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Shut Down the University! - The ultimatum for quality undergraduates

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Abstract: This empirical study examines the fundamental requirements to achieve an effective information literacy (IL) programme in a developing country such as Nigeria, where university lecturers embarked on an industrial action for six months (in 2013) to press home their demands, among others, of preparing undergraduates to be fit for the twentieth century workplace. This study is concerned with investigating if the situation in colleges is also in dire states, specifically focussing on the issue of information literacy practices of teaching staff at the Colleges of Education. An information literacy at the workplace model was formulated through a systematic critical review of the literature. The model was then verified through grounded data from participants who are lecturers at the College of Education. The study used an inductive approach using rich data from interviews, focus group discussions and observations between July, 2013 and January, 2014. Data analysis of the interview transcripts was done manually and results were mapped to the proposed model. Results show that: (1) academics hold divergent perceptions of IL based on their field of study and (2) the information infrastructure on campus does not encouraged IL practices. Some of the recommendations of the study include: (1) improved capital development of lecturers in colleges of education and (2) high investment in education to improve the information infrastructure that would contribute to the effective development of information literacy (IL) skills programmes for the undergraduates. Apart from the contribution towards the theoretical model, this study has also created a platform to further scientific growth in IL practice and research.

Keywords- Workplace information literacy, IL models, developing countries, information infrastructure, Nigeria

1. Introduction

'Quality undergraduates' is the vision of every nation as they are presumed to be equipped with the competencies and skills to take informed decision in the workplace to gain competitive advantage, facilitate learning/research and development in academic institutions, coordinate activities to improve quality of

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life in the community and above all, position the society as a model among comity of nations. While the American Library Association's Presidential Committee Report on Information Literacy (ALA 1989) describes these types of undergraduates as information literate persons, there has been no consensus on how to groom these undergraduates (Lloyd 2010) in line with the various definitions and conceptions of information literacy (IL). Some are of the opinion that IL is behavioural in nature, as such become a cognitive set of skills and competencies that facilitate learning (ALA 1989, Doyle 1994, ACRL 2003, Bundy 2004,) while others argue that the context of learning prefigures how information literacy will be experienced and co-participated, thus describing IL as a socio-cultural practice (Kapitzke, 2003, Lloyd (2007) cited in Lloyd (2010), Dorner and Gorman 2011). The ALA definition and IL model suggested for higher education by ACRL have their limitations for not considering the socio-cultural environment of the learners. It could be argued that the definitions suits learners from information societies where access to information and digital resources is not as difficult as in a developing countries like Nigeria, where the university lecturers had to embark on a six-month industrial action to force the government to improve the learning conditions in public universities (ASUU 2013). Lloyd's (2007, cited in Lloyd, 2010) definition seems more appropriate as she argues that the environment of the learning encounter is as important as the activity of learning. By environment, Lloyd considers the co-participants, the artefacts, tacit and explicit information, the interaction between people and the eventual construction of knowledge.

2. Literature review

The workplace is essentially the end-point where undergraduates are being prepared for. Universities produce "graduates who are able to make a meaningful contribution to the national economy" (Lumande, Fidzani and Oluka 2013. p130). How best they are prepared is determined by, among other factors, the perspective from which the institutions or academics address information literacy as a concept. A number of experts and organizations have defined information literacy (ALA 1989, Doyle 1994, Bruce 1997, ACRL 2000, Bawden 2001, Bundy 2004, Badke 2010). One emerging theme in all the definitions is the teaching-learning orientation that is flavoured by the library centric view (Lloyd 2010) of information search skills that supports information need, identification of source and ethical use. The reality in the workplace, however, is quite complex and does not suggest that information seeking is always necessary (Cheuk 2000). In Lloyd's (2010, 101) words, "the reified and abstract portrayal of information literacy in educational settings is incongruent with actual account of the practice of information literacy in the workplace and this issue requires urgent attention from researchers, especially if educational settings are serious about preparing people for the workplace". Apart from this limitation in the conceptualisation of IL in educational settings, the definitions are strongly influenced by the features of an information society prevalent in developed countries, neglecting communities where access to information, especially digital resources, is still minimal.

In a way, these definitions seem to be pro-information society. For instance, Association of College and Research Libraries (ACRL) describes IL as "a set of abilities requiring individuals to recognize when information is needed and have the ability to locate, evaluate and use effectively the needed information" (ACRL 2000). In the opinion of Dorner & Gorman (2011), this definition is narrow in focus as it does not consider the environments in developing countries. The authors were of the opinion that the 'individual' and his environment were not considered as a factor in the knowledge construction process thus, "it tends to reduce the process to a group of skill sets, and more particularly reduces it to a functional technological skill" (p.4).

However, the indigenous have information with which they solve problems and assist the community, without necessarily having a set of formally identified abilities. So, the definitions discussed above seem to have a bias towards communities (countries) where technology to access information is cheap, it is available, and it is a way of life. This is far from the realities in the developing countries where education is a luxury, internet access is a privilege, and the basic necessities of daily living is far more important than technological advancements.

A definition that will consider the environment of the people in negotiating meaning and co-participate in knowledge construction can initiate the thoughts of research in information literacy in the workplace. One of such definition which is context-sensitive is presented by Lloyd (2007, cited in Lloyd. 2010):

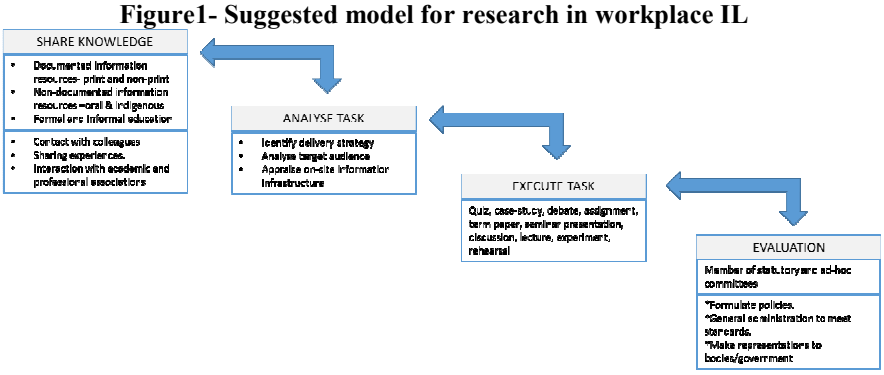
> Knowledge of information sources within an environment and an understanding of how these sources and the activities used to access them is constructed through discourse. Information literacy is constituted through the connections that exist between people, artefacts, texts and bodily experiences that enable individuals to develop both subjective and inter-subjective positions. Information literacy is a way of knowing the many environments that constitute an individual in the world. It is a catalyst that informs practice and is in turn informed by it.

3. Increasing scientific production in workplace IL

Research in workplace IL is just emerging (Li and Hung 2010), but there has been some literature on IL with more attention to IL practices in the classroom setting; intended to engender effective information use. (Abrizah 1999, Rader 2002, Smith and Hepworth 2005, Birdsong and Freitas, 2012) While some studies have justified the integration of IL across curricula (Bruce 2000), some tell the success stories of collaboration between librarians and faculty in

implementing IL programs in their institutions (Hunt and Birks 2004). However, there have been very few studies in workplace IL: (Cheuk 1998, Kirk 2004, Lloyd 2007, 2012). The existing IL models (Bond 2012), like the definitions discussed earlier, were shaped by the perspective of teaching-learning context thus making them inappropriate the further research in workplace IL. A detailed analysis of the popular IL models presented in an earlier study (Jinadu and Kiran 2014) indicates that the models were informed by the characteristics of an information society, where access to varied formats of information is easy and cheap. The authors argue that the models did not envisage realities in developing countries where most information is in the oral form and access to the internet is a luxury. For example, the 'Council of Australian Librarians (CAUL) Best Practice Characteristics for Developing Information Literacy in Australian Universities: a Guideline' was compiled in 2004 after a study of the ACRL model (CAUL 2004). In the same vein, The Council of New Zealand University Librarians (CONZUL) adapted the CAUL document and affirmed in its opening page that: "minor changes were made to the CAUL guideline to suit the New Zealand University sector". These adaptations further establish that IL is context-sensitive and the standard or model may not fit appropriately in other environments. This situation may explain why institutions, organisations or researchers have chosen different models or standards as platforms for their IL practices or research. This limitation prompted a suggestion of a model that is context-sensitive and appropriate for developing countries which fosters our hope that this model will extend research in workplace IL.

Figure1- Suggested model for research in workplace IL



(Source: Jinadu and Kiran, 2014)

4. The first empirical presentation

Further to the recasting of IL as a socio-cultural practice in the workplace rather than the individual and behavioural approach of the classroom setting, the suggested workplace IL model was subjected to its first empirical test among academics of a College of Education in Nigeria. The objectives that guided the study were:

1. To investigate the academics' perceptions of information literacy,

2. To investigate how academics engage in practices that can prepare undergraduates with information literacy skills to achieve improved performance at the workplace.
3. To investigate the information environment within which the academics work.

5. Methodology

Following an inductive approach and upon due respect to ethical considerations, ten Heads of Departments were selected from five schools (faculties) from a College of Education that was established over fifty-five years ago. HoDs are exposed to more complex information landscapes of varied information needs, processing and use, thus justifying their selection for the study since they are likely to supply more rich data; recommended as purposeful selection by Creswell (2012). The lecturers willing participated in the in-depth interview of an average of ninety minutes each. Four non-participatory class observations were carried out; each lasting for sixty minutes (full class time). After the interview, participants were asked to review transcripts, provide comments and were also involved in discussions about the emerging analysis; to achieve data validity (Maxwell 2009 cited in Yin, 2011). Data analysis of the interviews transcripts was done manually and results mapped to the proposed model. A practice theory, 'Person-Job fit' (PJ fit) was employed to address the understanding of the congruence between the academics and their practices of preparing undergraduates to be information literate -against the background of their contextual information environment.

6. Emerging themes

The findings that are presented here are tentative but can sufficiently guide an understanding of workplace IL in Nigeria where the suggested model is first empirically tested. Two major themes emerged from the interaction with the participants: the first is the divergent conceptions of information literacy and the other is the challenging information infrastructure on campus.

7. Divergent conceptions of information literacy

Three participants perceived information literacy as a support for educational attainment. They simply draw instances of how 'traditional' educational learning was before the advent of information technology and thus prefer to see the new aid (presumed IL) to achieve learning, as an educational tool. So, they presume that IL is educational technology. The Person-Job fit (Edwards 2001) presumes that there would be effective work performance when the knowledge, skills and abilities/attitudes (KSA) the employee brings to work is congruent with the task at hand. This perception may reflect the knowledge of the employee and the task is expected to be performed. What may prefigure his perception, therefore, as the case of P_3, is his KSA:

> *Our focus in terms of IL has to do with the use of information technology and that is the reason why we have*

> *a center which we call center for educational technology which happens to be a unit in the department of curriculum and instruction here in the College .This center is given the responsibility to make sure that the students and lecturers in the College are given the opportunity to be able to use computer technology and that is our own interpretation of IL. That is, our ability to make use of computer and computer-affiliated or associated technology in enhancing teaching and learning.-P_3*

Apart from the knowledge and task, the environment which is also one of the elements that shapes perception in a socio-cultural practice in the workplace, another employee who share a similar conception of information literacy said he has been training teachers to be care-givers in an environment where mothers are incapacitated in one way or the other. Acting like a pseudo-mother is therefore influenced by circumstance which the employee of a care-giving center should understand in order to deliver the service required of a pseudo-mother. As such, information literacy is simply a tool to understand this peculiar nature of education. So, IL is education-support to provide a difference from good to better:

> *What we are saying is that information literacy is itself an understanding of using a particular idea to turn things from good to better and to the best … So, literacy is not the same with reading and writing English language but (rather) the use of an idea to better (improve) situations in the society. P_6*

The understanding behind the relationship between data, information, knowledge and wisdom informs the perception of information literacy. This knowledge pyramid indicates the construction of knowledge among the co-participants in the social site described in Lloyd's definition of information literacy. This participant (P_1) was of the opinion that IL is experienced when avoiding the barriers to learning. A major challenge in learning is 'skip' gradient; when a learner skips what ought to have been learnt at a particular stage. Attending and resolving the problem of 'skip gradient' to remove the barrier is how he conceives information literacy:

> *Learning is considered to be in stages or steps. When you miss a stage or step (gradient), you (the learner) may run into a barrier. So, a student that does not have a 'grounded' (basic) knowledge in eh … let's say in some formulas (at the secondary school). When you (learner) get to higher institution, because they (lecturers) will still be bringing these formulas into it (topics of discussion), you may face a barrier. There are some things you ought to*

> *have learnt at certain stages, if you skip it, that may give you further problems. - P_1*

All the participants identify a need (problem) for information: to gain employment or reduce unemployment, facilitate learning, enhance healthy living and improving the community. This problem-solving conception of information literacy, according to the participants, did not necessarily have to be based on acquired skills, although in the opinion of P_1 (above), some skills are necessary to correct the skip gradient. Other participants were of the opinion that once a problem in a community, or about an individual is solved due to some information, this becomes more important since the "individual … can meaningfully use a given message to positively turn around things" (P_6). This conception of IL is prevalent in the IL models that suggest the identification of information need, locate information source, retrieve, synthesis, communicate and ethically use information (ALA 1989, ACRL, 2003).

'Media literacy' and 'emerging literacy' are the conceptions of IL of some other participants. The media literacy is the exposure and the skill necessary to navigate on the internet to access varied formats of information products and services. Once an individual is able to navigate and access information on the internet and be able to use such information, the participant argues that the person is information literate. This is, according to him, is the skill that:

> *"opens the gateway to the superhighway of information". This is the era of the new media. The new media has to do with convergence of different medium in sourcing, retrieving, and treating information"- P_5.*

The internet, a signpost of the information age and society, has influenced how life and work is interpreted, thus igniting "a wide debate about what competencies young people and adults need for successful life and work in the 21st century" (Virkus 2011. 15). This development also informed the perception of one of the participants, P_7 who declares that:

> *IL is the depth of our involvement of how we use IT as a tool to extract information. This can be in form of education, health, that is, health information, about culture that is cultural information, linguistic information. So, the umbrella or canopy body that gives us the perspective is IT. So, IL becomes a tributary or appendage to IT.-P_7*

8. The challenging information infrastructure in the community

The role of the library as an inter-phase between quality information resources of all kinds and the user has been adequately discussed (Baro and Asaba 2010, Lumande, Fidzani and Oluka 2013), but this study discovered (revealed by the participants) that the libraries they have in their community (campus) do not

serve its expected role. The participants lamented that there are no current books to attract the users and the library has no facility for users to access resources from remote locations. While some respondents lamented the inadequacy of the library, a participant simply submitted that there is an e-library on campus which attends to the information needs of users:

> *There should be an information centre where every student and staff can access information. Today on this campus, the library is the only information centre and whatsoever the library cannot provide is believed not to exist. When I recommend texts for my students, they will come back to tell me that the texts or some of them are not available in the library.-P_7*

> *We should tell them to look for information. Go to a place like the library to look for information. Thank God for technology, we have e-library. I don't see any reason why at every point in time students cannot acquaint themselves with the units to source for information even when they are not supplied with information. I don't believe in a situation where people (students) will sit down and expect people to bring information, you too have to source for information.- P_2*

In describing a learning environment where lecturers could put in their utmost and prepare undergraduates for the 21st century workplace, Mercangöz, Çilan, and Balaban (2011) justified the adoption of e-learning programs. The authors argue that the benefits of e-learning far out-weigh its disadvantages to attend to distant learning students and large number of students. One factor that is needed for successful e-learning is internet access – a factor which, according to the participants of the study, is very limited. Internet is one of the information infrastructures that will propel virtual learning environment (VLE). In the opinions of some of the participants:

> *One of the major challenges is electricity power failure. Some of us (lecturers) patronise the cyber cafe (commercial internet shop) but only to work half way and be told that electricity has been disrupted. So, one has to shut down the system and come back another time. Most students do not have laptops (because of the cost) and they have to rely on these cyber cafes but unfortunately the electricity has been a major hindrance. At times when there is electricity, the cyber café will be so crowded because so many people want to seize the opportunity of the available electricity to access the internet. Due to this crowd, the system will be slow because of the bandwidth that the café is using.- P_4*

> *Access to information is difficult compared to what is experienced in advanced countries. At times, I wake up in the night if that is when I can get adequate internet signals to access some information. There are instances when one would have to climb high places or storey buildings in order to get internet signals. However, the internet providers are trying to install high maste to improve the signal quality and because we are in Lagos, the population is good for business and that is why the internet (mobile network) providers will do anything within their ability to improve internet service.-P_3*

The class size is another major concern for some of the participants who believe that the number does not give room for regular periodic assessment. During one of the non-participatory class observation, the benches were arranged from one end of the class to the other, thus restricting the movement of the lecturer. The arrangement was apparently to maximise space in order to accommodate more students on the bench. The class has neither a public address system (PAS) nor a projector. The ceiling fans were not functioning, and students were standing by the windows while the lecture was in progress. In another observation session, during one of evening lectures, some students were standing at the back of the class, while some of their colleagues were also standing by the windows, thus obstructing the rays of the twilight which was the main source of light for the class as the electric fluorescent bulbs were not functioning. The class became dark and I observed the students were not taking notes. It was either the limited space between the lecturer and the students that did not give room for team /group discussions, or the lecturer was managing the constraint at hand by using a pedagogical approach that suited the situation. I counted the students to be 320 in the class. The response of one of the participants was that:

> *I allow them to ask questions in the classroom, that is how I may get to know their information need through the questions they ask. What I would have loved to do is, after each class, I wish to send assignments to them through their emails but the number of students I teach does not allow me to do that. Too large class. A situation where I have a minimum of 400 students in a class will make it difficult for me to handle their responses, via their emails, to the assignments. - P_3*

> *As lecturers, we should lead by examples. If there is anything we want the students to know or do, we should lead by example. If your class is 9am, then be there by 9am. If you want them to submit a well researched assignment, then give them a guide or websites. Sometimes ago, I conducted a test for my students and some were sitting*

> *outside the classroom and some on windows; claiming that there were not enough seats for them in the class. But to their surprise, after the test, I collected the scripts of only those in the classroom. -P_9*

Participants find solace in mobile phones as a way out of the challenge of inadequate information infrastructure. If inadequate electricity supply and weak internet signals have reduced how much information the lecturers could access, the mobile phones are coming up as succour. In one of the non-participatory observations, it was found that the lecturer did not give the students any reference list as guide. In her introduction of the topic of the day, she listed out some terms which eventually guided the entire lecture. The terms were the 'register of words' about the topic. She took them through the identification of meanings to interpret what information the terms suggest in order to drive the focus of discussion. Obviously, the students at the back of the class could not hear because when she asked them to check up some new terms on 'Google' via their mobile phones, most of them did not hear her; this is perhaps because the class size was larger than her personal portable public address system (PAS). As good as the mobile phone is succour, she could not carry the discussion wider because of the class size. For another participant, he is confident that the mobile phone is helping out to attend to his students. He commented that:

> *Even within our reach, we can still use the technology that is available … This telephone, why is it that we cannot use it as learning device? Information can always be processed even on telephone and various other things. I tell people I will send and I will tell my students give me your email and I send their assignment on phone, on my BB (Black Berry) , they receive the assignment and I tell them that they must reply as attachment on email to me. It is a way of making them to make use of the telephone they carry around- P_3*

9. Discussion

The concept of information literacy (IL) has been open to different definitions thus explaining why different people describe or experience information literacy differently (Bruce 1997, Rader 2002, Bawden 2008, Virkus 2011). The participants in this study express different perceptions of information literacy, mainly equating it to education technology, information technology, media literacy, tool for problem-solving. Though this finding is consistent with reports of earlier studies of Bruce (1997), Webber and Johnson (2000), their exposure and access to information was quite different. These divergent perceptions also influenced the creation of the existing IL models and Standards which in turn are influenced by the thoughts and characteristics of information societies; developed countries (Dadzie 2007, Jinadu and Kiran 2014). The way IL is conceptualised will determine how it will be modelled but Virkus (2011) argues that while the debate of how best to define or conceptualise IL continues, it is

certain that the information-related practices that will continue to be critical in terms of information handling and use shall be: "identifying, locating, gathering, selecting, storing, recording, retrieving and processing information from a variety of sources and media, developing successful information seeking and retrieval strategies, mastering complex and multiple information systems, organising, analysing, interpreting, evaluating, synthesising, and using information; and presenting and communicating information clearly, logically, concisely, and accurately. p23"

The participants (like any employee) are in the 'share knowledge' stage in the workplace and are described by Robert (2009) as employees that possess Person-Job-fit to access documented and non-documented information resources which prepare them adequately to perform expected tasks and negotiate information with co-employees and students. This is described as co-participants in a socio-cultural setting by Lloyd (2012). The participants (academics), are in the know of what to do and how to source for information to achieve the task of 'sharing knowledge'. However the information environment does not facilitate their activities (practices). The information practice, as important as 'information sourcing', is not encouraging in the environment as one participant lamented that is difficult "to direct my students to current information because I can't access such on campus though I have a MODEM that I use personally but I think information access should be part of what the College should provide as a tool for my work"- P_7. Justifying the match between employee on one hand and the organisation and environment on the other, Sekiguchi (2003) argues that performance is not only about individual knowledge and capability, rather performance and success in the workplace involves the congruence between the employee and all it takes to achieve the mission-vision of the organisation. If Library and Information Science (LIS) is concerned about how undergraduates are prepared for the 21st century workplace, the suggestion of being involved in Advocacy and recasting of what constitute information literacy and how it should be taught in higher education should become critical for LIS researchers (Lloyd 2010).

One sharp distinction between the classroom context and the workplace setting is the approach to learning. The learning in the classroom is linear, behavioural and objective. The workplace put employees through complex, constructionist and subjective circumstances. The competition in the workplace demands that employee deliver their utmost in order to gain competitive advantage in the market. To prepare undergraduates for a landscape of this complex nature requires that academics, in the 'Execute task' stage put their students through real life situations in order to envisage what happens in the workplace. It was this reality that prompted the Nigerian university academics to demand that Nigeria should have a conducive learning environment where students could be prepared for the real life situations in the 21st century workplace orchestrated by the information age (ASUU 2013). The fears raised by the University lecturers were also nursed by the College lecturers as a participant lamented he had 420

students in his class, while another participant complained that some students were sitting outside the class because all the sitting space in the classroom was filled. The practices such as 'real life case study', 'class debate' or 'group discussion' may be difficult in a large class contrary to the findings of Rafalow (2014) in a study of three schools which affirmed that skills are better taught to students in small groups.

One participant who teaches in the sciences claimed she had a manageable class size and was able to introduce a community-need skill development for the students. This creativity connects the relevance of information to solving a problem as obtained in the 'Evaluation stage' of the proposed model. At this stage, need of the society is expected to be met by the employees. If not, a reappraisal of the education system and society need is done through policy formulation. In the earlier estimation which informed the design of the proposed workplace IL model, the information infrastructure was assumed to be minimal but capable of fostering required information literacy practices, as listed by Virkus 2011, to prepare the undergraduates for the workplace. However, the data available suggested otherwise. Apart from suggesting more inadequacies in the information environment, which includes the information infrastructure, the data pointed questions and further research at the fitness in the Person-Job fit of the employees.

10. Conclusions

The domain of LIS has adequate convictions of what individual and the society stands to gain from information literacy (IL) in this era of information technology. While the developed countries have adequate arrays of information infrastructure to support access to information for improved work practices and research, the developing countries are far behind. This necessitated the suggested workplace IL model that accommodates the realities of the digital divide. The academics will adequately prepare the undergraduates to be information literate as the government in developing countries putting all necessary infrastructures to support higher education. With improved funding, the information environment will accommodate broad-based IL projects where undergraduates are exposed to programs that will prepare them for the workplace. Apart from the theoretical model which this study has contributed to existing knowledge of IL concept and theory, this study has created a platform to further scientific growth in IL practice and research. Also, this study has opened a vista to investigate the congruence of academics trained long before the advent of information technology and the task of preparing undergraduates to become information literates; may be something in the direction of 'looking beyond the hood'.

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