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Information Literacy at the Workplace: A Suggested Model for a Developing Country

Abstract: The purpose of this conceptual paper is to critically review and identify issues in the literature relating to the concept of Information Literacy and how it is being assessed. It provides arguments that the existing information literacy conceptualization and subsequent models do not support the perspective and understanding of information literacy at the workplace, especially in developing countries like Nigeria. Key literature and common models of information literacy are examined to identify the conceptualization of the construct of information literacy and its relevance to practices in the workplace. The paper also argues that existing information literacy models are not inclusive of the theoretical perspective of the person-in-practice workplace information environment and proposes a model that sets the basis for empirical studies on information literacy in the workplace, specifically in developing countries. The proposed model will assist researchers to understand the major components of workplace information literacy and how to assess information literacy of a person in practice at the workplace.

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Introduction

The library as an information centre is mainly concerned about the management and availability of information (to people). The library’s success is measured by how much of this information is accessed and used; thus arises the need not only to provide the information, but also to educate the users on how/what to access and how to use the information. What began in libraries as bibliographic instruction and user education has now evolved to a more sophisticated concept and application of information literacy. In 1989, the American Library Association (ALA) described information literacy as a programme that produces a literate person that is “able to recognise when information is needed and have the ability to locate, evaluate, and use effectively the needed information.” This description presupposes that the ability to identify information is skill-based, and can be acquired. Therefore, one of the roles of the library in society is to see how its users or citizens could benefit from information literacy through the acquisition of “a set of abilities requiring individuals to recognise when information is needed and have the ability to locate, evaluate and use effectively the needed information” (ACRL 2000). The abilities required to identify information resources some decades ago may have changed from what is required in today’s landscape of global information. Also information literacy is not exclusive to the student research process, but is a socio-cultural practice that is embedded in practices within a given social setting (Lloyd 2010). Communities of practice are built upon their shared understanding of information and the embodied knowledge within the group, and, as such, different communities’ learning and information practices vary. The skills to perform and excel in a workplace are much more complex than those needed in a classroom context, and the community where the workplace is situated may also shape the information literacy skills (Dorner and Gorman 2011) that will be required to succeed in the information society.

Existing definitions, descriptions and models of information literacy seem not to consider workplaces in developing countries (ALA 1989; Eisenberg and Berkowitz 1996) where the information process is highly influenced by people, culture, and the environment thus creating a situation where a person could be a ‘database’ or ‘oral archive’ through which information needs could be satisfied (Ossai 2010). In communities like this, the definitions and models of information literacy need to reflect this peculiarity. The absence of such definition and model for research in the workplace in developing countries necessitate this conceptual study. The objective of this paper is to develop a new framework to understand information literacy at the workplace, that will further be subjected to
empirical testing in the workplace among academics in Nigeria; an example of a developing country.

Placing Information Literacy in Perspective

Several definitions exist to justify the different ways that experts and organizations describe information literacy (ALA 1989; Doyle 1994; Bruce 1997; ACRL 2000; Bawden 2001; Bundy 2004; Badke 2010). Depending on the focus, perspective or professional affiliation of such organisations or individuals, Bruce (1997, 29) catalogued the different ways through which information literacy is seen:

1. using information technology;
2. library and computer literacy;
3. acquiring mental models of information system;
4. a combination of information and technology skills;
5. an amalgam of skills, attitudes and knowledge;
6. actively engaging with information;
7. the ability to learn;
8. the first component in the continuum of critical thinking skills; and
9. part of the literacy continuum.

This paper argues that these views are indications of an information society that was created by the information explosion. It is important to note, however, that the descriptions that underpin the definitions do not have the intention to be mutually exclusive. Rather, they were exhibitions of interest, historical background or professional affiliation.

Information literacy as a term is attributed to Paul Zurkowski, president of American Information Industry Association (AIIA), who first used the term in his 1974 report (Zurkowski 1974, 9) that investigated the inadequate workforce skills in the US industrial sector (Doyle 1994; Badke 2010). The report confirmed that students and the workforce were unable to identify and retrieve information from resources to meet target purposes. This situation prompted the American Library Association (ALA) to conclude that “to be information literate, a person must be able to recognise when information is needed and have the ability to locate, evaluate, and use effectively the needed information” (ALA 1989); a definition which Kapitzke (2003) thought was created when the advocates of library science (including ALA) failed in attempts to establish bibliographic instruction and library skills programs as a core component of college curricula in the U.S.

A critical look at the ALA definition shows that the person being referred to has access to information, and possesses the ability to manage it (information). As such, a person who has a wealth of experience but does not have access to information and lacks the ability to manage information may not be considered information literate. This paper argues that the definition ignores the process of becoming an information literate person but emphasizes the end-product which is the abilities. This conceptual limitation was aptly captured by Kapitzke (2003, 4) when she argued that, “despite some variation in the wording of definitions, (of information literacy) almost without exception, information literacy is conceptualized as a neutral method with generic, universal outcomes.” There is no doubt about the importance of information literacy, especially in this century, but there is no consensus on the processes and the products (learning outcomes). Thus, time and society shall continue to shape the degree or extent of information literacy that would be required for existence (Pullen, Gitsaki, and Baguley 2010).

Observing the activities in the business sector, the president of American Information Industry Association (AIIA), Zurkowski noted that “a multiplicity of access routes and sources have arisen in response to this kaleidoscopic approach people take to fulfilling their information needs. These are poorly understood and vastly underutilized” (Zurkowski 1974, 4). Most definitions and models of IL reflect the classroom setting and learning outcomes. Very few have been about the industry setting (workplace). It was this lack of workplace skills that necessitated Zurkowski’s report where the term ‘information literacy’ was first used, but one major concern today is that most definitions of information literacy rarely reflect the peculiarity of the workplace context. No doubt, the emphasis is on better education delivery with a belief that an effective education system will support an information literacy program that would improve performance in the workplace (Cheuk 1998). Furthermore, in considering the relevance of education and information literacy, Bruce, Hughes, and Somerville (2012) were of the opinion that those who learn how to learn will later improve the strategies of achieving goals to gain competitive advantage in the workplace.

In some developing countries, there are age grade systems, or youth communal efforts (Adepoju 2012) contributing to the growth of the community with indigenous, oral and non-transferable skills (Ossai 2010) that are not “a set of abilities” as described by the ACRL definition. Furthermore, the indigenes have information with which they solve problems and assist the community. So, the definitions discussed earlier seem to have a bias towards
communities (countries) where technology to access information is cheap, is available, and is a way of life. This is far from the realities in developing countries where education is a luxury, where Internet access is a privilege, and where access to the basic needs of life, such as food and electricity, is far more important than technological advancements.

One definition which is context sensitive, though not specific for the workplace, is presented by Dorner and Gorman (2011). The definition considers the background of individuals from developing communities (countries) which is important in learning and interaction. The definition says an information literate person should be able:

- To be aware of why, how and by whom information is created, communicated and controlled, and how it contributes to the construction of knowledge
- To understand when information can be used to improve their daily living or to contribute to the resolution of needs related to specific situations, such as at work or school
- To know how to locate information and to critique its relevance and appropriateness to their context
- To understand how to integrate relevant and appropriate information with what they already know to construct new knowledge that increases their capacity to improve their daily living or to resolve needs related to specific situations that have arisen (Dorner and Gorman 2011, 4)

This definition accommodates the individuals in communities or countries where information resources are available in trickles and the access to the Internet is a privilege. In such communities, the design and concept of information literacy should take such peculiarity into consideration in order to reap the benefits inherent in information literacy. It is equally important to mention that the competencies and abilities expected of individuals in developed countries where quality education and access to information is taken for granted (Center for World University Ranking 2013) will be different from the competencies of individuals in communities (countries) where technology to access information is cheap, is available, and is a way of life. This definition accommodates the individuals in communities (countries) where technology to access information is cheap, is available, and is a way of life.

Pullen (2010, 8) “educational use of technology needs to meet the socio-cultural aspects and needs of the users” to achieve development.

Information Literacy Models

There are several information literacy models evidenced in the literature, mainly classified as information search and use or information enquiry process (Bond 2012). Among the popular ones are the Big Six (Eisenberg and Berkowitz 2000) and its simplified version, Super3 (Bond 2012); Information Search Process, ISP (Kulthau 1994); the 8Ws (Lamb, Johnson, and Smith 1997); Seven Pillars of Information Literacy (SCONUL 2011); Loertscher’s Information Literacy Model (Loertscher and Woolls 2001); 3-Door Action model (Bond 2012), among others. None of these models consider the workplace as a context of information inquiry.

Li and Hung (2010) explain that a person is employed because he possesses Person-Job-Fit features, which are described as the compatibility between personal characteristics and job characteristics in the workplace. An employee is employed to meet already-set targets that shall be measured in terms of performance, organisational goals, profit, or customer satisfaction. The organisation, except where stated, does not expect its workforce to be “learners”; rather they should be seasoned professionals. As such, information literacy models for the workplace would have to consider this peculiarity. Most existing models were developed within the teaching-learning context, thus giving so much attention to steps to follow to learn how to use information rather than the workplace situations where employee must “effectively use information to construct knowledge for others to learn through experience” (Lloyd 2007, 6). Even though Perez-Studdard (2010) has confirmed that students learn at different rates (low and high achievers), the workplace frowns at low achievers but celebrates high fliers, goal-getters, and the ‘first among equals.’ This is the particular requirement of the workplace—to win in the competitive market.

This is not to say that there are no novices in the workplace since experienced workplace practitioners play a powerful role in the transition of novices (Lloyd 2007). The models see the student or person as one who will have to go through some linear steps to learn or pass through an experience to learn. Although this is also possible in the workplace, it is not the norm. The workplace is a complex place to exhibit prowess that the organisation and other employees could learn and benefit from in order to
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improve the society (Katz, Haras, and Blaszczynski 2010). Students could have the opportunity of a remedial class but an employee may be reprimanded for not completing a task on target. This peculiarity is not accommodated in the existing models thus justifying the need for an information literacy model for the workplace.

Methodology

A few information literacy models were selected for in-depth analysis and appraisal. A keyword search was conducted in Library and Information Science Abstract (LISA) database using two time-frames. The first was between 1989 and 1999 where 95 articles were retrieved based on the key-word search. The year 1989 was chosen being the year that the American Library Association (ALA) coined the popular definition of information literacy, thus marking the watershed for information literacy. In addition, the Prague Declaration (Prague Report 2003) considers the 1989 ALA definition as a consensus and watershed of information literacy. The year 1999 was chosen as it marks a decade of scholarship on information literacy and would not be too short a period to do a fair assessment of how much has been written about information literacy as a subject. The second phase was from 2000 to 2012. This was to examine how the models introduced during the first timeframe had developed in the following decade, and if there had been any new models developed. For the period 1989-1999, 18 information literacy models appeared in 73 of the retrieved papers representing 76.8%. Of the 18 models, four appeared more than once while others appeared only once. The ones that appeared more than once are presented in Table 1.

For the period of 2000 to 2012, 520 articles were accessed, in which 23 information literacy models appeared in 438 papers representing 84.23%. Of the 23 models, no new model appeared more than once. The models that were discussed more than once are presented in Table 2.

Table 1: Number of articles published between 1989 and 1999 about selected Information Literacy models

<table>
<thead>
<tr>
<th>Information Literacy Model</th>
<th>Year developed</th>
<th>Frequency of keyword in title/abstract</th>
</tr>
</thead>
<tbody>
<tr>
<td>Big Six</td>
<td>1996</td>
<td>6</td>
</tr>
<tr>
<td>PLUS</td>
<td>1996</td>
<td>2</td>
</tr>
<tr>
<td>Seven Faces of Information Literacy</td>
<td>1997</td>
<td>4</td>
</tr>
<tr>
<td>SCONUL 7 Pillars</td>
<td>1999</td>
<td>3</td>
</tr>
</tbody>
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Table 2: Number of articles published between 2000 and 2012 about selected Information Literacy models

<table>
<thead>
<tr>
<th>Information Literacy Model</th>
<th>Year developed</th>
<th>Frequency of keyword in title/abstract</th>
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</thead>
<tbody>
<tr>
<td>PLUS</td>
<td>1996</td>
<td>5</td>
</tr>
<tr>
<td>Big Six</td>
<td>1996</td>
<td>4</td>
</tr>
<tr>
<td>Seven Faces of Information Literacy</td>
<td>1997</td>
<td>3</td>
</tr>
<tr>
<td>SCONUL 7 Pillars</td>
<td>1999 (remodelled 2011)</td>
<td>4</td>
</tr>
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Table 2 shows that no new models were deemed popular after 2000. Most models developed prior to 2000 were being re-examined, adapted and adopted. Thus the analysis in this paper was limited to the main models in the literature: Big Six, Seven Faces of Information Literacy, SCONUL Seven Pillars, and PLUS.

Analysis and Appraisal of Selected Information Literacy Models

Big Six

Big Six, developed by Mike Eisenberg and Bob Berkowitz in 1996 (Eisenberg and Berkowitz 1996), is a process model for problem solving. It is fashioned after Bloom’s taxonomy of knowledge which described learning from cognitive (learning that is transferring knowledge), affective (learning that is developing attitudes), and psychomotor domains (learning that is generating a skill) (Anderson et al. 2001). The Big Six model expects a learner to follow six steps to achieve learning. The steps are:

- task identification;
- information seeking strategies;
- location and access;
- use of information;
- synthesis; and
- evaluation.

The steps are presented as a “hierarchy of skills” (Luke and Kapitzke 1999, 9) which means that each step is mastered before moving to the next hierarchy. The hierarchy of skills of the Big Six, in the opinion of Luke and Kapitzke, could be “very useful in generating teachable instruc-
tional sequences for students” (1999, 10) but this may not facilitate learning or performance in a workplace environment. The model has the school setting in mind and Luke and Kapitzke (1999, 9) confirmed that most “standard text quoted and used by many school librarians in the US and Australia is ... Big6 approach to problem solving.”

This shows, once again, that the model is more suited for the school environment in developed countries than for the workplace. Also, the setting of the model is developed information societies such as the US and not developing counties such as Nigeria where access to information is hindered by inadequate infrastructure, poverty, poor funding of education, environmental degradation and unemployment (Idiodi 2005). The picture painted by Idiodi has not experienced any significant change as the Central Intelligence Agency’s World Fact Book (2011) affirms that 70% of the population in Nigeria lives below poverty level.

Seven Faces of Information Literacy

This model was developed by Christine Bruce in 1997 (Bruce 1997). Her model is often referred to as the relational model of information literacy. Bruce tested the model in the workplace with academics as respondents in Australia. The model was used to explore the different ways which academics experience information literacy in their workplace. The different ways of experiencing information literacy were seven thus the title: Seven Faces of Information Literacy. The faces are:

- Using information technology;
- Finding information from appropriate sources;
- Executing a process;
- Controlling information;
- Building up a personal base in a new area of interest;
- Working with knowledge and personal perspectives adopted in such a way that novel insights are gained; and
- Using information wisely for the benefit of others. (Bruce 1997).

In considering the introduction of information literacy into the curriculum, Aiyepeku, Atinmo, and Aderinoye (2002) affirmed Bruce’s relational model as being closest to the African reality. The situation in African countries has not changed and the model still has its limitations for developing countries. In Bruce’s first face of information literacy, for example, information technology is assumed to be a crucial vehicle to access information resources, but without any consideration for communities where most information is not documented. Information is conveyed through stories, indigenous knowledge, artefacts, music and festivals; the technology to access this information is almost unavailable (Awofisayo, Layiwola, and Ajayi 2012).

This further calls attention to the need for a model that accommodates this peculiarity, especially when control of information (Bruce’s fourth face of information literacy) in such communities is a social and communal responsibility (Dorner and Gorman 2011). Though Bruce attempted to improve this in her ‘six frames of information literacy’ (Bruce, Edwards, and Lupton 2006) where, in the ‘social impact frame,’ learners are exposed to issues surrounding how the society can be improved.

Seven Pillars of Information Literacy

The Society of College, National and University Libraries (SCONUL) designed a set of standards that will guide information literacy education in higher education in the UK and Ireland (SCONUL 1999). The standard skills are iterative, from simple to complex. Each step is expected to be mastered before moving to the next skill to achieve the expected standard. The skills are:

- recognizing information need
- distinguishing ways of addressing gap
- constructing strategies for locating
- locating and accessing
- comparing and evaluating,
- organizing, applying and communicating
- synthesizing and creating.

The Seven Pillars of Information Literacy were designed with the UK environment in mind. The standards were to drive higher education to achieve effective information use among learners. Neither developing countries nor the workplace is considered in the standard. The fourth pillar (locating and accessing) for instance, relies on large resources that are available in digital form with very little attention to undocumented experiences of people as sources of information.

PLUS Model

The PLUS model was developed by James Herring in 1996 as an information skills process model with particular attention to ‘thinking skills and self evaluation’ (Herring 1996). PLUS is coined from the:

- Purpose of information
- Location of where to get resources
- Use of the information that is gathered
Self evaluation of the process to ascertain if the problem is solved.

In the Purpose stage, learners are expected to exhibit cognitive and thinking skills in order to draw up questions to justify the need for information. In the second stage, students are to exhibit Location skills to browse online resources, find information in library catalogues, or and CD-ROMs, books, or journals. In the Use stage, the model expects the students to develop reading skills, interactive skills, synthesising skills, and presentation skills in order to use and communicate information effectively.

The self-evaluation stage is an appraisal stage to see whether the processes in the stages generate the desired information or fulfilled the information need set out at the Purpose stage. In his introduction to the model, Herring (1996, 1) explained that the model is for the school setting where he explained that the “PLUS model is not necessarily a linear model although some students may progress from Purpose to Self-evaluation without a problem.” Like the earlier models, PLUS too was designed for the learners in UK, and as such, the model may not support research in the workplace in developing countries.

Summary of the Review of Information Literacy Models

One theme that runs through the models is the involvement of the teacher or librarian in supporting the learner. None of the models is based on a workplace environment in which teachers and librarians are not present. The information literacy parameters, drawing from the models: Big Six (Eisenberg and Berkowitz 1996), SCONUL (1999), seven faces of information literacy (Bruce 1997), and the six frames of information literacy (Bruce, Edward, and Lupton 2006) lay emphasis on the position of the learner or citizen within a given society. The seven faces of information literacy, being a relational model, presented different ways that individuals may understand and experience information literacy. In a workplace, this view becomes rather secondary as an employee is expected to display an expertise which justifies his remuneration; even if he differs in the ways he experiences information literacy, learning in the workplace is through practice and interrelationship with other co-workers (Lloyd 2007). Also, SCONUL (2011) identified the limitation in the ‘original’ Seven Pillars of Information Literacy as:

We live in a very different information world and while the basic principles underpinning the original Seven Pillars model remain valid, it was felt that the model needed to be updated and expanded to reflect more clearly the range of different terminologies and concepts which we now understand as “Information Literacy.” (SCONUL 2011, 2)

The Seven Pillars of Information Literacy, despite a broadened scope, did not accommodate the distinctiveness of the workplace. Though the model was remodelled with the UK in mind; as mentioned in the introduction to the model, it did not consider developing countries where opportunity to ‘identify’ information need (the first Pillar) is hazy due to the challenges of the learning environments (Idiodi 2005). It thus explains that a literate citizen should be able to conquer his or her immediate environment in order to conquer the ‘global village.’ Though the prescriptions of the various models are instructive, it is pertinent to assess students and workers within the framework of their immediate environment (Dadzie 2007) to justify how close or farther they are from the standard expectations of the worldview of information literacy. This position runs tandem to the view of Walker, Huddlestone, and Pullen (2010, 8) that “the educational use of technology needs to meet the socio-cultural aspects and needs of the users.”

Rethinking Information Literacy to Fit

Society, to a large extent, determines how much is expected from the learner. This informs why there has been so much debate about what the parameters of information literacy should be and how much of it should be taught to what category of learners in what society (Andreae and Anderson 2012). This is not to discredit the popular definitions and models of information literacy; nevertheless, importing these models into variant communities may not serve the interest of the communities. The communities need to be put in perspective. For instance, it may be a waste of time and resources if learners in a village in Nigeria (a developing country in West Africa) are taken through the rudiments of accessing, retrieving, and managing information from the Web when more of the needed information around them is still in paper, oral tradition, or indigenous knowledge. At the World Conference at Prague in 2003, developing countries and their challenges were the concern of UNESCO’s Shigeri Aoyagi when he cautioned, “the conference participants to remember the information have-nots, those to whom basic literacy and access to computers is still a dream” (Prague Declaration
It is this absence of an information literacy model that considers the workplace in developing countries such as Nigeria that prompted this call to researchers and organisations to begin deliberations on how to develop such model. This gap was also noticed by IFLA-ALP which, in collaboration with the National Institute of Library and Information Science (NILIS) of Sri Lanka, organised a regional workshop to develop a model that addressed the peculiarity of developing countries (Wijentunge and Alahakoon 2005). It was this workshop that developed the Empowering 8 model to problem solving:

- Identify
- Explore
- Select
- Organise
- Create
- Present
- Assess
- Apply.

One outstanding feature of the model is the second step, ‘Explore.’ The step provides opportunities for the learners to go outside the classroom environment to interview people who may possess useful information. It also encourages the students to engage in field trips and other outside research to gather information because, in developing countries, more information is not documented; information lies with people, artefacts, and events. The model understands this and emphasises it. However, it is important to mention that the model (Empowering 8) was not designed for information literacy in the workplace where participants possess the features of Person-Job-Fit (Li and Hung 2010). Rather it was designed to facilitate information literacy education in Sri Lanka (Edzan 2008) and other developing countries, thus leaving a gap.

Information Literacy at the Workplace

The workplace is a social site, factory or office where employees participate collectively in a social setting with the understanding of the division of labour to bring about a practice through which information literacy can be identified (Collins 2009; Lloyd 2012). At the workplace, employees are employed on the basis of Person-Job-Fit to work with other stakeholders such as co-workers, shareholders, management, customers, policy makers, and the community (Wertsch and Bivens 1992).

An employee possesses adequate information and is aware of where and how to find the source of more information. He also has accumulated knowledge that enables him to perform a task that is unique to the setting, thus qualifying for the Person-Job-Fit. This employee will participate in the construction of knowledge by sharing what he knows with co-workers in order to gain experience and develop skills to address similar tasks in future. Workplaces that encourage this are described by Goad (2002) as learning organisations. This is the learning that the workplace encourages.

Learning in the context of students’ environments where students identify an information need, justify an appropriate source and communicate the information ethically is quite different from the workplace landscape where the learning is viewed from on-site activities exhibited by workers and shared through experiences; this is the social context described by Lloyd (2012, 773) as the “person-in-practice perspective.” In her earlier work, Lloyd (2007, 2) captured the workplace “as a complex, socio-cultural practice that is discursively situated and constituted through the connections and networks that exist between people, artefacts, texts and bodily experiences.” This is unlike the school setting where students and teachers are bound by linear learning steps and pedagogical approaches.

Information and knowledge form a continuum along which newcomers and seasoned employees participate socially in agreed terms. The value that ensues is the intellectual power which separates the worth of one worker from another (Goad 2002). As such, at the point of entry into the workplace, the extent of information literacy proficiency has been determined by the employer as suitable to accomplish spelt out tasks. The interplay between such workers on-site described by Lloyd (2012, 775) as “co-located and co-participatory” will engender learning outcomes, measured in the workplace as performance (Katz, Haras, and Blaszczynski 2010). It does not mean that the employee will not seek and synthesize information; rather the process will not be linear as presented in the teaching-learning discourses. Such exercises are better displayed in the participatory activities of the workplace where one worker, no matter how brilliant and energetic, cannot start and end the production or communication chain.

The social interaction that underpins information literacy in the workplace is better depicted in the description of Kirton and Barham (2005, 2) with terms such as “networking,” “formal and informal working relationships,” and “client orientation.” This further underscores the fact
that employees will not be asked to write essays or be assigned specific issues to earn personal marks; rather they are to go through complex information analyses to execute a complex task that is appreciated by co-workers, clients, management, and society. Kirton and Barham (2005, 2) report further that, “complex tasks are non-routine, unanalyzable and involve different approaches” and must be delivered in time-bound specificity.

The competition amongst organisations pushes them to hire the employee who understands how best to source information and manage such information effectively. As such, the issue of information management in the workplace may be viewed as an extension that is accommodated by information literacy in the workplace. This relevance prompted Kirton and Barham (2005) to suggest that workplaces should establish special libraries in the workplace to assist employees in information sourcing to improve performance (Li and Hung 2010). However, it is important to mention here that the information needs of employees at various workplaces may vary since their hierarchy, tasks, focuses, and products/services also vary.

Information Literacy Research in the Workplace

Research into information literacy in the workplace is just emerging (Wang, Bruce, and Hughes 2011) and like any new field of study it has to experience some limitations. This explains why there have been few notable research studies on information literacy in the workplace: (i) Bruce (1997) among higher education professionals including academics in Australia; (ii) Cheuk (1998) among auditors in Singapore; (iii) Kirk (2004) among senior managers; (iv) Lloyd (2007) among fire fighters and ambulance officers in Australia; and (v) Boon, Johnson, and Webber (2007) among academics in Australia. This low out-turn in the scientific output in information literacy in the workplace was noticed by the Secretary’s Commission on Achieve Necessary Skills (SCANS) and this prompted the Commission’s recommendation that researchers should focus on how information literacy is manifested in the work settings and the degree to which it enhances workplace productivity Cheuk (2012).

The social interaction in the workplace is further explained through the person-in-practice perspective of Lloyd (2012) who presented the workplace as a social site where people (employees) interact to execute a task thus learning through experience. Wang, Bruce, and Hughes (2011, 3) further describe this social interaction in the workplace from the perspective of Vygotsky’s socio-cultural theory which assumes that “human cognition is formed through engagement in social activities.” The socio-cultural theory is said to have four aspects: mind, tools, zone of proximal development and community of practice (Wang, Bruce, and Hughes 2011). Wang, Bruce, and Hughes’s position supports an earlier work by Gherardi (2009) which affirms that knowing is a practical activity, thus drawing attention to the fact that the workplace is a platform for practice, interaction, and socio-cultural affinity with the environment, and it is context-related.

Therefore, in planning and reaping maximum benefit from information literacy programmes, the context and socio-cultural influences should be considered as crucial factors to determine success (Dorner and Gorman 2011; Awofisayo, Layiwola, and Ajayi 2012). The volume and access to information resources in some information societies are better, cheaper and easier than in developing countries. Areas that developing countries rely upon to bridge the gap of inadequate access to information are indigenous knowledge, improvisation, and socio-cultural heritage. As such, information literacy programmes, curriculum development, or workplace assessment should consider these as important factors.

Looking Ahead: Into the Future with a Proposed Model

The proposed model is intended to be tested among academics in a developing country like Nigeria where individuals rely more on other sources of information in their locality such as indigenous knowledge (Awofisayo, Layiwola, and Ajayi 2012) to complete their daily routines. Sourcing information from people’s accumulated experience could fill the gap occasioned by the limited access to information technologies such as the Internet (Ossai 2010). The knowledge that is popular among the people is tacit, uncodified, and collectively owned but this does not take away the communal life that underpins most activities at work and at play (Adepoju 2012), thus suggesting that information literacy initiatives should reflect this peculiarity. This knowledge (indigenous knowledge) has its import in all works of life: traditional birth system, indigenous entrepreneurial skills, local agricultural strategies, and learning through oral traditions, to mention but a few.

Relying on this contextual background and the theoretical position of Lloyd’s ‘person-in-practice perspective,’ this model will support empirical studies to explore information literacy among employees in Nigeria based on their
levels of task. The proposed model which is not intended to be in its finality recognizes that the employee in a developing country like Nigeria is a worker who is in the workplace as ‘Person-Job-Fit.’ The worker is therefore expected to know what to do, due to the information he had accessed through non-documented resources (oral evidences, indigenous knowledge, and protected information resources) and documented resources (print and electronic). The interplay of the worker and the resources makes him an experienced, knowledgeable, and competent employee. This wealth of knowledge of the worker and his access to information are graphically presented in Figure 1.

The model cannot be said to be a perfect attempt at providing a platform for research into information literacy in the workplace in developing countries such as Nigeria, but it is a starting point to invite comments and contributions to better develop the model. The rectangles essentially outline the proposed model, while the circles are the processes and activities the employees will engage in at each stage.

Share Knowledge

This stage presents the employee as one who has accumulated experience and knowledge which describes him as the ‘Person-Job-Fit’ (Li and Hung 2010). He also understands the information landscape in a social setting where “information literacy makes learning possible by connecting users to various modalities of information that are situated within a social site” (Lloyd 2010, 15). This employee collaborates with on-site and off-site colleagues and resources to acquire and share knowledge to improve the community as stipulated in the working definition of Dorner and Gorman (2011). This category of employee is part of Lloyd’s description of the gatekeepers who nurture new members in the organisation. The employee at this stage is not a novice worker; he is a seasoned professional who knows what to do (Lloyd 2007), where to seek additional information, and how to manage such information for the benefit of the organisation or community. This employee requires little or no supervision to execute the task specified. This is a category of employee prevalent in a workplace because each employee is employed having possessed some requisite skills. However, it is important to mention here that a novice (fresh from college) could be employed, perhaps as a trainee employee and would have to learn in the organisation through practice as described by Vygotsky’s community of practice, explained earlier.

Analyse Task

An employee, first and foremost, is employed to execute a task. ‘Knowing’ what to do, in the opinion of Gherardi
(2009) is a practical activity. His accumulated knowledge should guide in the analysis of the task at hand in order to decide what information is required and where to source such information. Therefore, how effective, timely, and his ability to manage resources depend on his dexterity, experience and access to appropriate information as explained in the first stage. The employee at this stage has studied the specific task before him. Based on his access to information and counting on his previous experience, he is able to analyse the task with maximum benefit: time, profit, user satisfaction, and organisational goal. He asks questions such as what resources are required, who is he to work with and communicate or report, and how does the available infrastructure support his chosen strategy? Being a social context that encourages informal relationship across-the-board, the employee at this stage relies on verbal and non-verbal cues (Csibra and Gergely 2011) to determine when to adjust his parameters for analysis.

The employee at this stage is graphically presented in Figure 2.

Execute Task

The employee considers the analysis that was done earlier to arrive at the best option to execute the task. The chosen option would have been selected from other alternatives after critically thinking about cost, quality, source, time, tools, colleagues, organisational goals and community benefit (Waring, Wainwright, and Skoumpopoulou 2011). Like the third face in Bruce’s (1997) seven faces of information literacy, this is the execution stage. However, the employee at this stage prepares the yardsticks to measure the outcomes (learning outcomes or quality assessments) of the execution, which are the building blocks for the next stage, the evaluation stage. In an academic environment, this stage could be used do a self-evaluation as described by Goad (2002) as a learning organisation. The employee would reconsider the strategy of execution if the expected results were not met, thus re-analysing the task again. The employee at this stage is graphically presented in Figure 3:

Evaluation

The last stage of the model is where the organisation evaluates its investment in order to determine the profit and lost. For non-for profit organisations, they measure performance by the Key Performance Indicators set by the organisation (Li and Hung 2010). In describing the influence of social interaction, Wang, Bruce, and Hughes (2011) sum up that the Zone of Proximal Development (ZPD) is the distance between actual development level and potential development through collaboration with more capable peers. That is, employees could execute some tasks on their own but they will get to a point where they will not be able to proceed without inputs of experienced employees on site. As such, the collaboration of employees is encouraged by the organisation in order to nurture young and novice workers through practice described by Lloyd (2010) as community of practice. While individual
employees could do self-evaluations during the execution stage (previous stage), the organisation at this stage sets parameters to evaluate the contribution of the individual employee, assessing contributions to society, and ascertaining to what extent organisational goals are met.

The New Model for Information Literacy in the Workplace

The discussions above are brought together to form a four-stage model for Information literacy at the workplace (Figure 5).

The Empowering 8 model (Wijetunge and Alahakoon 2005), being a model for information literacy education in Sri Lanka, provided an opportunity for the learners to explore other information resources outside the classroom environment. This is the reality that this new model also espoused in the workplace at the share knowledge stage where the employee can explore non-documented, oral and indigenous information that could make him an informed employee. The existing models did not provide this opportunity. The proposed model considers the information process at each stage and brings the experience of the worker to bear on the task at hand. This is quite unlike the information process described by Cheuk (1998) where the auditors only ‘consume’ and ‘supply’ information without considering the wealth of knowledge they brought into the workplace. Relying on the argument of Aiyepeku, Atinmo and Aderinoye (2002), the relational model of Bruce (1997) was the closest to the African (Nigerian) reality, but the proposed model brings the employees to the reality of serving the goal of improving their immediate and international community. At the execution stage, information literacy competencies of the employees are better exhibited since they will determine an execution strategy based on contextual realities and the task at hand, an opportunity that was not provided in the existing models.

Conclusion

Library and Information Science research is not limited to an academic context, but should encompass all activities of life. Workplace practices should also occupy a prominent position in LIS research. The theoretical lens to capture information literacy in developing countries has to be context-sensitive to accommodate the state of information poverty, non-documented oral information, and minimal database resources that require robust technology infrastructure for access. More aggressive researches in infor-
Information literacy in the workplace in developing countries may show how much lifelong skills are exhibited on-site through socio-cultural interactions, ‘person-in-practice perspective’ or organisational learning to improve performance. It is hoped that the proposed model will encourage and facilitate the documentation of oral information which will enable developing countries to benefit from global information sharing. Both students and employees are learners but through different channels, thus requiring different information literacy models. The suggested model may have its limitation as it has not yet been tested empirically, but it is hoped that it will stimulate discussions geared towards increasing empirical studies in developing countries to further widen the domain of LIS research in information literacy.

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References


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