

## **Information Literacies to Transform Societies**

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**Abstract.** Information literacy forms the basis of lifelong learning and also is the basis for evaluating contemporary sources of information. The importance of information literacy is globally appreciated because of its potential to transform lives and societies. The world is in technological revolution which influences everything we do: the way we work, communicate and spend our leisure time. Literacy embraces the comprehensive set of skills needed by individuals to learn, work, socially interact and cope with the needs of everyday life. In the knowledge society, the widespread impact of advanced information and communication technologies (ICTs) on the lives of individuals and societies arouses the need to revise the current perspectives on literacy and to identify and define new relevant literacies. In the era of digital revolution, there is need to develop new forms of media literacy, computer literacy, and multimedia literacy, in addition to reading, writing and traditional print literacies, also known as multi-literacies or multiple-literacies. New media and cultural forms demand novel skills and competencies and if education is to be relevant to the problems and challenges of contemporary life, it must expand the concept of literacy and develop new curricula and pedagogies. Educators need to foster a variety of new types of literacies to make education relevant to the demands of the digital era. As new technologies are influencing every aspect of our society and culture, we need to understand and utilize them to transform our society. Introducing new literacies to empower individuals and group require a reconstruction of the education system to make it more responsive to the challenges of a democratic society. The acquisition of new varied literacies helps individuals to contribute in a novel way to the scientific, cultural, economic, political and social innovations. This paper explores a strong emphasis on print literacy, combined with developing multimedia literacy, computer and information literacies to help reconstruct education and society. The challenges accomplishing this task are also explored.

**Keywords:** Information literacy, information literacies, information and communication technologies (ICTs), multiple-literacies and society.

### **1. Introduction**

We are in a technological revolution that is changing everything from the ways that we work, to the ways we communicate with each other, to how we spend

our leisure time. We are witnessing deep transformative currents related to knowledge and its production and dissemination and we need to understand the pattern of changes in the services provided, especially literary services, with serious positive long-term consequences. This deep transformative current is changing the world as we know it, perhaps in the historically short time of a few generations. The world today boasts of a knowledge society. The quest for knowledge has led to the creation and accumulation of enormous amount of information. This quest for knowledge knows no bounds and limits is never satisfied. In the world today, there has been a full realization that information is the prime commodity of the present age, which continued since the dawn of civilization to the modern age. Infact, the availability of free flow of information brings about knowledge which has great potential to provide impetus for the social, cultural, spiritual, political, economic, scientific, and technological advancement of a nation. The valuable knowledge and information available to mankind needs to be preserved. Libraries preserve and disseminate knowledge and information for use for the present and future generations. Thus, libraries are at immense importance in the knowledge society. Libraries are regarded as purveyor of information, custodian of knowledge and the house of learning and plays an important role in the development of any society by catering for the information needs of millions of people who seek information.

Information is at the core of education, and that it has a democratic, libratory power that will give all members of the society the equality of access to society's power. Implicit in this statement is Freire's goal of social transformation through education. Access to information means an unhindered access to information, which is required at any point in time for individual. Literary involves a continuum of learning in enabling the individuals to achieve their goals, to develop their knowledge and potentials, and to participate fully in their community and wider society (UNESCO, 2004). Literacy promotes training of citizens on the power to use information and information resources. The term information is omnipresent in academic research as well as in everyday life. Words like information society, information age, and information overload are floating everywhere. The handling of digital information requires new cultural skills that are addressed with the term information library. Information library is important due to use vast quantity of information available in the information society. For an individual to be information literate, he must have computer literacy, information technology (IT) literacy, library skills and information skills (Bruce, cited in Pozvanka & Clane, nd.). There is a range of literacies, often combined and at times standing alone, and the ability to use these literacies can affect our academic and life success and career.

Discussion in this treatise, will be treated under these subheadings, namely

- Access to information
- Concept of literacy
- Types of literacy

- Information literacy
- Impact of technology
- Literacy as empowerment
- Role of libraries and librarians
- Challenges

## **2. Access to information**

Information is a basic human right and is absolutely vital in the development of any society. Information is that which is capable of transforming structure, and written or spoken surrogate of knowledge. Information adds some new structures to the existing knowledge base of the recipient; this added new structure being capable of changing the new structure of the recipient (Abdulsalam, Okezie & Agbo, 2013). A vital fact is the right of information which is defended by various international laws related to fundamental rights and freedom. One of such laws include the Universal Declaration of Human Rights (Article 19:1) which states that any person has the right to freedom and expression of opinions. This right includes freedom of opinion without interference from the outside and freedom to seek, receive and spread information and ideas through any means, regardless of state borders. The International Pact on Civil and Political Rights (Article 19:2) states that any person is entitled to freedom of expression, including freedom to seek, receive and spread information and ideal of any kind, regardless of frontiers, in the oral, written, printed form, or by any means chosen and the Convention of Children's Right, adopted by the General Assembly of United Nations on November, 20, 1989 (Article 19:3).

Today, access to information is needed at any print in time for the citizens, since it is a catalyst for social, economic and political development and for good decision making too. Access to information is access to internet and it is a means for overcoming inequality of information in the society (Pozvanka & Clane, nd).

Access to information is referred to as freedom of information (FOI) which refers to the rights of the citizens to access information. FOI supports the universal right to information and knowledge that provides information that is updated, reliable, balanced and appropriate to the needs of the society (Pozvanka & Clane, nd). Access to the right information brings about economic, social and democratic development and equity. Access to information of guarantee every citizen the right to obtain information too.

Access to information ensures that access to all library and information resources regardless of its format should be made available to users. Accessing information invariably means bridging the gap between the developed and the developing countries. As Achitabnimo (2007) put it, information is a link for national development and for any nation to develop, there is need to provide

relevant, updated and adequate information. Individuals need information to develop their potentials through education and training to succeed in business, to enrich their cultural experience and to take control of their daily lives. The concept of information has been generally and universally accepted as a basic resource which all people use to improve their condition of living and essential to economic development of a nation (Manir, 2009). Supporting this view, Opeke (2004) states that information has received a widespread acceptance as the essential feature of production, consumption and exchange of his are where the so force of wealth and power is increasing from information and human mental creativity as compared to physical resources.

Effective information access and use depends on communication facilities available, such as telephones, internet, telex, fax, computers, and even postal services as well as an adequate supply of electricity (Ugah, 2007). With the advent of information and communication technological (ICTs) access to information have changed. In this modern electronic age, people are expected to access information at any point in time with the availability of Internet. The Internet has developed as mode of accessing information, a medium which every person involved in processing, disseminating and retrieving information should explore. With the ICT, libraries can provide the right information for users in the right form and at the right time (Orakpor, 2007). Users can as well go to the library to have Internet access. With the information explosion, more in formation is available in the electronic format and can be accessed any where and at any time through the Internet; thereby making access to information easy and fast

### **3. Concept of Literacy**

The means for creating and consuming information are increasing and evolving today. The amount of information is rapidly expanding while the processes used in qualifying information truth are shifting from centralization to broader civic participation. Although reading and writing are still the foundation of knowledge, literacy in this electronics age means more than the ability to read and write; it requires a complex set of skills including access, analysis synthesis, evaluation, and use of information in a variety of mode (Cordes, 2009). The notion of literary evolved from being strictly for use on the realm of reading and writing skills, to embracing the comprehensive set of skills needed by individuals to learn, work and socially interact and cope with the needs of everyday life, (Lemke, 2005; Lonsdals & McCurry, 2005).

Literacy comprise gaining competencies involved in effectively using socially construed forms of communication and representation. Learning literacies involves attaining competencies in practice in context that are governed by rules and conventions. Literacies are socially constructed in educational and cultural practices involved in various institutional discourses and practices. They evolve and shift in response to social and cultural changes in interest of elites who control hegemonic institution. Thus, literary involves gaining the skills and

knowledge to read and interpreted the text of the world and successfully navigate and negotiate its challenges, conflicts and crisis. Literacy is a condition to equip people to participate in the local, national and global economy, culture and polity (Cordes, 2009).

Education is necessary to enable people individuals to participate in democracy, and thus with out an educated, informed, and literate citizenry a robust democracy cannot thrive. Moreover, there is a vital link between literacy, democracy, empowerment and participation, and without developing adequate literacies, the difference between the haves and how nots cannot be overcome and individuals and groups be left out of the undergoing economy, network society and culture (Dewey, cited in Cordes, 2005). Literacies are cultural constructs closely tied to the technologies both affording and demanding their involvement. In the era of technological revolution in addition to reading, writing and traditional print literacies there is need to develop new forms of literacies – media literacy, computer literacy and multimedia literacies. This is called multiliteracies or multiple literacies. These new forms of literacies demand novel skills and competencies and if education is to be relevant to the problems and challenges of contemporary life, it must expand the concept of literacy and develop curricula and pedagogies.

#### **4. New forms of literacy**

In the knowledge society, the wide spread impact of advance of ICTs on the lives of individuals and societies, arouses the need to revise current perspectives on literacy and to identify and define new relevant literacies (Mioduser, Nachmias & Forkosh – Baruch 2008). Introducing new literacies to empower individuals and groups would require a reconstruction of the education system to make it more responsive to the challenges of a democratic and multicultural society. Kellner (2000) opined that we need multiple literacies for all multicultural society, that we need to develop new literacies to meet the challenges of new media and technologies, and that literacies of diverse sorts including more fundamental importance of print literacy are of crucial importance in reconstructing education for a higher technical and multicultural society and global culture. He further stated that media are altering every aspect of all society and culture, and that we need to understand and make use of them both to understand and transform our world. New literacies introduced will empower individuals as well as groups. The acquisition of more varied literacies would enable individual and groups to contribute in a novel way to scientific, cultural, economic, and social innovations. As we know, literacies are the skills to interpret and use textual and visual media.

Before, we discuss new literacies, it is necessary to give a clear meaning of the term literacy. Literacy is perceived classically as a person's capabilities to read and write, serving to transform thoughts into printed records and vice versa (Murray, 2000). More layers, meaning and perspectives of literacy are given. Snow (2004) gives the varied perspectives for defining literacy in to six main

dimensions, suggested as continuum: **Componential vs holistic** (the view of literacy as an array of necessary skills or as integrated capability centred in meaning making; **solitary vs social**-(primarily an inside-of-the-head process or a collaborative activity with substantive social and political implications) **instructed vs natural**-requiring the passage through successive teaching/learning stages or natural product of living in a literate environment; **functional/technical vs transformation/cultural**- technical capabilities that facilitate functional performance in all kinds of tasks or essential force in the building process of individual's identity and societies cultures; **singular/coherent vs multiple/ varied** (confined to a given set of skills, eg. Those required to pass a reading test or multiple literacies demanded by different readable objects such as a contract, a poem or a bus timetable); **school-focused vs home-and community-focused** (focus on curriculum-based and standardized knowledge or on every day life and multiple social environments naturally constructed knowledge). Integrating these dimensions, each extreme of the continuum leads to defining literacy as either "an instructed skills accomplished by child operating individually, as a technical achievement exercised primarily and most crucially in school settings, analyzable into component skills and unconnected to political or cultural commitments" or "social, community – based, culturally – defined, varied, and potentially transformation" (Snow, 2004)

Skills and competencies needed to navigate and perform in information today make us to focus on a range of literacy. The term multiliteracies is used to broaden approach to include multimodal textual practices, such as linguistic, visual, audio, gestural and spatial modes as well as the idea literacies that were culturally grounded (Cope & Karbantzis, (2000) cited in Codes 2009). Along with and part of this broad framework are the areas of literacy such as technology literacy, spatial literacy, Historical literacy, political literacy, visual literacy, media literacy, information literacy, and multi cultural literacy among others (Abilock, 2008). Other literacies include communication literacy, navigating the infospace, visual literacy, hyper literacy, personal information management literacy, (PIM), coping with complexity, multimodal literacy, media literacy (Mioduser, 2005). Infact, every field of human endeavour have a form of literacy required in the field, as we may hear of mathematical literacy, computer literacy, textual literacy etc.

When discussing new literacies, there are three assumptions that should be considered (Mioduser, et al, 2008), namely

1. That not only in the digital era but at all times, literacy should be perceive as a multifaceted construct, not constrained solely to knowledge and skills related to the written or printed world (Oslo, 1994).
2. That for any epoch, specific prevalent literacy should not be considered as independent and isolated constructs (a set of objectively defined skills), but as a result intricate interactions between individual's

knowledge (inner or within-the-mind-literacy) and the knowledge embodied in technology (Outer or artifacts-embedded-literacy) Mioduser, 2005, Oslo, 1994).

3. That any given literacy is far more than a set of acquired skills-it is first and foremost the person's stance towards knowledge embedded objects of a wide range of types (eg. Textual, visual, haptic), behaviours (eg. Static, dynamic, permanent, valuable), media (print, digital, waves), and semantic status. These premises are important for any discussion on the literacies for the knowledge society.

## **5. Some Major Literacies**

Some of the major literacies will be dealt with in this section, namely, visual literacy, multicultural literacy, media literacy, multimodal literacy, and information literacy. Four literacies – information literacy, visual literacy, media literacy and multicultural literacy will be used as a group that may be thought of as a competent, if not comprehensive description of some characteristics of multimedia literacy in theory and practice.

### **Visual literacy**

Visual literacy – this is the ability to analyze, create and use images, and videos using technology and media to enable critical thinking, communication, decision making and understanding.

Visual literacy is the ability to decode, evaluate, use or create images of various kinds (eg. still, moving, representational, directly recorded), using both conventional and 21<sup>st</sup> century media in ways that advance thinking, reasoning, decision making, communication and learning. Human beings have been generating and reading images for all kinds of purposes from time immemorial as a means for dominating, enhancing, venerating reality or aspects of it, for representing existing reinvented realities, for converting thought and communicating with others; for visualizing natural, social and artificial phenomena and processes under study; for performing formal manipulations with symbol systems that are alternatives to words and number systems (McLuhan 1994; West, 1995). What writing presents to readers a picture presents to the unlearned who behold, since in it even the ignorant see what they ought to follow, in it illiterate need with regard to pictorial representations. As important as visual literacy is, it has no place in formal education. There virtually no instruction in visual literacy in the schools, or out of school. We do not even recognized that learning to look is a processes of stages, just like reading. There is no system by which to teach it either, that is, strategies sequenced that to address the needs and abilities of an individual at a given moment, strategies that eventually allow one to come to terms with complex images (Mioduser, 2008) citing Yenawine)

## **6. Media Literacy**

Media literacy – media literacy is the process of accessing, analyzing, evaluating and creating messages in a wide variety of media modes, genres and forms. It used an inquiry-based instructional model that encourages people to ask questions about what they watch, see and read.

It is important to develop media literacy to critically engage the wealth of media resources that currently immerse us. Media literacy involves teaching the skills that will empower citizens and students to become sensitive to the politics of representations, of race, ethnicity, gender, sexuality, class, and other cultural differences in order to promote critical thinking and enhance democratization. Through the cultivation of media literacy, teachers can discover how to use media to promote multicultural education and to use materials to teach media literacy as well. The argument for developing media literacy as part of standard educational training is that the media themselves are a form of cultural pedagogy and thus must be countered by a critical media pedagogy that dissects how media communicate and effect their audiences and students and citizens can gain skill critically to analyze the media.

Media literacy involves knowledge of how media works, how they construct meanings, how they serve as form of cultural pedagogy and how they function in every day life. A media literate person is skilful in analyzing media codes and conventions, able to criticize media stereotype, values, and ideologies, and thus literate in reading media critically. Media literacy, thus empowers people to use media intelligently to discriminate and evaluate media content, to critically dissect media forms, and to investigate effects and uses (Kellner, 2000). Media culture teaches proper and improper behaviour, gender roles, values and knowledge of the world. One is often not aware that one is being educated and constructed by media culture, thus its pedagogy is invisible and subliminal, requesting critical approaches that make us aware of how media construct meanings, influence and educate audiences, and impose theirs messages and value.

## **7. Multimodal Literacy**

Multimodal literacy: this is the synthesis of multiple modes of communication which can result in a transformation of the singular modes into a form that often contains new or multiple meanings. The multimodal object can require a range of tools, skills, and sensibilities and often reflect both collaborative and individual effort.

This is also known as multimodal information processing literacy, which consists of the skills and knowledge required to understand, produce and negotiate meaning in a culture made up of words, images and sounds. Multimodal literacy will be used to represent a union of literacies in multiple modes. The notion of the interaction between these literacies create an object that is more than the sum of its parts is a divergent perspective from traditional

compartmentalized notion of literacy. Technological literacy permeates each of the four major literacy areas and will be dealt with as a universal component of each area.

Multimodal literacy requires in part a new sensibility, one that promotes a self-responsibility for the acquisition and use of knowledge that is flexible, exploratory, and ethical. The multimodality of the culture derives from:

- a. The need to deal with multiple representational means and forms (eg. Printed words, static and moving images, sound, haptic information, texts, charts or programming code)
- b. The fact that it is accessed from and/or addressed to, multiple information agents (eg, peers, experts, scientific publications, blogs or websites); and
- c. Its use of multiple processing tools, within
- d. Multicultural contexts (Mioduser, et al, 2008).

## **8. Information Literacy**

Since information may be presented in a number of formats, the term “information” applies to more than just the printed word. Other literacies such as, visual, media, computer, network, and basic literacies are implicit in information literacy. Computers have become an integral part of our culture. Information literacy is globally recognized as an essential skill for the information society and is helpful to every person in order to carry out their occupation efficiently and successfully. The handling of digital information requires new cultural skills that are addressed with the term information literacy.

Information literacy (IL) is the ability to locate, synthesize and use information effectively. IL is the ability to evaluate information across an array of media, recognize when information is needed, locate, synthesize, and use information and to accomplish these functions using technology, communication networks, and electronic resources.

Information literacy is the set of skills needed to find, retrieve, analyze, and use information. Information literacy is closely tied to course-integrated instruction but it extends far beyond coordination between the reference librarian and the individual faculty member (ACRC, 2010). Information-literate persons are those who have learned how to learn. They know how to learn because they know how information is organized, how to find information and how to use information in such a way that others can learn from them. They are people prepared for lifelong learning because they can always find information needed for the task or decision ahead.

Information literacy is important due to the amount of information available in the modern society. By being exposed to a great amount of information, do not make people informed literate citizens. They need to acquire skills to learn how to use the information. IL within every day life is connected to searching for,

critically evaluating and using information effectively. In every day life, individuals need useful information for making informed decisions that are of significant value to them and their communities around citizenship, health, well-being, and generally their overall quality of life. As Anator & Filson (2004) put it, IL is a social need and access for effective use of the huge amount of information in today's information society. Hence, having IL skills enables the individual to become literate in the society.

Effective action of the citizen is possible only when citizens know how to gain access to information of all kinds and have the skills to become responsible, informed participants in democracies. If the concept of information literacy or better information literacies as reduced to written information but included the ability to deal with all forms of digitized information as well as learning how to handle digital codes and devices, then it should play a key role in the education sector (Limberg, Sundin & Talja, 2012). It would be pedagogically misleading to understand IL skills as dealing only with skills without learning also a critical appraisal of possible misuses. Responsible practices with regard to blogs, apps, e-mails or social softwares should be taught in schools no less than the creative use of the web for learning processes and political participation.

Information literacy skills are required in all areas of society but each area has its own standards, risks and objectives. In a globalized world information literacies deal with learning how, why, how far and to whom we reveal or conceal who we are in a digital environment with regards to specific situations and cultural traditions (Capurro, Eldred & Nagel, 2013). The world is not only readable but also writable, as Blumenberg's metaphor suggests; in both case, it is digitally and socially interactively 'informed' today. We should be informed so as to inform others using digital media. The foundational metaphor of this use is the digital interface and more the book. (Illich, cited in Trende (2018).

Multicultural literacy – this ability to acknowledge, compare, contrast, and appreciate communities and differences in cultural behaviours, beliefs, and values within and between cultures.

Communication literacy “this relates to the skills required for mindful knowledgeable and ethical use of a wide range of communication means using multiple communication channels (eg. Verbal, written, visual) in various interaction configurations (eg. One-to-one; one-to-many; many-to-many) for different purposes, (eg. Social interaction, team work, collaboration, creations, media consumption and or production)

Navigating the info space: this literacy relates to the ability to know when and why there is need for information, how and where to find it and retrieve it from the vast info space; and how to decode, evaluate, used and communicate it in both an efficient and ethical manner.

Hyperacy: this is the ability of the people to deal either as consumers, or producers with non-linear knowledge representations. The visible layer of this literacy relates to skills involved in either recreating and using features such as links among knowledge units or navigation aids.

Personal information management literacy (PIM). PIM is the process by which an individual stores his/her information items (eg documents, email, web favourites, tasks, contacts) in order to retrieve them later. PIM is a fundamental aspect of people's interaction with computers where they manage information items daily. PIM arose as a result of the increase of vast amount of information the users of computer need to handle.

Coping with complexity: this is the literacy that encompasses the skills and methods needed to perceive phenomena as complex (eg. Recognizing multiple actors or multiple layers, or emergent behavioural patterns) to study and understand these phenomena (eg. Devising multiple and alternative strategies, building and activating models) and to implement the gained understanding for coping with them.

## **9. Impact of Technology**

A key feature of the knowledge or information on society is the obvious fact that technologies, specifically information and communication technology (ICT) are the core of the transformation taking place. One can claim that this is not new to history, and that all technological developments of the past triggered important social change (Oslo, 1994). It is universally accepted that this change in perspective is closely related to the vital changes in the life of the individuals and societies emanating from the recent developments in information and communication technology (ICT). There is a symbolic interaction between ICT and the emergence of new literacies (Mioduser, et al, 2008). As earlier state all these new literacies utilize technology and as such technology is emersed in each of them.

We are in a technological evolution that is changing everything from the ways that we work, to the ways we communicate with each other to how we spend our leisure time. The technological revolution centres on information technology, and is often interpreted as the beginning of knowledge society and therefore ascribe education a central role in every aspect of life. This transformation passes tremendous challenge to education to rethink the basic tenets, to deploy the new technologies in creative and productive ways, and to restructure schooling in the light of the metamorphosis we are now undergoing (Kellner, 200). New technological are altering every aspect of our society and we need to understand and utilize them both to understand and transform our world. As technologies continue to move ahead, so too must the educational system that is saddled with the job of ensuring that our children are ready to become effective members of the society when they leave school.

The Internet has become the main vehicle through which people access information on the web. Internet spans the globe, connecting government, educational, commercial institutions and private individuals and has reduced the whole world into global village. Internet has become the most popular way to locating and retrieving information, very useful in allowing users to access vast quantities of information and communication with every one around the world. One can complete writing a research work without visiting the library building. It is a major learning, teaching, and research tool for a community to interact with no matter the remoteness of the societies. It is one of the new and emerging technologies that have tremendous impact on how human activities are conducted.

Ojedokun (2011) pointed out that the Internet has broken down barriers of communication and information access from anywhere in the world. He maintained that Internet allows the user to have access to updated information on social, economic, political and development. IFLA (2002) proclaimed unhindered access to all which is essential to freedom, equality, global understanding and peace. Public libraries, in particular, provide essential gateways to the Internet, for some, they offer convenience, guidance and assistance, while for others, they are the only available access point (Pozvanka & Clane, n.d.)

Digital divide with lack of access to digital information exists between countries with nationwide coverage of Internet and those with less or no access. This gap is also relevant to within the so-called information rich society and is both technical, cultural, educational, as well as political. The Internet is subject to censorship in many countries and can be used as instrument for surveillance and social control and at the same time, offers new possibilities for a better life as well as social change (Coenen, Hofkirchner & Nafria, 2012).

Indeed, one could argue that in the new ICT environment, traditional print literacy takes an increasingly importance in the computer mediated cyber world as one needs to critically scrutinize and scroll tremendous amount of information, putting new emphasis on developing reading and writing abilities. For example, Internet discussion groups, chat rooms, e-mail, and various forms require writing skills in which of new emphasis on the importance of clarity and precision is emerging as communication proliferate. In the context of information saturation, it becomes an ethical imperative not to contribute to cultural and information overload, and to concisely communicate one's thought and feedings.

### **10. Literacies as Empowerment**

There is need to cultivate wide range of types of multiple literacies to deal with the exigencies of the cultural and technological revolution that we are involved recently ranging from computer literacy to multimedia literacy to new forms of cultural literacy. Such concerns are part of a critical pedagogy that summons

educators, students and citizens to rethink established curricula and teaching strategies to meet the challenges of empowering individuals to democratically participate in our increasingly multicultural and technological society (Kellner, 2000). The gaining of skills in literacy development multiplies the opportunities for learner's self directed learning as they become engaged in using a wide variety of information sources to expand their knowledge, ask questions, and sharpen their critical thinking for still further self directed learning.

The mastery of literacy practice embodies a philosophy of living that reflect the different ways in our culture that humans develop knowledge about themselves, and which can ultimately affect the development of the human potential. This new idea can be represented in what Foucault calls "Technologies."

Foucault's Technologies

Foucault's technologies explain the different ways in our culture that human beings develop knowledge about themselves, namely

1. Technologies of production which permit people to produce, transform or manipulate things,
  2. Technologies of sign systems which permit individuals to use sign, meaning, symbols or significations,
  3. Technologies of power which determine the conduct of individuals, submit them to certain ends or dominations, an objectivising of the subject, and
  4. Technologies of the self, which permit persons to affect their own means or with the help of others, a certain number of operations on their own bodies, and souls as to transform themselves in order to attain a certain state of happiness, purity, wisdom, perfection, or immortality (Foucault 1988 cited in Cordes, 2009). He further stated that Foucault's Technologies show the ability to use and create information given certain technical and social factors which include the idea that performance of these activities requires prior knowledge and disposition which is culturally and historically tampered and is a means of self improvement or the caring of oneself. Foucault's technology can be used in library and information work.
- In the library, information products produced from "raw" information is by librarians and patrons through the manipulation of information using analog (scissors, flip chart) and digital tools (database, presentation software)
  - These information products are highly symbolic, given to represent a mode (modes) of text (paper, video, chart, report), with specific goals and audiences (student paper, library promotional video, committee chart, library plan), this includes the idea of semiotics and communication required of for the activity.
  - There is a type of or domination that constrains each technology, including individual ability with tools to create information, the ability to communicate information in a variety of modes, power balances

between roles in the system, and the influence of cultural and historical forces (including effects of digital divide)

- Performance of these activities often requires cognitive, physical and affective pre-disposition, in turn outcomes of the activity can lead to a transformation in the participants.

### **11. Roles of Libraries and Librarians**

Libraries of all types support the development of the information skills of the individuals through education and partnership thereby encouraging and supporting learning at all times and at all levels of education. Library are viewed as agencies through which sources of information of accumulated knowledge and experiences are selected, acquired, organized, preserved, and disseminated to persons who need them. It is important to preserve and maintain the valuable knowledge and information contained in books and documents for posterity so that future generations can benefit from them. This unique function of the library to acquire, organize, offer for use and preserve publicly available materials irrespective of the form in which it is packaged (print, cassette, CD-Rom, network form, etc) in such way that when it is needed, it can be found and put to use, makes library a treasure house of knowledge. No other institution carries this out long term, systematic work (Sighn & Uttam, 2012).

Library can be an important tool for transforming educational system in Nigeria. Okiy (2015) pointed out that education involves the development of the whole person intellectually, psychologically, socially, vocationally, religiously and morally. The library provides the information resources that are used in training by established schools from the basic level of education to the tertiary level. Umar (2004) further stated that the library represent the unfiled programme involving the use of audio visuals, printed resources, and tools necessary to satisfy educational needs and recreational interests of students and teachers with the aim of offering support and enrichment to the school curriculum.

Libraries support the development of information and media literacy skills. In the light of social and technical changes, the ability to meet up with the challenges of the future rest with the library as organisation, ourselves, the information professionals, and the role of the library patrons. The struggle to master knowledge is loosely self written. Some implications are involved in the relationship between people and information. The ability to use information successfully in a variety of forms is paramount to success in the modern classroom and workplace. Libraries offer real and virtual civic spaces, where citizens can speak freely, share similar interests and concerns, and pursue what they believe are their public's interest. Ultimately, free discourse among informed citizens assure civil society; and civil society provides the social capital necessary to achieve common goals. Through this role, libraries prevent the lack of information and exchange of ideas which in a closed society stifles creativity, suppresses the imagination and creates barrier to social, economic and technological progress (Limberg, Sundin & Talja, 2012).

Technology, economy, and politics are forces that are changing the world as we know it and our communities at fast pace. Libraries are embracing these changes and have different strategies for maintaining and increasing their relevance to the communities. Maker spaces are just an example of how libraries facilitate innovation and actively support creation of knowledge in the modern world. But to embrace change and to be a driving force for that fast changing community need, librarians must have skills, to discover and drive change.

Librarians face new roles in the computer dominated electronic environment. As a change agent responsible to diffusing new technology, they must bridge the gap between technology and the end user in a manner in which the end user is enabled to use effectively and efficiently the available technologies. To achieve this proactive role, librarians should be familiar with the technology, provide bibliographic instructions, and assist users in addressing information needs and evaluating the relevance of retrieved information. They should also be educators, directing, guiding and educating users to use these technologies effectively to retrieve information. However, rapidly evolving information technology has changed the ways in which information is stored, preserved, retrieved and managed. Due to this change, librarians to meet the information needs by bringing the gap between the new technology and the library users. Librarians, therefore, need to understand and adapt to these innovations.

The task of the modern librarian is to be able to use and disseminate the information in many formats other than print and as such he/she should be acquainted with the use of all media, including digital and social media. To achieve this task of providing knowledge, librarians should be proficient in using these media.

According to Foucault's technologies, power influences the ability of the individual to transform. Libraries and librarians have been the custodian of knowledge. Due to technical and cultural change, the library users have increased demands on libraries with respect to facilities, services, and what should be done with both. The culture of technology has increased the struggle by both librarians and the library patrons to transform. Libraries master new literacies and technologies to help enable these skills in the patrons users and patrons does work with the librarians to empower themselves through access to symbolic information to create objects. In the way, the library becomes a community of interaction where patrons can transform themselves into a more literate state of being. This is true for library professionals who must meet this demand to remain viable in the workplace, and to ensure future generations are able to use information effectively. It is also imperative for users, whether undergoing coursework, searching for a job or retraining for a new career.

## 12. Challenges

Information and technology skills are the few 'basics' and being able to find and use information effectively is essential to the success of students of all ages. In order to provide our students with adequate skills needed to function in life, some challenges are met, namely:

- Absence of functional literacy in the curriculum of our schools, from the basic to higher levels of education. This is obviously seen in the little knowledge of literacy and search strategies or lack of it shown by students as they enrol in higher education of learning.

Other barriers to acquisition of these skills include,

- Lack of IL policies, programmes and projects in our schools,
- Lack of facilities such as computers, Internet services, alternative power supply, etc,
- Lack of funding,
- Lack of understanding of IL,
- Inadequate qualified staff to teach literacy (IL) in schools,
- Lack of interest by students, staff and library management,
- Non-challant attitude of students towards attending IL session, etc.

## 13. Recommendations

From the foregoing discussion, it is clear that modern literacies have broadened in scope, is led by technology, have the potential to transform and requires long-term commitment on the part of the stakeholders, - the educators, libraries and librarians, library patrons, students and the entire citizens. It is also noted that the acquisition of these literacies will enable the people to know how to gain access to information in all format and have the skills to become responsible, educated, informed, and empowered citizens and participants in democracy. To achieve this, the following recommendations are made:

- Heads of schools, institutions and establishments and governments at all levels should provide necessary facilities - computers with stable Internet access, regular power supply, adequate funding, training of staff on the new literacies and information technology to acquire the necessary skills to train others.
- There should be collaborative approach to curriculum development among classroom teachers, librarians, technology teachers and other educators and policy makers, administrators and government agencies to ensure IL policy formulation and implementation.
- Staff must be encouraged to work together to analyze students' curriculum needs, develop a broad instruction plan, set information literacy goals, and design specific units and lessons plan that integrate information skills and classroom content. These educators can also collaborate on teaching and assessment duties.
- Library management has to make changes and innovations in the functions and roles of libraries for the ultimate benefits of its users.

Many scholars have noted the role of librarians in the change process as champions of library technology.

- With availability of online databases, and users need special training in their use, librarians should become more concerned about teaching students in using library, information and technologies. The faculty as well should be involved in guiding and helping them in using electronic environment.
- Librarians must support teachers' role by building information skills and discovering how to integrate them into the course. In this context, the librarians should encourage the faculty in the establishment of learning priorities which ensure that students develop the abilities that will allow them to be information independent in the digital world. This collaborative effort will make teachers/lecturers to include information literacy skills in assignments and assessments, looking at ways that they can develop them in their students.
- Information literacy curriculum content should entail problem based, inquiry based and resource based, make effective use of instructional pedagogies and technologies and is integrated and articulated with a discipline's learning outcome. Infact, it is best enhanced when it is integrated into the curriculum.

#### **14. Conclusion**

In a period of technological change and digital revolution, educators need to foster a variety of new types of literacies to make education relevant to the demands of this period. New technologies are influencing every aspects of the society and culture and we need to understand and utilize them to transform our society. A major method of fighting social exclusion is education and professional activity. In the context, we mean the provision of literacy and media education at the primary school level, and technological information at secondary and tertiary levels of education to enable one skilfully move through the tangle of information which one encounters during each stage in life.

The library is a change agent and as a change agent, it serves to form the individual into a responsible citizen. Librarians have become increasingly more concerned about the ideas for people to gain information skills so that they can be successful in the information society. The librarian actually participates in the process of searching for information. It is worthy to note that it is not technologies themselves that bring about change, transform individuals and societies but the personnel – librarians who utilize the technologies as a strategic resource to innovate library infrastructure, system, services, and resources and who assist the users in the effective use of technology that makes the difference and transform the society. The librarians should be part of the process to inform and empower learning with technology that enables the uses to access information in its many form and formats –real or virtual – and check effectively and responsibly. In this era of information processing,

communication, and the knowledge industry, the librarian participates in building a new society.

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