

# SUSTAINABLE DEVELOPMENT GOALS AND INFORMATION LITERACY VISION: A ROADMAP FOR EFFECTIVE TEACHER EDUCATION IN NIGERIA

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## ABSTRACT

Information literacy is the single most pervasive educational issue for the 21st century. It is gradually becoming an indispensable factor in the educational development of the student. Despite the importance of information literacy, students enter and graduate from the educational institutions without basic information literacy. The reason for this is that teachers are not equipped with relevant training needed to teach information literacy to the pupils and students. One reason for this could be lack of information literacy vision which could among others, address the need for a comprehensive and result oriented information literacy at all levels of the educational system in Nigeria. This paper proposes such a vision and recommends that it should complement the Sustainable Development Goals (SDGs) in view of the deficiencies of the SDGs especially with regards to information literacy and should be entrenched in the teacher preparation programmes as the needed catalyst for effective training of teachers and adequate delivery of instruction in Nigerian schools. The paper examines the concept, objectives and deficiencies of the SDGs, the methods and objectives of teacher education in Nigeria, need for information resources in teaching and rationale for training in information literacy teaching. It also addresses the need to complement the SDGs with information literacy vision and makes general recommendation for effective actualization of the information literacy vision. The present study is anchored on Information Process and utilization Model by Kulthau (1991). This is justified by the relevance of the theory in explaining the relationship between the library information resources available in teaching school libraries and the literacy level, behaviour and channels for the accessibility and utilization by the students for their academic pursuit. This is an opinion paper and adopted descriptive and systematic review of relevant literature to arrive at conclusions.

## Introduction

It has been observed that the most important 'learning is learning to learn' while the most important knowledge is 'self knowledge' (Apeji in Mole, 2007). Developing in students the skills or ability to find, identify, evaluate and use information effectively to solve a particular problem or make a decision independent of the teacher has become a major theme of modern education and a vital tool and strong catalyst for sustainable education and human development. Information literacy, as Bundy (2004) described it is the single most pervasive issue for the 21<sup>st</sup> century. This is the age of information. It might be more appropriately described as the age of information technology. Nevertheless, it is an age when we are being bombarded with ever-

increasing quantities of information, in diverse forms and media, made more accessible and better organized by information technology.

This underscores the need for information literacy and for the training of teachers who are grounded in the teaching of information literacy right from the junior levels of the education system. This has become even more important in view of the changing structure of information in this age. Despite the importance of and need for information literacy, there is little indication that its development is being addressed in a comprehensive manner. This underscores the need for an information literacy vision to be entrenched in teacher preparation framework in Nigeria. Such a vision will complement the Sustainable Development goals and as the later engineers educational development, the former will be designed to engineer a wholistic and comprehensive approach to information literacy beginning with the preparation of teachers for information literacy teaching from the pre – primary level of formal education. This paper is therefore an attempt at examining the why, what and how of information literacy vision for Nigeria and its place in promoting the SDGs through teacher preparation programme in Nigeria.

### **Objectives and Methods of Teacher Preparation in Nigeria**

Teacher preparation programme in Nigeria takes two forms: pre-service training and in-service training. The pre-service training is structured to provide a three-year programme leading to the award of the Nigeria certificate in Education (NCE) in the colleges of education and a four-year programme leading to the award of Bachelor of education degree (B.Ed) in the universities. There are also the post-graduate programmes leading to the award of the Master of Education (M.Ed) and Doctor of Philosophy (Ph.D) in education.

The aims of pre-service teacher preparation, according to the National Policy on Education (2004) are to:

1. Provide teachers with a sound content base of the courses at the levels at which they will function.
2. Provide teachers with sound professional skills to make them effective and efficient to guide their learners.
3. Inculcate the qualities of leadership into would - be - teachers to make them able to integrate the school with the community, to create an ecosystem which will make children learn with pleasure, and to prove themselves acceptable to the society.
4. Train teachers in relevant skills so that they can motivate the children they teach in the acquisition of basic skills.

The importance of the fourth aim is instructive in view of its emphasis on the teaching of basic skills which includes among others, information skills.

The second form of teacher preparation is the in-service training which is the training a teacher gets after the initial/pre-services/professional training and while on the job. It is aimed at keeping teachers abreast of development in teaching (Assimonye, 2007) and to clarify and modify teacher's attitude, behaviour, skills, knowledge and effectiveness in instruction, in meeting student's needs, their personal needs and school needs (Arubayi, 2012).

In service training are of different types, according to Assimonye (2007)

1. Off the job raining: This involves employee's participation in training activities outside the school. They include conferences, seminars, workshops, sandwich programme, overseas training, teacher vacation courses, weekend programmes, sabbatical leave.
2. On the job training: This is done by experienced teachers during supervision exercise. They instruct teachers on how best to carry out certain basic responsibilities such as using instructional materials and teaching information literacy.
3. Induction training: This gives teachers opportunities to meet colleagues to learn ideas in order o fit into the classroom.

### **Concept and Objectives of Sustainable Development Goals (SDGs)**

In 2015, the United Nationals launched its sustainable Development Goals (SDG) Agenda to end poverty, protect the environment and ensure prosperity for all by 2030. International organizations such as UNESCO and international Federation of Library Association and Institutions (IFLA) observed that several of the SDG targets required access to information and communication technology as key tenets for attaining their aims. One of the working documents that led to the SDG was the Lyon Declaration. Sponsored by IFLA, it called on library institutions and associations to "ensure that every one has access to information and is able to understand, use and share information that is essential for promoting sustainable development and decorate societies" (Lyon Declaration, 2014). This declaration acknowledges that "access to information" alone is a necessary but sufficient condition for promoting sustainable development and decorate societies. Effective use of information entails the skills which the information professions term information Literacy (IL) competency.

The development agenda of the SDG differs markedly from its predecessor, the Millenium Development Goals by adopting a rights-based approach to sustainable development. It is a comprehensive framework to stimulate all round growth around the globe. It also offers a

blueprint for sustainable political development in Nigeria. In line with the above, the National Council on SDGs headed by the president, in collaboration with the National Steering Committee proposed the following thematic areas for the National Technical Working Group (NTWGs): agriculture and food security, business environment and competitiveness, corporate Governance, culture, tourism and national re-orientation, educational, employment, energy, environment and sustainable development, finance, foreign policy, governance, health, housing, human development, information and communication technology, judiciary and the rule of law, manufacturing, media and communications, mining and steel development, Niger Delta and regional development, political system, science, technology & innovation, security, small and medium scale enterprises, sports development, trade and commerce, transport, urban and rural development, water and sanitation. Each of the thematic areas is composed of about 20 – 25 technical experts who are renowned in their fields.

The rationale for sustainable development is for government and their citizens to engage in innovations that would renew rather than deplete the environment and its life supporting resources. Sustainable living therefore calls for a culture that balance conservation with creativity in information learning systems, the learning outcome of information literacy skills training is beyond the control of the librarian.

Being a democratic institution founded on a mission to empower communities with information for civic engagement, the LIS profession is perceived as a natural partner to the effort of this UN version of development programming. Information Literacy is advanced as a tool with which to actualize the right-based approach to attaining the SDG targets. IL may have become a catch-all phrase for accessing information for problem-solving. Its most developed construct however pertains to the skills of efficiently searching and locating information resources that may be judged most relevant and applicable to resolving problem situations. This task has sometimes been referred to as information research. As the LIS profession in Nigeria seeks to articulate its role in enhancing attainment of the SDG in Nigeria, we need to proffer more research-based studies and data-driven evidence of the model and processes of IL programs that have advanced specific SDG targets in Nigeria.

### **Relevance of IL in Teaching and Learning and SDGs**

Information literacy is an abstract notion which embraces a broad set of skills related to engaging in meaningful ways with others' textual or multimedia information and making it one's own and often representing it for specific audiences (Odigwe, 2017). Information literacy,

sometimes referred to as information skill, covers such skills as library skills, communication skills, study skills, reading skills, and learning skills. All these have one thing in common, the handling of information. Put in another way, information literacy is an umbrella term for the acquisition of information, the retrieval, the organization of information, the interpretation of information, and the communication of information (Malley, 1984). Simply put, information literacy is all about knowing how to find, identify, evaluate, and use information effectively to solve a particular problem or make decision. The importance of information literacy was summarized by Bundy (2004) who described it as the single most pervasive educational issue for the 21<sup>st</sup> century. In 2000, the (US) Association of College and Research Libraries provided the following guide for teaching and assessing Information Literacy skills

- (i) Determining the extent of information needed;
- (ii) Accessing the needed information effectively and efficiently;
- (iii) Evaluating information and its sources critically;
- (iv) incorporating selected information into one's knowledge base;
- (v) Using information effectively to accomplish a specific purpose
- (vi) Understanding the economic, legal and social issues surrounding the use of information and access and
- (vii) Using information ethically and legally (ACRL, 2000).

#### “Unpacking” the Information Literacy Text Box

All human activities, especially problem-solving tasks are premised on the quest for and deployment of relevant information to address needs. Humans therefore acquire from experience habit of looking for and retrieving needed information. Library orientation and instructional programs are devised to facilitate searching of library records and tools such as catalogues and indexes. By outlining logical steps to locate, evaluate and interpret library resources, IL offers templates or models by which, information seeker, especially novices could strategize to locate their needed resources efficiently. IL research has also revealed the range of cognitive, emotive and psychomotor experiences that accompany each stage in the information search process. This knowledge enables mature library patrons to take advantage of such self-knowledge to more strategically adopt “short-cuts” in their search protocols. They also exercise metacognitive control in their search to enhance efficiency and effectiveness. Within the past two decades, IL research has yielded models of information seeking behaviors within or outside of library systems of diverse groups, ranging from primary school pupils, medical researchers and job seekers, for examples.

The question then, is, what kind of learning is enhanced with information Literacy? There is an assumption that IL encourages transformative learning. Transformative learning is learning that changes fixed assumptions and expectations of learners so they become more discriminating, reflective and open to change (Mezirow, 2003). Drawing on the theory of communicative action (Ezeji, 2016), we assume that the IL student reading through resources identified in his/her search “communicating” with the authors of the retrieved library resources. In effect, the student uses his /her frame of references to assess the assumptions, intentions and qualifications of the authors as well as the credibility, authenticity and logic of their writing. Ultimately, the student “negotiates” the text with reference to the nature and goal of the topic in relation to his/her perspective and goal in the information search.

The transformed learner then makes new meaning from reading and seeks to implement this new or “negotiated” understanding in reshaping his/her situation in novel ways. In other words, this reader does not copy or replicate the teacher’s or textbook author’s perspective. Transformative learning is contrasted with Paulo’s Freire’s ”banking concept of education” in which students are perceived as empty heads in which the teacher’s or author’s knowledge need to be deposited as with money in bank accounts. By this concept, students are justified to reproduce the lecture notes as textbooks because they have not engage with the ideas shared in the interaction with the authors or their teachers. Such students might have no need for IL or libraries as their learning have not been acts of cognition but transferals of information. It is expected that the IL experience equips them with the skills and desire for transformative learning by which they become change agents in their course of the SDG.

### **Rationale for Information Literacy in Teacher Preparation**

The teacher uses a number of devices to enhance efficiency and effectiveness of his instruction. These include information resources which can be used to promote and encourage effective teaching and learning activities (Odigwe, 2007). While much information literacy work has been the province of librarians, there is the view that librarians’ sphere of influence are limited. For instance, Behrens (1994) locate the responsibility for information literacy in progressively wider domains involving teachers. Teachers are at the center of the education of pupils and students. They have better knowledge of curriculum, classroom programme, students educational and information deficiencies, abilities and needs (Arubayi, 2012) and resources and strategies needed to address them. They are therefore indispensable in the development of information literacy among the students.

This underscores the need for training in the teaching of information literacy. Such training will enable them to guide the students to acquire relevant study skills, including library use skills, and ICT based skills to access information which abound in various and diverse media and forms. Such training will help teachers in developing strategies to facilitate the movement of their students towards independent research skills. It is important those students are appropriately guided through the process of asking questions, finding appropriate information, identifying needed information when found, using and exploring various information sources, including electronic and conventional sources, evaluating information, and utilizing information to solve particular problems and for life-long learning and development of the individual and society.

Specifically knowledge of the content and method of information literacy and teaching information literacy to pupils and students will among others serve as the key to use of library and other information resources; save time in information search and retrieval; ease the teacher's class work; ensure adequate coverage of the curriculum, & encourage effective use of ICTs. These will consequently enhance independent and lifelong learning (Mole, 2007).

#### **Role of Libraries in Information Literacy Development for Teacher Preparation and SDGs**

The teacher is at the center of the educational system (Odigwe, 2017). He occupies a very important position in the education system (Ezeji, 2016). His utterances, action, leadership style, knowledge of the subject he teaches, and skills in the teaching are considered as important factors having implication for students' learning. Thus, Alio (2005) asserted that successful teaching requires thorough preparation, hardwork and positive attitude towards students. Additionally, effective teaching and learning requires efficient complementary use of information resources including library based and ICT related resources. These resources are used preparatory for class instruction, during class instruction, after class instruction, and for life-long learning. In any case, they complement classroom instruction and makes learning learner centred and more result oriented. It is on the above premise that it is necessary that appropriate information resources for instruction be utilized for effective teaching and learning. Appropriate utilization of relevant library & information resources makes the teacher's role simple and offers the students more realistic approach in what is being taught them.

No problem can be solved from the same consciousness that created it. To attain the delicate balance of the three pillars therefore, the SDG seeks to mobilize knowledge systems across geographical regions and bureaucratic sectors to enlarge peoples' choices, reduce risks and sustain development gains. In 2014, IFLA president Donna Scheeder observed that "there is no truly sustainable development without access to information, and no meaningful, inclusive

access to information without libraries”. In furthering social equity and justice, the FLA project: development and Access to information suggests four factors which influence access to information and its ability to influence the SDGs:

- (i) ICT infrastructure: connectivity to information;
- (ii) Social context of use: local cultural factors that shape how users engage with information;
- (iii) Capability: functional knowledge, skills and resources that shape how information is used or not used;
- (iv) Legal and policy landscape: policy and regulatory frameworks that promote or hinder connectivity, affordability, inclusiveness and right (FLA, 2017).

The LIS profession has played active roles in implementing these guidelines, including teaching IT skills. Academic and research libraries have gone beyond such basic literacy skills training to devise information literacy training to enhance the ability of their clients to research library resources and effectively process their search results into actionable knowledge.

### **Need To Complement The Sdgs With Information Literacy Vision For Effective Teacher Education**

This is an information age. It is an age characterized by an increasing proliferation of information as well as increasing access to information. To survive in this age, students, pupils and teachers will need to be information literate (Seamans cited in Willison & O’Regan, 2005). They will need to know how to find, evaluate, and use information effectively to solve a particular problem or make decision. They will need to recognize their own need for good information, and have the skills to identify, access, evaluate, synthesize and apply the needed information (Bundy, 2004). Simply put, to cope with the challenges of the information age, which among others, include explosion of information in many diverse forms and media including those brought about by modern electronic media, there is need for comprehensive information literacy in Nigeria.

Despite the importance of and need for information literacy, there is little indication that its development is being addressed in a comprehensive way. It has been observed that many students lack experience in information handling and effective independent learning. Studies carried out at Universities around the world show that students are not only entering, but graduating from, universities without information literacy skills they need for continuous learning and to function in the society of tomorrow (Hepworth, 1999).

This poor literacy skills among pupils and students is a result of lack of clear vision, blueprint or roadmap on how to teach and learn information literacy especially at the teacher



preparation level. This has led to many distortions, inconsistencies, disparities, differences, adhoc initiatives and discontinuities in the way and manner information literacy skills are taught and learned. Willison and O'Regan (2005) lamented that there is no clear vision of the path of information literacy development or of how that development can best be fostered.

Information literacy is not linear and once-and-for all. Rather, it is contextual, and continuous life-long, with recursions, up, down and sideways being part of the journey. It does not end at a particular educational level but leads up to the others. It is on the above premise that it has become pertinent to have an information literacy vision to complement the SDGs especially in the area of teacher preparation.

A vision is a clear mental picture of the future which must represent a significant improvement on the current state, supported by a clear and realistic path to its realisation and requiring consistent and sustained effort to its achievement (Abdullahi, 2008). This vision will among others be a blueprint or roadmap for comprehensive development of information literacy which will begin with the training of teachers in the teaching of information literacy. This will among others cover both the content and method of teaching information literacy for teachers from the pre-primary to the post-graduate levels of the educational system. The vision will in addition provide a conceptual and strategic map and, for the teacher and pupil/student, a sense of “my role in the whole”.

The information literacy vision which should be encapsulated in the teacher education programmes in Nigeria and strengthen the SDGs, should cover programme content, design and planning; aims and objectives of information literacy teaching, teaching aids and resources; teaching models and method; learners and information needs, timing and frequency and evaluation. The ultimate aim will be to engender the development of information literacy that will be comprehensive and result oriented.

### **Inherent Challenges**

Visionary as the SDGs may be, Akiyode (2007) raised a procedural concern and asserted that “the agenda is questionable because it lacks specification for structural transformation, and the blueprint does not meet the requirement for a clearly defined vision. Similarly, Oyedobe (2017) argued that if Nigeria wants to achieve the goals, there must be a total overhaul and re-appraisal of all critical institutions in the country. He writes that one of the critical institutions that are in dire need of readjustment and special attention is educational institutions. Abdullahi (2007) also lamented that the problem facing the nation, particularly in education, is neither the

lack of technical know-how, workable and well-intentioned national policy on education nor the lack of capital to adequately fund education, but the failure to develop and implement a clearly defined and articulated vision of education. Akiyode maintained that programs in Nigeria are often poorly conceived, poorly planned and extremely difficult to implement.

Considering the important place of information literacy in the educational system, its critical role in overall educational development of the individual, and the emerging formats and structure of information, what is required is not a mild emphasis, but a comprehensive review for achievement of specific goals.

### **General Recommendations**

1. There is need to review the National Policy on Education with a view to entrenching the information literacy vision in the policy.
2. A policy framework for the actualization of the information literacy vision should be put in place with a view to developing lifelong information literacy beginning from the pre-primary through the post-graduate levels of education.
3. Both pre-service and in-service information illiteracy teaching/training should be given to teachers and teacher - librarians. Such training should address all forms of information literacy.
4. Training in the teaching of information literacy should be provided for in the curriculum of teacher education.
5. Library services (including well situated collections, good reading and study facilities, relevant ICTs and sufficient hours of service) should be made physically accessible in all levels of the education system beginning from the pre-primary schools.
6. A programme of information literacy and information use have to be formulated in which the regular provision of information literacy education must be entrenched.
7. Schools should introduce a curriculum for information literacy and teach it as a core subject to the students in classroom until graduation.
8. Emphasis should be laid on the acquisition of computer proficiency by both trainee teachers, working teachers and students. This will facilitate the acquisition of information literacy teaching skills and information literacy.

### **Conclusion**

One alternative definition of information literacy is 'learning to learn' just as one of the strongly-held tenets of education is that the prime purpose of education in school is to learn how to learn, that is, to acquire a range of skills which presently and in future will enable one to find

and utilize needed information. Yet, studies on information literacy indicate stories of woes and failure in the teaching and acquisition of information literacy. One veritable measure to address this problem and reposition information literacy in Nigeria is to develop a vision of information literacy, otherwise known as information literacy vision. Such vision would be vigorously pursued side by side with the SDGs as a roadmap for repositioning and re-engineering teacher education and preparation in Nigeria.

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