Abstract
The aim of this paper is to identify the roles which university librarians can play in promoting information literacy which has been identified as the basic requirement for learning and survival in the present information and communication technologies (ICT) era. The necessity for this work is based on the concern that there is prevailing information illiteracy among the stakeholders of the Nigerian universities which is evident not only in the lowering competence of Nigerian university graduates but also in the inability of the universities to compete favorably with universities in other countries of the world, especially in terms research output, irrespective of the ICT and globalized environmental realities. A literature-based research approach was adopted for this study. First, the nexus between information literacy and learning in the context of technological changes and the emergence of information society was highlighted. The next approach was to identify the various roles of the library in promoting information literacy including the challenges inherent in the process. The paper argued that the university libraries are strategically positioned to advance the course of information literacy through providing resources as information systems, acting as change agencies through advocacy, fostering collaboration in information literacy, playing advisory roles and involvement in staff development for information literacy. Major issues identified as challenges include, staff development/training and lack of institutional policy for information literacy. It is recommended that the universities’ administration and the National Universities Commission should promote information literacy by including it as a requirement for university education and integrating it into the academic program of the Nigerian universities.

Introduction
The most striking outcome of the evolution of the electronic age, emanating from the introduction of information and communication technologies (ICT) is globalization, which has turned the whole world into a global village. As pointed out by Marshal Mcluhan to whom the term global village is attributed, the electronic age is turning all humanity into a “global tribe”, resulting to various kinds of global connections in culture, governmental policies, economies, politics and education (Ogunsola, 2004). Globalization is further described by Salamu (2008) as international integration or a process by which the people of the world are unified into a single society, functioning together.

At the center stage of ICT revolutions and globalization are constant changes occurring in societies in almost every sphere of life culminating to emergence of information society. To keep abreast with these changes, individuals do not only require information but the ability to manipulate technological infrastructures necessary for adaptation in the new global information society. This implies that individuals do not only need to know how to manipulate the computers, browse the internet, use CD-ROM, printers, scanning machines and other electronic resources that make up the ICT resources but how to locate, identify and effectively make use of information for improved functionality and societal survival.

Information literacy which has been defined by the American Library Association (1989) as a set of abilities requiring individuals to recognize when information is needed, evaluate and use effectively needed information has been identified as a factor for survival in the present dispensation. It is an instrument which equips an individual to take advantage of opportunities inherent in the global information society (Doyle, 1994). Information literacy is further described by Virkus (2004), while citing Bruce (2002) and Bundy (2003), as absolutely the critical literacy for the 21st century and a pre-requisite for participative citizenship, social inclusion, and the creation of new knowledge, personal development and learning for life.

The challenge facing the educational sector in the present dispensation is how to develop strategies and policies for designing learning opportunities that will enable learners to take advantage of the information and communication infrastructures to become independent lifelong learners, who can access, evaluate and effectively use information (which is the major instrument for adaptation in the new information age).
The university library has an enhanced potential to support the university in achieving the above aim. This is because the impact of ICT is mostly felt inside the library which is regarded as the engine room of the university.

Given the fact that information literacy is poor among the people, even though we operate in an ICT and globalized environmental realities, the work is therefore aimed at articulating the roles of the university library in fostering information literacy for effective functioning of the stakeholders of the university in the ICT and globalized environment. The following major issues are of concern to this article.

1. Information literacy and learning in ICT environment.
2. Library and information literacy.
3. Issues and challenges of the library in information literacy development.

**Information Literacy and Learning in an ICT Environment**

Information literacy has been identified as the basic foundation of learning in an environment of technological change with the abundant digital information. Bruce (2002) has pointed out that the rapid development of information and communication technologies and the complexities of the information environment have brought about the realization that learners need to engage with the information environment as part of their formal learning process. In addition, new skills are needed in the digital work environment throughout a person’s life time and this has made life-long learning central to achievement of personal and societal development. Emphasis on life-long learning requires a paradigm shift from traditional learning approaches to resource-based and problem-based approaches requiring information literacy. By this approach students are enabled to transform information into knowledge and wisdom (Virkus, 2004), their performances in formal learning settings are enhanced as they are encouraged to learn independently. Commenting on the need to promote information literacy as an integral part of the learning process, Virkus (2004) citing Todd (1995) and George and Luke (1995) argued that an integrated information literacy component in learning would have positive impact on students’ mastery of context, fulfilling research tasks and problem-solving, becoming more self directed and assuming greater control over their own learning, enabling individuals to engage in a variety of learning situation and opportunities in optimal ways.

The above argument clearly gives credence to learning with resource rather than what one may call abstract learning where learners are meant to take down predesignated information from lectures or prescribed texts. Bruce (2002) has painted a picture of a new model of learning complemented by information literacy thus: “Learning that is based on information resources of the real world and learning that is active and integrated, not passive and fragmented.” Bruce further asserts that what is called for is not a new information studies curriculum, but a restructuring of the learning process; where text books, workbooks and lectures must yield to learning process based on information resources available for learning and problem solving throughout people’s life time.

The above contentions highlight some ingredients of learning in the context of ICT and globalization and supported by information literacy, which correspond to the four pillars of learning propounded by Delors in 1996, now regarded as the proposed foundation for education in the 21st century (Bruce, 2002). The four pillars include,

1. Learning to live together –supported by the use of real world learning resources where the application of ICT in classroom link students to the rich histories, cultures, and traditions of the world, thereby bringing the world into the classroom.
2. Learning to know –seeking out knowledge from the abundant range of resources and developing a critical appreciation of the relative value of those resources.
3. Learning to do –through curriculum that exposes learners to experiences designed to introduce them to the kinds of information practices that support professional, civic and personal life.
4. Learning to be –supported by development of critical and creative thinking that helps learners to appropriate information in a useful and responsible manner.

Analysis of the above pillars of learning shows that application of information literacy principles would help the learner to have a knowledge of what is happening around the world in terms of
existing of information; develops in him the ability to identify, access and evaluate required information, including the ethics of information use and skills in critical analysis of information. All these would help the individual to make use of information for his own benefit and the benefit of others.

The realities of the paradigm shift in learning supported by abundant information resources as highlighted above has resulted in a number of views about learning in the context of information literacy. Bruce (1994) presented a number of emerging views of learning adapted from Kirk and Todd (1993) which when juxtaposed on the traditional view of learning highlighted the need for information literacy as indicated in the table below.

Table 1: Emerging views of learning and information provision that supports information literacy (Adapted from Bruce, 1994)

<table>
<thead>
<tr>
<th>Longstanding views of learning</th>
<th>Emerging view of learning</th>
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<tr>
<td>Emphasis on learning contents, acquiring a body of right information once and for all.</td>
<td>Emphasis on learning how to learn, how to ask questions, to be open and to evaluate new concepts, how to access information, what is known may change?</td>
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<td>Learning is a product, a destination</td>
<td>Learning is a process, learners make decisions about their learning and are encouraged to be autonomous and independent learners</td>
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<td>Classroom designed for teaching efficiency and convenience.</td>
<td>Learning context and establishing an environment that encourages confidence; self reliance and responsibility are important.</td>
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<td>Often learning needs are not bureaucratically determined, resistant to community input.</td>
<td>Concern for the environment of learning that is responsive to the needs of learner. Community input is encouraged.</td>
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<td>Teacher imparts content, a one-way street, teaching is talking, learning is listening</td>
<td>Teacher is a facilitator of learning, a learner too, learning is a shared environment where candor is permitted, students and teacher see each other as people not roles.</td>
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<tr>
<td>Information is viewed as objective, bricks of information with constant meaning.</td>
<td>Information creates meaning and understanding, enables persons to make sense of their situations, meaning varies from person to person</td>
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<td>Agency functions as a channel between information source and user, emphasis on delivery/transfer of information-getting information into the hands of the users.</td>
<td>Information user is actually involved in information transfer and does something with the information to satisfy needs; emphasis on user doing something with the information.</td>
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<tr>
<td>Users of information are passive recipients of information.</td>
<td>Users are information processors and decision makers; they initiate information needs, information needs exist within users as gaps in knowing.</td>
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<td>Libraries designed as store rooms for books, convenience of storage rather than convenience of users.</td>
<td>Libraries are part of vast information infrastructure to meet users’ information needs.</td>
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<td>Passive approach to the development of service tailored to specific information needs; little feedback from users on appropriateness of resources.</td>
<td>Collaborative approaches between all sectors of the information infrastructure to develop services to meet needs; feedback is essential</td>
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From the foregoing it is evident that information literacy transcends knowledge of the use of the library. It encompasses learning in its holistic form and should be regarded as a fundamental
principle of learning founded upon some of the oldest goals of education—to inculcate a spirit of critique and independence of mind (Angeley & Purdue, 2000). This now leads to a discourse on the roles of librarians in fostering information literacy.

The Library/Librarians and Information Literacy

It has already been argued that the library, which is described as the heart of the university, is strategically positioned to play a major role in promoting information literacy. Services of a university library cut across the entire campus spanning all disciplines. Hence, William and Zald (1997) assert that librarians are uniquely situated to create and foster new ways of teaching and learning information technology. This implies that in the present era of information explosion and constant technological changes, librarians should see themselves as crusaders and agents of change. As posited by Fowell and Levy (cited in Williams & Zald, 1997), information professionals have the opportunity to take a leading role in developing and delivering the learning support strategies which will be appropriate to this new environment, acting as significant culture change agents in their institutions. A number of roles have been identified for librarians in line with the principles of information literacy, to include, roles as information systems; agents of change; agents of collaboration; teaching, staff development and advisory roles.

As information systems, the library is described as the university information access point. It is charged with the responsibility of acquiring, describing and making available information in a variety of formats, principally in print and electronic forms. The contemporary library is not only seen as a repository of information and a place for quiet contemplation but also as a dynamic gateway to information. The library provides an active laboratory for students and faculty to explore, navigate and retrieve information both locally and virtually (Angeley & Purdue, 2000). In addition, the library is required to provide the necessary resources needed for actualization of the aim of restructuring of the learning process towards resource-based learning. In the opinion of Bruce (1994) the nature and range of resources and media which need to be available and accessible must match the resources and media with which staff and students should potentially work outside the institution.

Equally important as an information system, is the Librarians’ role as agents of change. The role required of the Librarians as agents of change for promoting information literacy is primarily a leadership role. From the view of Rader (1990), libraries are expected to show demonstrated leadership through the initiation of information literacy programs, promotion of information literacy through newsletters, and annual reports, developing a program of principles, goals and objectives and developing strategies for effective evaluation of learning outcomes.

Advocacy has been identified as the instrument for effective leadership in this regard. Hunt and Birks (2004) have argued that librarians’ advocacy is needed especially in a university environment that is uninformed, indifferent and occupied with other priorities. Advocacy is much more required in Nigerian situation where many of the universities have appreciated the need to acquire technological infrastructures for provision of networked information without any policy framework that supports information literacy development for both staff and students. Bennett (2007) has noted that administration depends on experts in every discipline to inform them of changes in their field. Thus librarians stand a better chance of winning the support of the leadership in any innovation taking place in the field of information.

Attracting administrative support in this regard would serve the following purposes:

1. Mission statement of goals and objectives related to information literacy.
2. Providing training programme designed to equip staff with skills needed to teach information literacy to students
3. Inclusion of information literacy at various levels of the curriculum and the academic structure.
4. Encouraging partnerships between faculty and information professionals in developing students’ information literacy.

Related to the leadership role of the library in information literacy is the issue of fostering a climate of partnership between the faculty and other information professionals. This partnership entails the interaction of the knowledge, experience and skills of professional educators, academicians and information professionals. Collaboration has been described as a very important
factor for best practices in information literacy. According to Bruce (2002), it fosters sharing of ideas, expertise and provides opportunities for exposure to different pedagogies and teaching/learning techniques, enabling colleagues to become familiar with each other’s field. Such cooperation is described by Breivik (1994) as a partnership between stakeholders with pedagogical expertise, subject expertise and expertise in information organization and technology. Role relationships exist in information literacy collaboration. Graffenh (2002) identified the role of the library as mainly teaching generic information literacy skills while the faculty is responsible for imparting those skills that are embedded within the research paradigms and procedures of their disciplines.

Teaching of information literacy by Librarians is not only limited to students but also involves staff development. Staff involved in teaching of information literacy need to be trained on how to implement information literacy education. In addition, both staff and students need to be educated on the principles of effective use of information. Hence continual updating of skills and knowledge about the world of information is very necessary in information literacy. Based on this Bruce (1994) has recommended that librarians should also design a programme for educating the staff and students in principles and practice of information retrieval, management and use, in line with technological changes.

Effective implementation of the programme of information literacy requires the advisory role of Librarians. Positive learning outcome in information literacy requires the teachers’ understanding of what students require to learn, how best they can learn it and how to evaluate what they have learnt. Lecturers and course coordinators need to be advised on these matters. This could be achieved through organizing workshops on integration of information literacy in the curriculum, close liaison with or mentoring of interested faculty; establishment of network of teachers interested in information literacy, among others (Bruce, 1994)

Issues/ Challenges of Fostering Information Literacy by Librarians
The library’s success in actualization the enumerated roles for information literacy depends on two basic issues: staff development/re-skilling and availability of institutional policies for ICT infrastructure and information literacy.

The issue of staff development is expedient for fostering information literacy. The constant technological changes of the new information society require training and continual retraining for renewal of skills of the library professionals. Roseroka (nd) has identified inadequate/ outdated skills held by most library professionals as one of the constraints facing African university libraries in meeting their technological emerging roles. Realization of the leadership position of the library in the exploitation of opportunities offered by the global electronic information exposes the need for developing the technological skills of the librarians. This is important especially when it is appreciated that they are expected to train other stakeholders in the skills of exploiting information for societal survival in the new information environment.

Recognizing the need for fostering information literacy and the significance of ICT in the contemporary world of learning does not only require the training/re-skilling of Librarians and other professionals but most importantly, requires a university level institutional policy on acquisition, maintenance and upgrading of information technology (IT) infrastructures. Most universities in Nigeria have the policies in place but in some cases the library and information infrastructural needs on IT usage, maintenance and sustainability are not yet guaranteed.

Of fundamental importance also are institutional policies and guidelines in support of the adoption of information literacy and its integration in the overall academic curriculum of the university. Most universities are yet to recognize the importance of making information literacy an institutional priority. This is why many universities in Nigeria are yet to emulate their counter parts in other counties of the world like South Africa, Botswana, United Kingdom, United States and a host of others who have made giant strides in the course of promoting information literacy.

Conclusion
It has been established that learning in the present dispensation of ICT and globalization to a large extent depends on information literacy development. The paradigm shift in learning from
the traditional approach to resource/problem based approach has clearly indicated that without information literacy, the 21st century learning will not be able to produce individuals who would be able to survive independently.

To achieve the above feats, libraries and librarians have been identified as being strategically positioned to play a leading role in promoting information literacy through advocacy, advising, fostering collaboration and developing the skills of stakeholders. Lack of requisite skills and non availability of institutional policy framework on ICT infrastructure and integration of information literacy in the overall curriculum of universities are the major challenges of fostering information literacy by libraries in the ICT and globalized environment.

There is no doubting the symbiotic relationship existing between information literacy and learning in the present ICT dispensation. It is pertinent that Nigerian Universities' administration should embrace information literacy as an enabling tool for learning by integrating it into the academic curriculum. It is also necessary that the capacity of staff should be enhanced through training and retraining programmes. Such programmes would ensure that both faculty and information professionals have sufficient ICT skills to train students in electronic information handling. The National Universities Commission (NUC) should encourage the universities in this regard by including information literacy development as one of the basic requirements for university education in Nigeria and enforcing its inclusion in the mission statement of universities.

References
Bruce, C. S. (1994). Information Literacy Blueprint. Griffit: Division of Information Services, Griffit University