewhere have shown that most of the public secondary schools' students can neither move into higher institutions nor enjoy useful benefits of digitalization in the schools because of the frustrating attitude of the management (Ajayi, 2009). Some public schools have neither computer nor computer staff who could impart ICT knowledge into the students. In some schools where ICT facilities are available, proper utilization and maintenance would still be their problems because of the observed demotivational attitude of the management as well as poor maintenance culture of the staff and students. Many students who are willing to improve themselves digitally have been frustrated by the management and staff even when there is enough money and ICT facilities available for the purpose. There is a continuous enactment of rules and regulations as regard the utilization of the available ICT facilities in some schools to the detriment of the students. Besides, the practice of bureaucratic principle in accessing the available ICT facilities by students in schools is another bottleneck to students learning of computer in secondary schools thereby narrow down their computer knowledge and level of academic performance. The resultant effect is that, Some of them are frustrated when it comes to the use of computer in carrying out any of the activity in school and outside the school. Omoregie (2006) submitted that this class of secondary schools' students are no longer effective in service delivery in Nigeria. National University Commission's (NUC) study (2004) found that Nigerian university graduates are failing to meet the needs of the labour market largely because of the poor intakes from some secondary schools. This they attributed to managerial faults of not providing the necessary facilities that would promote effective teaching and learning in secondary schools in Nigeria. The question therefore is, will proper management of ICT enhance secondary school students' academic performance in Kogi east education zone?

However, the importance of secondary education cannot be over emphasized. Secondary education is crucial in both personal and national development. Secondary school level is the bridge between the primary and tertiary levels. Secondary education is the education children receive after primary education and before the tertiary stage within the range of 12 to 18 years (FRN, 2004). The broad goal of secondary education is to prepare the individual for useful living in the society and for higher education (FRN, 2004). Specifically, the secondary school system is geared towards catering for the differences in talents, opportunities and future roles, to provide technical knowledge and vocational skills necessary for agricultural, industrial, commercial and economic development (FRN, 2004). Students spend six years in Secondary School, which is 3 years of Junior Secondary School and 3 years of Senior Secondary School. Secondary school is the stage of career choice. By Senior Secondary School Class 2 (SS2), students are taking the GCE O'Levels examination, which is not mandatory, but some students take it to prepare for the Senior Secondary Certificate Examination. The Senior Secondary School ends on the WASSCE. In spite of the paramount position of secondary school management in the provision of ICT for better students academic achievement in Nigeria the level of students academic performance in education especially when it comes to the use of ICT facilities in Kogi east education zone is still observed to be poor. Students academic performance in the observation of the researchers appear to have been bedevilled by some problems which are speculated to be management responsibility in Kogi state ( Shaibu et al., 2017).

### **Concept of Academic Performance**

Academic performance according to Ejeh (2012) is the level of progress and failure in students' academic record in schools. Ejeh adds that the level of students' performance depends on facilities available, teachers' qualification, teaching method, students' background and school environment. These ideas are corroborated by Maji (2013) who opines that students' academic achievement in school is an embodiment of educational facilities available to them at home and in the school as well as teachers' qualification and teaching method adopted in instructional delivery. On the contrary Omale (2010) attributes students' poor performance in school to teachers' inability in the use of school facilities especially in new curriculum leading to non coverage of syllabus.

Observations and reports have shown that success of high academic achievement has become a Herculean task to students in recent times. Poor academic achievements are recorded both at the secondary and tertiary levels of education in Nigeria especially public own schools. For instance, Adebisi (2007), reported that lack of ICT facilities, insufficient funds, inadequate teachers, insufficient textbooks, poor teaching methods teachers' wrong perception on subjects and other management factors contribute to high percentage failure.

The decline in the academic achievement of students in Nigeria institutions has been observed by Soyinka (1999), when he observes that the educational system in Nigeria needs restructuring. The researcher notes that academic standards have fallen drastically and the poor academic achievement of students has been of great concern to educationist, and guidance counsellors in particular. In Kogi State, there are variations in the academic achievement of students in schools (the cause of such variations are not known). It therefore becomes necessary to find out the causes of such variations in students' academic achievement in the zone.

Variations in students' achievement have been attributed to a lot of indicators such as availability status of educational facilities especially ICT, students' attitudes to school, approach to learning and academic self concept (Lee, 1999). Apart from students factors, school factors and teachers' poor perception of the subject, there are other indicators such as management factors that affect students' performance in both school and outside the school. On the part of the parents, there are certain factors which influence children's success, such as parents' social class, parents' education as well as parent inputs and other exogenous variables (Doolittle, 2002). Some parents have ICT facilities at homes which boost the academic performance of their children in schools while some parents do not have. This study intends to ex rays the management level of ICT for students' academic performance and sustainable national development in Kogi east education zone of Kogi state.

Over the years, management of ICT for students' academic performance in secondary schools in Kogi east education zone seems to have been perplexed with series of management problems which have been observed to affect effective students' performance in secondary schools. These management problems may include: Inadequate funding, lack of statistical data of the teaching resources, Poor maintenance culture, Poor policy on maintenance of teaching resources, inadequate equipment for ICT centre especially those schools that has, low capacity of teachers to manage and use teaching resources, overcrowded classrooms, bureaucratic bottle neck in policy implementation, lack of initiatives and creativity on the part of management staff and teachers, non promotion of accountability on the part of financial activities, insufficient qualified technologist in the school, non availability of enough ICT facilities to cover all areas of subjects, inadequate facilities and instructional materials.



negligence of staff rights, poor principal-teacher relationship, poor leadership styles of the principal, poor funding of the education sector (Shaibu, 2016). In the same vein, Filardo (2008) asserts that mismanagement of funds by college administrators and poor attention to staff training programmes are all management factors responsible for the apparent poor management/provision of ICT for secondary school students' academic performance in secondary schools. These management factors in the observation of the researcher are also assumed to affect effective students' academic performance in schools in Kogi east education zone. Inadequate fund was seen by Omupupa and Abdulrahim (2013) as one of the challenges facing effective management of teaching resources while Castaldi (2001) also blamed the practice of bureaucratic procedures by the government agents aims at bribe as one of the problems affecting students' academic performance in schools also in Kogi east education zone. From the foregoing, it is evident that most of the factors that bewildered students' academic performance in schools are management factors, a correction of which will ensure effective academic performance. However, the basis for the worry in the study is: how can ICT be managed for secondary school students' academic performance and sustainable national development in Kogi east education zone?

Secondary schools in Kogi east education zone of Kogi state- Nigeria are selected owing to the observation of Samuel (2016) that mismanagement of ICT facilities for secondary school students' academic performance by stakeholders seem to be on the high side in the zone resulting in poor quality of poor academic performance by students in the area. Therefore, management variables which affect students' academic performance in Kogi east education zone need to be examined.

Kogi East Education Zone comprises nine local government areas: Ankpa, Olamaboro, Omala, Idah, Igalamela, Ofu, Dekina, Ibaji and Bassa respectively. The area has two hundred and eight (208) public secondary schools (Kogi State Ministry of Education Office, 2015). Secondary schools in this zone are characterized majorly with old buildings, old educational facilities, conservative school heads and staff and the students' academic performance especially those from public schools in this zone seems to be stagnated with low record of academic success in schools which is attributed to management. The choice of Kogi east education zone of Kogi state for the study is due to the urgent need by government, educational administrators and other stakeholders in education to collaborate and improve on the provision and proper management of ICT in order to guarantee the effective students' academic performance and ensure sustainable development in Kogi east education zone of Kogi state.

### **Concept of Sustainable Development**

Development at any level – individual, community or national, has a purpose which is the liberation of man. Development according to Ochioma (2010) is man's attempt to transform nature in order to improve his own condition. It has to do with all aspects of the people's life – economic, political, legal, social amongst others. It does this through the satisfaction of basic

needs in all activities and processes, directed towards the attainment and qualitative realization of a state of affair, characterised by adequate human happiness, welfare, human mastery of his environment and free individual participation in the affairs of the state (Ojo, 2011). Development in the opinion of Oni and Bello (1987) is qualitative and quantitative change in factors of production by a society, and increase in the quality of goods and services that every individual is opportune to possess. Development in this context could be seen as an impressive positive change in the capacity of individual and groups to enhance their socio –



economic well – being through increased production of goods and services to satisfy their daily needs. Ume (1987) in Ochioma (2010) reiterated that development in all societies must have at least the following objectives: To increase the availability and widen the distribution of basic life sustaining goods such as food, shelter, health and protection; to raise the level of living in addition to higher incomes, the provision of more jobs, better education and greater attention to cultural and humanistic values. All of which will serve not only to enhance material well being, but also to generate individual and national self-esteem; to expand the range of economic and social choice to individuals and nations by freeing them from servitude and dependence, not only in relation to other people and nation state, but also from the forces of ignorance and human misery. The achievement of all these objectives by any society would lead to a sustainable development.

Sustainable development in the opinion of Kundan in Ugoh (2008) refers to as a construct, which envision development as meeting the need of the present generation without compromising the needs of the future generation. It implies that while education meets the need of the present it does not compromise the ability of the future generations to meet own needs. Nevertheless, this ability to meet the needs is determined by human capital (through education, technology advance) and through physical capital (machine, tool etc). Kundan argues that continued sustainable development is only possible or assured when it is agreed and indeed concrete steps are taken to raise the level of literacy and numeracy in any society. Educational institutions especially with emphasis on ICT at all levels and their programmes are therefore, the tools with which to achieve development and its sustainability.

Sustainable development has also been defined by the Nigeria Study/Action Team (NEST, 1991) in Osuji (2004) as “an approach that combines the development needs and aspirations of the present without compromising the ability of the future while also maintaining ecological integrity”. This implies according to Osuji a development process that is equitable and sensitive to ecological and environmental issues. It depends on the initiative, resourcefulness, and discipline of human beings who are the managers of developmental programmes.

Contemporarily, sustainable development has become a password that resonates across all disciplines in today’s knowledge industry. It is associated with “omnipotent capabilities” of proffering solutions to all problems of man and the society. It suggests harmonious living and quality growth among individuals in the society in order to secure the well being of future generations. In other words, the present generation should avoid practices and activities that can be harmful to future generations. Craven (2009) views that the concept of sustainable development is rooted in a system where quality of life is perceived and appreciated most especially through education. The concept of sustainable development helps us to understand ourselves and our nation which is faced with numerous problems which can be addressed through education. Regrettably, sustainable development does not have a specific position in Kogi state despite its salient attribute to both the individual and the ecosystem. This is partly attributed to improper utilization of ICT in the actualization of sustainable development. Hence, the need to explore the role of ICT for sustainable development in the area to point out its values has become inevitable.

### **Roles of ICT for Sustainable Development**

The role of ICT for sustainable development cannot be overemphasized. For instance Ezz (2005) posited that any opportunity to effect sustainable development requires that new and

efficient qualitative evaluation schemas coupled with “an integrated assessment of the ecological, social, and economic features and implications of a given project, technology or agro-ecosystem through the use of appropriate indicators be executed. Sustainable development takes time but its benefits are materially rewarding. Sustainability requires cooperative and collaborative endeavours that advance positive relationships between the various indices. One must therefore, be mindful not to confuse piecemeal approaches, such as sectoral management with sustainable development because although local zones can attempt to manage their own affairs, until there is a common purpose in recognizing a single solution for prevailing problems, the likelihood of problems recurring will hold strong possibilities.

A fundamental concern to ICT supporting sustainable development is the recognition of the existing challenges in ICT itself and how well these demands can be resolved to enhance organizational and spatial integration. Ezz (2005) argued that one can glean from globalization initiatives. The author reasoned that certain trends in international business, such as e-commerce, e-business, and e-government all support cross-national collaborative endeavours. Therefore, governments and enterprises alike can glean from such activities and rethink their own administrative praxis. One acknowledges that cultural mores may pose issues but sustainable initiatives need international cooperation, coordination, and standardization. International organizations and multinationals hold many answers in this regard on how to proceed. Another concern in achieving sustainable development through ICT is persons’ resistance to change. People usually abhor abandoning familiarity for unknown or different modus operandi. However, sustainable development can come from many avenues. Ozioko, Igwesi, and Eke (2011) posited that “the overall objective of local content is to promote knowledge creation, preservation, dissemination, and use of locally generated knowledge”. Promoting these activities are themselves engendering a broader cultural awareness across national borders because they create a cultural diversity that may not be known prior. Ozioko et al. (2005) noted that “cultural diversity is as essential as biodiversity and is a benefit for present and future generations”. ICT allow affordable digitization of such content allowing easy access, sharing, and understanding of local information. Visiting tourists, for example will likely be able to participate more completely in local activities because they already coexist with the culture through technology sharing.

The United Nations millennium development goals (MDG) hope to address the dysfunctional trend in human development within a relatively short period. Although achieving the MDG deadline might be optimistic (2015), its eight objectives are essential to good governance for sustainable development. These goals are (1) eradicating extreme poverty and hunger, (2) achieving universal primary education, (3) promoting gender equality and empowering women, (4) reducing child mortality, (5) improving maternal health, (6) combating HIV/AIDS, malaria and other diseases, (7) ensuring environmental sustainability, and (8) generating a global partnership for development. Although number seven is listed separately, the prevailing contemporary environment dictates that all eight shares a phenomenological umbilical relationship and ICT is fundamental to realizing such noble endeavours. More countries and enterprises are recognizing the importance of ICT to poverty alleviation. A poorwoman farmer in a rural community can use a telephone to enquire about her vegetable prices without the overhead of a bus fare or the physical endurance such journey require. One will agree, however; that such possibilities arise out of the willingness to invest financial resources, ICT infrastructure, and capacity building. Gilhooly (2005) argued that if countries want to tackle the MDG seriously, they must appropriately deploy, integrate, and prioritize



ICT. The researchers noted that ICT is essential both to eradicating poverty and in creating sustainable human development. He conceded, however, that the paradox of “persistent scarcity in a digital era of superabundant capacity – is perhaps the greatest single challenge to the networked economy and society”. Gilhooly (2005) opined that because of the complex prevailing realities, grasping fulsome clarity is difficult to achieve. Nevertheless, Gilhooly (2005) proffered that if ICT is situated appropriately, it can significantly aid the process of the MDG in relatively short periods thereby substantially reducing the gap between the advanced nations and emerging economies.

When one considers some of the broad issues of sustainability, ICT undoubtedly will contribute positively. Examples may include the impact of technology on the lives of the physically disabled, community development, health, social security, education, and grassroots businesses, among the huge list of possibilities. The physically challenged can use technology to work from home through the invention of teleworking for persons with disabilities. Community development activities can be enhanced and supported through ICT, such as the Society for Research and Initiatives for Sustainable Technologies and Institutions initiative in which the purpose is to encourage the use of ICT to advance innovation and eco-friendly solutions to ongoing problems. RajNidhi in Rajasthan, India, use ICT to provide its citizens with information, such as health, family planning, employment, transportation, distance education, agriculture, water, electricity, birth and death registration, and tax rates along with many other services.

Health facilities sharing health records can respond timely to individual health concerns and make more accurate decisions about health-related problems. ICT can inform members of a community about their social services available and the benefits to which each individual is entitled. Technology is revolutionizing the way persons learn. World Corps, for example, use ICT to impart technical and business related skill-sets to disadvantaged persons by promoting employment through sustainable and environmentally sound enterprises, such as Internet centers whereas Community Learning Center, use technology to enhance elementary education and computer literacy among poor children. Grassroots businesses are also using the Internet to sell

their produce through an auction system. They apply the technology in ways that provide information for crop production, cultivation practices, marketing initiatives, processing standards, and pest and disease control. In addition, community based initiatives include engaging the technology to advance and expand micro-financing and micro-enterprise programs (Sachdeva, 2007). Despite these laudable benefits of ICT to sustainable development worldwide its management for sustainable development in Kogi east education zone is still in a quagmire of confusion hence the examine the management and promotion of ICT for sustainable development in Kogi east education zone becomes imperative.

## **Conclusion**

From the foregoing, it has been deduced that proper management of ICT, is the one that anchor secondary schoolstudents’ academic performance and sustainable development in Kogi east education zone. Regrettably, the functionality and proliferation of ICT centres have been halted by the government and the management of secondary education making the beneficiaries to swim in their ignorance and backwardness. This makes the entirety (students and inhabitants) of the area to be handicapped in the exploration of their world and allow

secondary school students' academic performance and sustainable development in the area to be in a stagnated position.

### **Recommendations**

The following recommendations are highlighted based on the conclusion made in this study:

- (1) ICT facilities should be sufficiently provided by the government to all their secondary schools in Kogi east education zone. This will enable students and staff to access them in time of need.
- (2) The available ICT facilities should be properly managed by the school management, staff and students to ensure its consistent functionality. Proper management of these facilities will ensure their durability for the benefit of the area.
3. Conferences, seminars, workshop, symposium amongst others should always be organized by the government for both students and indigenes on the importance of ICT for sustainable national development. This will expose them to the learning and using of ICT facilities within their disposal to stimulate sustainable development in the area.
4. There should be proliferation of ICT centres everywhere in Kogi state by the government. This will enable every member of the area to have access to ICT facilities. This will enable them to explore the world globally.
5. Computer education should be introduced and made compulsory for every literate member of the area. A law should be made and enforce by the government to effect this on every member. This will boost their participation in the learning of computer in the area as and will lead to sustainable development in the area.

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