

An Exploration of High School Teachers Information Literacy in the Cape Coast Metropolis, Ghana

G. Tachie-Donkor¹, P. S. Dadzie²

¹Junior Assistant Librarian, Sam Jonah Library, University of Cape Coast, Cape Coast, Ghana.

Email: gtachie-donkor@ucc.edu.gh

²Associate Professor, University Librarian, University of Ghana, Legon, Ghana.

Email: pdadzie@ug.edu.gh

Abstract: The concept of information literacy has gained roots in many developed countries. In developing countries and for that matter Ghana, the concept is new and evolving at a slower pace. The educational system in Ghana has not integrated information literacy skills into its educational system thus both pre-tertiary and tertiary institutions. Due to this, information literacy skill is not a taught subject in most educational institutions.

Research Problem: Ghanaian second cycle institutions do not factor information literacy skills in any of their continuous professional training for teachers. For that matter, most teachers are challenged in the use of information literacy skills in the teaching and learning process in the classroom.

Purpose: this study therefore set out to explore how teachers use information literacy skills as an opportunity to stay abreast with the rapid technological changes associated with the use of diverse information resources for teaching. In view of these, the study investigated and focused on determining the level of awareness of information literacy skills of teachers, ascertain the extent of training in information literacy skills for teachers, determine the kind of strategies teachers employed in using different information resources for teaching and also to determine some barriers that militate against the development of information literacy among teachers.

Methodology/approach: mixed method approach was used for the study. Quantitative and qualitative instruments and observations were used to collect data from the teachers and head teachers respectively.

Finding: the study provided that most of the teachers had information needs, they were aware of the gaps that existed in their subject areas and used diverse information resources available to them to fill these gaps. Teachers had a high preference for internet sources to keep abreast with information in their subject areas and also update their teaching notes. It was also evident that no training was organized for teachers in IL. However, it was found out that teachers possessed moderate levels of IL skills and employed various strategies to find information from the various sources available to them. Inadequate resources were a major challenge that affected IL development among teachers.

Originality/value: the study adds up to the information literacy skills of high school teachers and how they exploit the opportunities in information literacy to support the teaching and learning activities in the classroom.

Keywords: Cape coast metropolis, Ghana, Information literacy skills, Senior high school teachers.

I. INTRODUCTION

Information literacy has become a topic of interest for most countries both developed and developing. Currently, the world contains an unimaginably vast amount of information in print and electronic forms which is growing massively. This is due to the fact that a lot of information is being produced every second in this era of continuous technological change. Users of information are confronted with the challenge of locating and using information appropriately from diverse forms and formats; thus information from varying sources can be authentic or fake, useful or not useful. A number of information found in libraries, community resources, special interest organizations, media, and the internet appear in unfiltered forms and their authenticity, validity, and reliability are questionable (ALA, 2017).

One must possess certain requisite skills in order to unlock appropriately the advantages that information brings to the individual. Most information out there, both in print and electronic hoist issues of authenticity, validity and reliability. Therefore it is important that users understand the right ways of assessing and using information from different sources. One sure way to do this is becoming information literate. Anunobi & Udem, (2015) simply defined information literacy as the identification of what time information is needed, why information is needed, where to look for information needed, how to access and evaluate, use and share the kind of information found in an ethical manner. Information literacy also involves the ability to use technology to access and use found information (Bothma, Cosijn, Fourie & Penzhorn 2014), it is crucial in three significant areas of a person's life; university education, future workplace and everyday living.

Persons with techniques and skills in the use of informational resources in diverse formats to solve problem possess information literacy skills (Eisenberg, 2004).

Despite emphasis on the importance of Information Literacy for personal, social and occupational goals, the main focus for developments has been formal education. Education has assumed the centre stage in the socio-economic development of both developed and developing nations. Therefore, it has been termed “the engine of growth and national development”. Rader (2002) estimates that 60% of the annual published materials on information literacy relates to higher education, with 20% focusing on primary and secondary schools. This is a clear indication that much needs to be done on information literacy for secondary schools.

Many studies reported in the literature, indicate that teachers play a significant role in the use of information literacy in secondary education and this makes it a fact beyond dispute that teachers are indispensable in the successful use and implementation of IL in secondary education. While they prepare students for tertiary studies and for the workplace, their information literacy training should be taken seriously.

To exploit the different forms and formats of information available, teachers have to take advantage of the emerging information revolution and massive technological changes that comes with it. In other words, teachers need to be abreast with the competences and skills of searching and using information for their teaching purposes, as well as develop the ability to learn throughout life (Lifelong Learning Council Queensland Inc. 2016).

Information literacy competence for teachers in African schools can be achieved through organizing development programs in information literacy to equip them with requisite skills to search for curricular based materials which support their teaching activities (Pulkkinen & Wyk, 2002).

An empirical research in Ghana by Kwarteng (2011) raised the issue of few connections between teacher education, teachers’ professional development, and school needs. She stated that adequate training and development of teachers in the second cycle institutions have great correlation on teacher performance and the student’s success in future, therefore teachers professional development should not be down played. There is, therefore, the need to weave information literacy which covers all aspects of learning into the fabric of teacher development and training programs. This will enable teachers to train students to have specialist knowledge in their fields and also have information literacy competencies required for lifelong learners.

With regards to the above submission, information literacy for teachers in Wesley Girls High School was explored. This high profile school is an educational institution for girls in the southern part of Ghana. It is the first girls’ secondary educational institution in Ghana. It was established in the Cape Coast metropolis in 1836 by the wife of a Methodist Minister to train young girls. Currently, the school is ranked as the best girls’ school in Ghana. One may be tempted to say that based on the schools outstanding performance, its teachers are information

literate in that they are able to search for the right amount of information to support their teaching and learning activities.

The school can boast of an automated school library with a librarian and an ICT centre which is connected to Wi-Fi. Every year, the school organizes in-service training on all aspects of education for its teachers as part of teacher motivation which has massive enhancement on teacher productivity. Other in-service training programs for teachers are also organized by subject associations which are sponsored by the school. But it is doubtful whether the training and development programs organized for teachers in the school integrate information literacy skills. It was precisely this concern that matured this study. In agreement with Bent (2011) information literacy competency training is needed by all disciplines, in all learning environments and in the education of teachers in second cycle institutions.

The study was informed by the Seven Pillars of Information Literacy Skills developed by the Society of College, National and University Libraries (SCONUL, 1999). A number of studies have been conducted in developing countries on the use of SCONUL to primarily investigate the IL level of teachers and students in higher and secondary education. Similarly in Ghana, many studies have been conducted in information literacy in higher education; however research in information literacy in secondary schools is left to be covered. Also, not much has been published about the use of SCONUL to investigate the IL level of teachers in second cycle institutions in Ghana. It is against this background that the current study seeks to use SCONUL to look into the IL level of teachers in a senior high school in the Cape Coast metropolis, Ghana.

II. PROBLEM STATEMENT

Information literacy should be of concern to teachers in an information-based and technology driven society. If teachers are competent enough in searching for curricular based information, they will inculcate into their students the ability to search for information in diverse formats to satisfy their informational needs. But there are numerous challenges that confront teachers in achieving this aim in Ghana.

From observation most Ghanaian second cycle institutions factor no training into information literacy skills for teachers. In places where information literacy is considered, attention is often shifted to computer literacy for ICT teachers (Tachie-Donkor, 2015) while other teachers are denied such literacies and many more such as information skills, searching skills, data management etc. This results in the majority of them, being challenged in using search engines, databases, educational sites, search strategies, appropriate key words and concepts to find information for teaching. A personal interaction with some teachers indicated that evaluating online and print materials for teaching frustrates them. Furthermore, the educational policy in Ghana has not considered information literacy as a taught subject in senior high schools as well as teacher training

institutions. As a result some teachers are not aware of the need to possess the competencies and skills to be information literate. Some are technophobic, and others lack the enthusiasm to possess the competence and skills to be information literate thereby failing to look for new information in addition to the curricular, hence their questionable productivity. It was against this background that the study examined the information literacy level of teachers in Wesley Girls High school, the teachers' ability to access information in the school's library and use of internet resources.

III. PURPOSE AND OBJECTIVES OF THE STUDY

The purpose of this study was to examine, the current level of information literacy among teachers in Wesley Girl's High school in the Cape Coast metropolis, Ghana.

The specific objectives of the study are to:

- determine the level of awareness of information literacy among teachers.
- ascertain the extent of training in information literacy skills organized for teachers.
- determine the strategies teachers in the senior high school employ to find and use information from print and electronic sources.
- ascertain the barriers militating against the development of information literacy skills among teachers.

IV. SIGNIFICANCE OF THE STUDY

The findings of this study will provide guidelines to the Ghana Education Service in organizing and implementing information literacy training programs for teachers in Ghanaian secondary schools. The findings will also inform the Ghana Education Service in developing a suitable curriculum in information literacy for teachers in the field as well as Colleges of education. The study will as well serve as baseline information for further studies in information literacy in secondary schools in Ghana

V. THEORETICAL FRAMEWORK

The study adopted the Seven Pillars of Information Literacy Skills developed by the Society of College, National and University Libraries (SCONUL, 1999) as the most suitable model. The model has been accepted the world over to assess the competencies of an information literate person including teachers. In April 2011, the 1999 model was updated and modified to embody new terminologies, concepts, skills and competencies of information literacy while the original seven pillars model continues to be valid. The seven pillars of SCONUL (1999) model is shown in fig. 1.

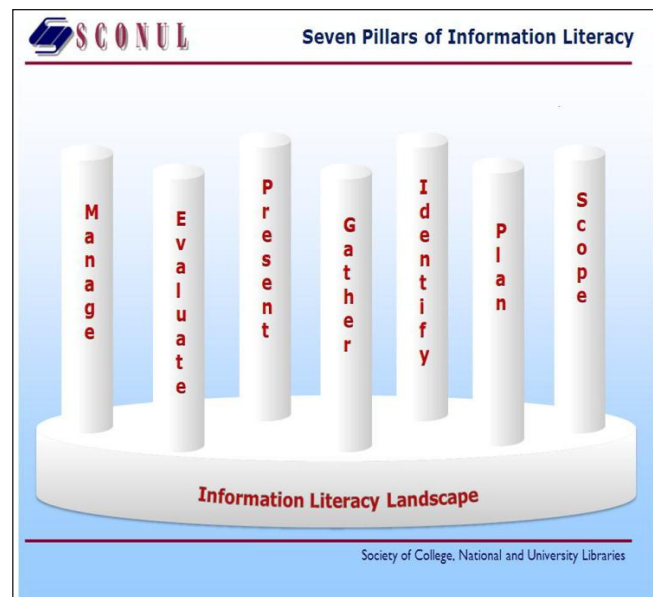


Fig. 1: Seven Pillars of Information Literacy, SCONUL (1999)

The core model indicates that an individual's aptitude, behaviour, background and experiences will influence how they react to information literacy development. The circular nature of the model is an indication that becoming information literate is a continuous process which begins with an individual teacher's capability to identify the need for information, know the scope and extent of information, plan the use of information, gather various forms of information, evaluate information, manage and present information. Ideally an individual teacher will have to move from identifying information through to presenting information in a circular direction; but in practice an individual teacher can decide to develop within several pillars concurrently since they are often closely related.

VI. DEVELOPING TEACHERS INFORMATION LITERACY USING THE SEVEN PILLARS

Identify: The information literate teacher should be able to recognize personally the need for information. In the mist of information explosion teachers should develop learning habits to actively seek information, have better understanding of what new information is being produced and in what forms it is being produced. It is considered that a careful use of this pillar will guide this study to review the current situation of how teachers identify their information needs.

- Scope:** The second pillar deals with the information literate teacher's understanding in assessing current knowledge and being able to identify gaps. Teachers should demonstrate access to current knowledge on the subjects they teach. They should be able to identify gaps that exist in that area. Information literate teachers

must understand the characteristics of different types of information sources and the formats in which they appear and the use of new tools as they become available to them. Pillar two in the study will bring to light how teachers recognise gaps in their subject areas.

- B. *Plan*: This pillar involves the adequacies of an information literate teacher to construct searching strategies to find information. Information literate teachers should possess the knowledge of searching techniques available for finding information. They should be able to find information using appropriate keywords and concepts within a specified limit. It is believed that the use of this pillar in the study will highlight the aspect of teachers planning their searching strategies to find information.
- C. *Gather*: Pillar four signifies the information literate teacher's capability to locate and assess information and data needed. Information literate teachers should understand how information and data are gathered from print and electronic sources. They should recognize the need to be abreast with current information. They should also be able to use appropriate retrieval means to capture full text information from different sources. The use of pillar four in the study will observe how teachers use collaborative tools to create and share information.
- D. *Evaluate*: Pillar five entreats teachers to compare and evaluate information and data from different sources in terms of quality, validity, accuracy, authenticity, reliability and relevance. They should also understand the information and data landscape in their teaching context. An efficient use of this model will bring to bear how teachers evaluate their information sources.
- E. *Manage*: How to organize and manage information professionally and ethically is identified in pillar six. It looks at information use of teachers with regards to copyright laws and the ability to meet requirements for academic integrity. Manage as the sixth pillar of the model will be demonstrated in the study, awareness of information ethics of teachers.
- F. *Present*: With reference to pillar 7 the information literate teacher must apply the knowledge gained by presenting the results of their research in different forms and formats. The teacher should thus be able to blend research results to create new knowledge and distribute it in varying ways. Also teachers should be able to summarize the results of a study verbally and in writing. The proficient use of the final pillar of the model will emphasize the presentation of research results by teachers in diverse ways to students.

The rest of the study continues with a review of the literature, followed by the methodology for the study, then, the findings and discussion. Conclusions and recommendations were made based on the findings of the study.

VII. LITERATURE REVIEW

Literature confirms that the concept of "information literacy" cannot be attributed to a single study or author but relatively from many studies and from various disciplines. Jorosi and Isaac (2008) established in their study that there are various definitions, interpretations and conceptions of IL; they concluded that there is no clear-cut definition for IL. In reviewing key contributions to the development of the definitions of IL, the American Library Association (ALA) Presidential Committee on Information Literacy (1989), put forward that for someone to be information literate, he or she must be able to recognize when information is needed and show competence to locate, evaluate and utilize information effectively and efficiently the needed information.

The US Association of College and Research Libraries (ACRL, 2000), also defined key areas in IL as the ability to: determine the nature and scope of information needed, access needed information efficiently, evaluate information appropriately, utilize information to achieve a given task and above all understands the ethical issues governing the use of information. Furthermore, the Society of College, National and University Libraries (SCONUL) (2011) posits that information literate people are conscious of how they gather, use, manage, synthesize and create data in an ethical way with the needed information skills to do so effectively.

According to SCONUL (1999), librarians and teachers over the world have shown massive interest in the use of the SCONUL (1999) model, the framework adopted for this study to deliver information skills to their learners. To confirm this assertion, Johnston and Webber (2003) indicated that SCONUL's "seven pillars of information literacy" is generalized thereby avoiding the risk of limiting IL to only educational context. Thus unlike other frameworks, SCONUL extends IL to a broader information society including teachers, students and persons of non-academic communities.

Virkus (2003), indicated that the seven set of skills in the pillars demonstrate an iterative process by which information users improve from novice to expert by practicing the skills; thus from a competent information user at the base level of the pillar (novice user) to an information-literate person (expert user). Some users of the SCONUL model prefer the cyclical approach to demonstrate that becoming an information literate person does not follow a linear sequence, but rather there can be development within several pillars of the model simultaneously and independently, although practically they are closely linked. Johnson (2000) noted that in higher educational institutions in Europe, the UK Standing Conference of National and University Libraries (SCONUL) have been the ring leader in the promotion for information literacy since 1999.

With regards to information literacy in schools, ALA's Presidential Committee on Information Literacy (ALA, 1989)

identified and reported that the “information age is divorced from most teaching styles”. To rectify this situation and bridge this gap, ALA called for a restructuring of students learning process in order to create a new information-age school distinguished by interactive, self-initiated learning whereby the teacher will be thought of as a guide to the learning process. In view of this Williams and Wavell (2006) looked at teachers IL skills in relation to their classroom practices through a semi-structured group discussion. The study investigated teachers’ conception of IL which included how teachers look for information and facts for their teaching activities, how they use technology to find information and how they use the school’s library. According to the results of the study, Williams and Wavell (2006) indicated that the concept of IL was new to most teachers. Also the study revealed that some teachers’ were not aware of the various sources of information that are available and therefore were not able to teach their students how to use these sources of information. A similar study by Merchant and Hepworth (2002) on teachers IL indicated that teachers used the internet and schools library resources frequently to prepare teaching notes, develop new concepts and seek clarification on a topic to be taught. Merchant and Hepworth said that teachers in their quest for information for teaching, first consult familiar resources such textbooks, newspapers, departmental and personal resources and TV to gather information for teaching their students.

Information literate teachers are expected to inculcate IL skills into their students, but a study by Duke and Asher (2012), revealed that students experience anxiety and confusion in their quest for informational resources for academic work. Duke and Asher proposed that the faculty, the library and librarians should be trained and collaborate to assist students in their search for information to accomplish their research and academic work. Teachers and librarians should be experts in IL before they can transfer these skills to users. Similarly a study by Miller and Murillo (2012) confirms that students often struggle with finding informational resources for academic work. According to the research findings, Miller and Murillo (2012) noted that students prefer help from their teachers, student’s friends, or their own self-instruction but do not consider help from librarians. It brings to light that students to some extent wish to depend on their teachers for help for finding informational resources for their academic work. This demonstrates the role teachers play in providing students with opportunities of using informational resources. Looking at the role of inculcating IL into students, it can be said without any shred of doubt that no other personality can have influence more profound than the teacher. Therefore the teacher must be trained in IL. Bawden and Robinson (2002) conducted a case study on a summer school, where training course in information literacy was organized for information professionals including teachers. The study revealed that, the professional development in IL for teachers enabled them to inculcate IL skills into students; these skills empowered students with critical thinking skills which helped them tackle academic work and also to become independent lifelong learners. Bawden and Robinson (2002),

stated that for teachers to deal with the complications of the present information situation, a complex and broad form of information literacy is required. To them information literacy training for teacher development must be correspondingly expansive, varied and context-sensitive.

Evidence in research reveals that the training and development programs organized for teachers in secondary schools in the competencies and generic skills of information literacy comes with numerous challenges. Williams and Wavell’s (2006) study researched into information literacy in the classroom. The study accessed secondary school teachers’ conceptions and how best teachers can help in the development of information literacy in their schools. The findings of the study demonstrated that teachers were not confident; they did not know how they could influence and effectively support the development of information literacy in their school. Williams and Wavell (2006) further stated in the same study that most teachers felt information literacy was a cross-curriculum skills building, which is separate from their subject areas of teaching rather than a way of learning and teaching. Therefore the development of IL by teachers is unnecessary. Another challenge revealed in the study emerged to be the current educational context. “Teachers felt constrained by overloaded curriculum content, with timetables too tight to allow time for information literacy skills development” though some teachers go through IL training in their schools. Stockham and Collins (2010) said that these skills received by teachers in IL training lacked priority in practice. Many teachers have no interest, time or opportunity to incorporate the skills acquired in IL training into daily lessons and teaching activities, teachers who have time and opportunity are not interested and prepared for this role.

Duke and Ward (2009) found in their study that even though teachers have education programs in IL, most teachers were not sufficiently prepared to use IL skills in their teaching. From these reports IL training in schools for teachers may not be encouraged and sustained by schools.

On the other hand, Bruce (2004) is of the view that there should be international and national policies and guidelines for teacher education in IL, and the organization of information literacy programs for schools to support staff development. To help bridge the gap between policy and practice, she said IL should mirror the changes to educational culture connected to promoting lifelong learning. She stressed on the need for institutional policies to sustain information literacy education programs to promote staff development and curriculum initiatives. The above point stress out the need for schools to have IL policies for teacher development but its sustainability, thus support and implementation must not be underestimated.

Looking at support for schools in IL, Rader (2002) indicated in his study that even though policy mandates information literacy instruction in schools in New Zealand, IL is not always supported at the school level. This he indicated poses a challenge to teachers in the implementation of IL in their instruction since there is no appropriate professional

development for teachers. Merchant and Hepworth (2002), in their study said that there should be training and guidance for teachers on how to incorporate information skills into their teaching. This suggestion by Merchant and Hepworth (2002) somehow is a dream as Laverty and Reed (2006) reported that teachers usually enter the teaching field without the necessary information literacy skills, knowledge and competence that is expected of them. Laverty and Reed (2006) confirmed the assertion made by Williams & Coles (2007) stating that teachers themselves are not essentially confident users of information therefore they prefer to restrict their information resources to relatively few sources.

VIII. METHODOLOGY

This study adopted the descriptive survey design to mainly solicit information on the current status and existing practices of the information literacy skills of teachers in the senior high school in the Cape Coast metropolis of Ghana. The population of the study comprised all 96 teaching staff including the head mistress and her assistant head. Questionnaire and an interview schedule were used for data collection. Teachers answered the questionnaire while the head mistress and her assistant head were interviewed. The interview data was coded and analyzed to identify recurring themes and the questionnaire data collected was also coded using numerical values, and analysis was done using Statistical Package for Social Sciences (SPSS).

IX. FINDINGS

A. Background Characteristics of the Respondents

Majority of the respondents were University graduates; this suggests that this high schools is not less endowed with respect to quality education. There is the tendency, however, to think that due to their educational level, they would be more information literate but Bruce (1995) states clearly that being a graduate does not make someone information literate and that one can only claim to be educated when he/she is information literate.

University graduates in the high school were (94.6%) with at least two years teaching experience. The respondents were teaching various courses across the various programmes including General Science, General Arts, Business, Home Economics and Visual Arts. Some respondents also taught core subjects such as English Language, Integrated Science, Core Mathematics, Social Studies and Information Technology. The different subjects taught in the high school makes the information literacy skills of teachers more relevant.

B. Level of Awareness of Information Literacy

The first objective sought to determine the level of awareness of information literacy among teachers in the high school.

All respondents indicated that teachers required information. Some of the reasons why teachers required information were to update teaching notes (32.3%), for entertainment (5.9%), to acquire new knowledge in subject areas (30.1%) and to keep abreast with current information in subject areas (31.7%). Concerning their sources of information, most teachers said that they usually used the internet (35%), subject textbooks (31.7%), library materials (19.4%) and old notes (10.5%). Teachers indicated that subject textbooks and some materials found on the internet were very effective as compared to library materials and old notes.

Interviews with the head teachers confirmed that teachers need information for their teaching activities. According to the assistant head of the high school teachers' used information from different sources to enhance their teaching and also promote high performance of students. On the issue of what teachers required information for, the headmistress of the senior high school indicated that teachers required information to update themselves with current issues in their field in order to prepare well for teaching; thus information from different sources enabled teachers to gain knowledge for teaching, for research and for personal development.

Both the head and assistant also indicated that teachers obtained relevant information for teaching from bookshops, internet, workshops, seminars, newspapers, textbooks, library materials including dictionaries and encyclopedias, but most teachers preferred information from the internet they indicated. According to the assistant head of the high school, teachers preferred internet materials because they are more current than the available library materials.

From the findings, teachers were also aware and used a number of educational sites: The Science Spot (21.2%), Vocational Educational Centre (7.7%), Education World (40.5%), Smithsonian Education (3.8%), Teaching Procedural and Technical Skills (15.4%), Pubmed (1.9%), Maths world (3.8%), Le point du fle (1.9%) and Francais facile (3.8%).

Teachers were also aware and used some search engines. Teachers preferred choice are arranged as follows: Google (36.5%), Google Scholar (19.1%), Yahoo (16.4%), Ask (13.2) and Bing (14.3%). Majority of the respondents who used the educational sites and search engines indicated that, they were very effective for finding information for teaching.

C. Extent of Training in Information Literacy Skills

The second objective looked at the extent of training in information literacy skills organized for teachers. The results (98%) showed that generally, the school did not organize formal training on internet and library skills for the teachers.

The reasons given by the Head teachers for not organizing formal training on library skills and internet skills for teachers were: the assistant headmistress (AHW) said that, there used to be training on internet skills for teachers some years back but

currently no. He further stated that, for now there is no planned time for that. It is taken for granted that the teachers know about the internet through other means. teachers learnt the use of the library at the university through information literacy course (AHW); this has not been seen as an important component of the teaching process, and since it is not part of curriculum, much attention is not directed to it, most teachers have had IL courses at the Universities (AHW); training in information literacy has not been considered necessary (HW).

D. Strategies Teachers Employ to Find Information from Information Sources

Teachers indicated how they checked if particular information found was scholarly. In checking for scholarly materials, (30%) said they looked at the authority behind the work, (23%) indicated that they looked for information written for a scholarly community, the source should be part of an edited publication (30%); the authenticity of the information created was indicated (16%).

The study inquired if respondents acknowledged the sources of information they used, (58.2%) said "Yes" while (10.2%) said "No", "Sometimes" (31.6%). They gave reasons for acknowledging sources as; "it is the right thing to do" (15.1%), "to prevent plagiarism" (45.3%), "for academic integrity" (18.6%), "to conform with copy rights issues" (21%).

On how respondents included new information they obtained from libraries and the internet into their teaching activities, (32.5%) said "I summarize new information for teaching", "I give new information to students as it is" (5.2%), I blend information for students (62.3%).

On the issue as to whether teachers acknowledged sources of information they used for their teaching activities, HM indicated *yes* while HW indicated not always, teachers used new information from libraries and internet verbally and as a reference in their lesson notes. One clearly defined challenge according to HW was the sorting of the right information, having time to meticulously strain out the right educational information to satisfy the need of the students and syllabus requirement.

E. Barriers to the Development of Information Literacy Skills Among Teachers

The final objective looked at the barriers that are mitigating against the development of information literacy skills among teachers in the high school. The results are as follows: time constraints (20.6%), interrupted power supply (15.9%), instability of internet (14), lack of funds (15%), inadequate books (2.8%), lack of interest on the part of teachers (8.4%), information literacy is not in the curriculum and not examinable

(2.8%), lack of trained personnel's (6.5%), lack of facilities (11.3%). Other barriers were lack of planning, lack of manpower and logistics (2.8%).

The AHW indicated some barriers are inadequate funding; lack of teacher preparedness for these skills.

The HW also indicated some barriers to be lack of facilitators, lack of the instruments to be used and unavailability of the teachers themselves.

Considering the identified barriers, respondents were asked to suggest ways by which information literacy skills training could be carried out in their schools. Multiple responses gathered were as follows: (97.1%) there should be relevant materials in the library and stable internet access (95%) on campus for the training, (62.4%) training should be organized during vacation and/or mid-terms, it should be part of the curriculum. Other suggestions included the compulsory training for every teacher (51.8%), provision of adequate funds (67.2%). Few respondents (6.6%) indicated that training should be free or subsidized.

Some of the suggestions put forward by the head teachers were:

AHW: Government should support through adequate funding, teachers need to be enlightened about the need for such skills, and it should be factored into the school's curriculum by Ghana Education service.

HW: Provision of more computers, ICT laboratorie with modern equipment and qualified resource personnel's from the Ministry of Education and Ghana Education Service to facilitate the training. All stakeholders must be made to understand the importance of information literacy skills for teachers in secondary school so that they can give their maximum support to the training.

X. DISCUSSIONS

The first objective sought to determine the level of awareness of information literacy among teachers' in the high school. Teachers' ability to identify and use information resources was looked into. Comparing the views of teachers, they all agreed that they needed information for their teaching purposes.

From the responses gathered, the respondents were generally aware of and understood the concept of IL but had different interpretations of IL. This to some extent influenced greatly their use of different information resources to find and use information for their teaching activities. This finding disagrees with Williams and Wavell's (2006) study which indicated that the concept of IL was new to most teachers.

The findings indicated clearly that most teachers required information to update their teaching notes, acquire new knowledge in subject areas and to keep abreast with current information in subject area. The findings also revealed that teachers consulted mainly the internet, library materials and

textbooks for teaching, with the internet being the most preferred source. Teachers had the ability to identify information gaps that existed in their subject areas and looked for information to fill these gaps. This findings conflict with Williams and Wavell's (2006) study which indicated that some teachers' were not aware of the various sources of information that was available to them. This findings confirms Merchant and Hepworth's (2002) which indicated that teachers used internet and schools library resources frequently to prepare teaching notes, develop new concepts and seek clarification on a topic to be taught.

Teachers' ability to recognize personally the need for information is in line with the first pillar of SCONUL's (1999) model (IDENTIFY) which states that the information literate teacher should exhibit the ability to recognize that there is the need for information. The findings also satisfy the second pillar of SCONUL's model (SCOPE), which dwells on information literate teacher's understanding of assessing current knowledge and being able to identify gaps. This pillar stresses on the ability of the information literate teacher to access current knowledge on the subjects they teach and their ability to understand the characteristics of the various types of information sources. From the responses, teachers from this high school were able to identify their teaching needs which satisfied the second pillar of the SCONUL model. The teacher's ability to find and use information from print and electronic sources is in line with the forth pillar (GATHER) of SCONUL model which states that information literate teachers should possess the ability to locate and assess information and data needed from print and electronic sources. It can also be deduced from the findings of the study that to some extent teachers in one way or the other knew how to look for information for their teaching activities from different information sources, which is in line with SCONUL's pillar three (PLAN).

On the issue of IL training for teachers, the findings indicated that currently there is no IL training for teachers in the high school. To this effect Merchant and Hepworth (2002) indicated that there should be training and guidance for teachers in IL development. IT literacy and library literacy form a major part of information literacy. It is important to train teachers in IL so that they can transfer these relevant skills to their students.

Teachers were able to rate the effectiveness of the sources they used, they satisfy the requirement for the fifth pillar. The fifth pillar in the SCONUL model (EVALUATE), deal with how information literate teachers can critically appraise and evaluate the information they gather from different sources.

In determining the strategies teachers employed to find information, most teachers indicated they acknowledged the sources they used. As to why they acknowledged the sources, most of them indicated "to prevent plagiarism" and "it is the right thing to do". These reasons all conform to the ethical basis for acknowledging sources. Pillar six (MANAGE) looks at how to organize and manage information professionally and ethically. Most of the teachers through their response demonstrated their ability to meet requirements for academic

integrity and therefore satisfy the requirements for pillar six of the model.

The next issue looked at how respondents included new information they obtained from libraries and the internet into their teaching activities. Most respondents indicated that they summarized or blended new information with existing information for teaching. Pillar 7 (PRESENT) states that the information literate teacher should be able to blend research results and create new knowledge in their teaching. They should also be able to summarize the results of a search. Teachers on the whole satisfied this requirement.

Several reasons were alluded to as militating against the development of information literacy in the school. Time constraints and interrupted power supply featured the most as the barrier to IL training. "Time constraints" as a barrier is no different from Williams and Wavell's (2006) and Stockham and Collins's (2010) findings which revealed that teachers felt constrained by overloaded curriculum content, with tight time tables to allow time for information literacy skills training. This is evident in the reasons that the teachers gave. Policy formulation is one sure way to ensure that the necessary tools and facilities are made available for development of information literacy.

In suggesting ways by which information literacy skills training could be carried out in schools, respondents indicated that there should be relevant library materials and stable internet access in the high school; training should be done during vacation. Adequate funding, provision of more computers, ICT laboratories by Ghana Education service were indicated by the school heads. Also respondents indicated that information literacy should be part of the schools curriculum.

XI. CONCLUSION AND RECOMMENDATIONS

SCONUL's seven pillars of information literacy were appropriate and consistent and clearly mapped out the IL skill level of teachers at Wesley Girls High School. It can be concluded that even though teachers did not have any training in IL, many of them possessed moderate level of IL skills. There may be differences in their level of knowledge and use of information sources but that notwithstanding the findings gave evidence that most teachers were aware of the information sources available to them, even though they might be using the information resources in varying degrees and for different purposes. This is exhibited in their understanding of how to find and use information and communicate it ethically to support their teaching activities. No wonder the school is among the category 'A' schools in the Cape Coast metropolis. However there is the need for some form of continuous professional training in IL for teachers in order to enhance the information literacy skills of the teachers. There should be institutional and national policies that will guide such training for teachers.

Based on the findings of the study, the following recommendations were made:

1. Facilities for IL training must be provided by heads of schools.
2. The Ghana Education Service must make IL a taught course in Colleges of Education and secondary schools in Ghana; for that matter a suitable information literacy curriculum for the training of teachers must be developed by the Ghana Education Service.
3. Heads of institutions should make stakeholders including teachers know the importance of IL for teachers.
4. Heads of institutions should ensure that training is held during periods when teachers are available and willing to participate.
5. Qualified school Librarians should facilitate IL programs for school teachers.
6. Above all, Heads of institutions should fund and make IL training programs compulsory for all teachers in secondary schools.
7. The authors of this study recommend the SCONUL (1999) model as an appropriate model for IL training in secondary schools in Ghana.

RECOMMENDATIONS

This study recommends the integration of IL into the curriculum of Colleges of Education and Senior High Schools by Ghana Education Service. Heads of schools should factor IL into Continuous Development Programmes for their teachers; the IL training should be made compulsory for all teachers and the necessary logistics and facilities needed for IL development in schools should be provided the government.

REFERENCES

- [1] American Library Association, 2010. Presidential Committee on Information Literacy. "Final Report". Chicago: American Library Association 1989.
- [2] Association of College, Research Libraries and American Library Association, 2000. Information literacy competency standards for higher education. ACRL.
- [3] D. Bawden, and L. Robinson, "Promoting literacy in a digital age: Approaches to training for information literacy," *Learned Publishing*, vol. 15, no. 4, pp. 297-301, 2002.
- [4] M. Bent, and R. Stubbings, (2011). The sconul seven pillars of information literacy core model for higher education. Available: <http://bit.ly/29b3ps4>
- [5] T. Bothma, E. Cosijn, I. Fourie, and C. Penzhorn, (2014). Navigating information literacy: Your information society survival toolkit (4th ed.). Pearson Holdings South Africa, Cape Town.
- [6] C. S. Bruce, "Information literacy: A framework for higher education," *The Australian Library Journal*, vol. 44, no. 3, pp. 158-170, 1995.
- [7] L. M. Duke, and A. D. Asher, eds., (2012). College libraries and student culture: What we now know. American Library Association.
- [8] T. S. Duke, and J. D. Ward, "Preparing information literate teachers: A met synthesis," *Library & Information Science Research*, vol. 31, no. 4, pp. 247-256, 2009.
- [9] M. B. Eisenberg, C. A. Lowe, and K. L. Spitzer, (2004). Information literacy: Essential skills for the information age. Greenwood Publishing Group, 88 Post Road West, Westport, CT 06825.
- [10] S. Corrall, and H. Hathaway, (2000). Seven pillars of wisdom? Good practice in information skills development. SCONUL.
- [11] H. Johnson, "Introduction in: Seven pillars of wisdom? Good practice in information literacy skills development," *Proceedings of a conference held at the University of Warwick*, June 6-7 2000, S. Corrall and H. Hathaway (Ed.). p. 3-4. London: SCONUL
- [12] B. N. Jorosi, and G. G. Isaac, "Teaching information literacy skills in community junior secondary schools in Gaborone," *Information Development*, Botswana, vol. 24, no. 1, pp.123-134, 2008.
- [13] L. Merchant, and M. Hepworth, "Information literacy of teachers and pupils in secondary schools," *Journal of Librarianship and Information Science*, vol. 34, no. 2, pp. 81-89, 2002.
- [14] C. Laverty, and B. Reed, "Inspired teachers: Providing a classroom context for information literacy theory and practice," D. Cook & N. Cooper (Eds.), *Teaching information literacy to social sciences students and practitioners: A casebook of applications*. Chicago: Association of College and Research Libraries, 2006.
- [15] Lifelong Learning Council Queensland Inc., (2016). Available: http://www.llcq.org.au/01_cms/details.asp?ID=12
- [16] S. Miller, and N. Murillo, "Why don't students ask librarians for help? Undergraduate help-seeking behavior in three academic libraries," *College Libraries and Student Culture: What We Now Know*, pp. 49-70, 2002.
- [17] J. Pulkkinen, and T. V. Wyk, "The challenge of the information society for African teachers," *The federation for information processing*, 2002. Available: http://link.springer.com/chapter/10.1007%252F978-0-387-35615-0_18
- [18] H. B. Rader, "Teaching and assessing information skills in the twenty-first century: A global perspective," *Library Trends*, vol. 51, no. 2, Fall 2002.
- [19] SCONUL, "The SCONUL seven pillars of information literacy: A research lens for higher education," *SCONUL Working Group of Information Literacy* 2011. Available:

- [http://www.sconul.ac.uk/groups/information_literacy / seven_pillars.html](http://www.sconul.ac.uk/groups/information_literacy/seven_pillars.html)
- [20] M. Stockham, and H. Collins, "Information Literacy Skills for Preservice Teachers: Do They Transfer to K-12 Classrooms?," *Education Libraries*, vol. 35, pp. 59-72, 2012.
- [21] S. Virkus, "Information literacy in Europe: A literature," *Inf. Res.*, vol. 8, no. 4, pp. 1-56, 2003.
- [22] D. Williams, and L. Coles, L., "Teachers' approaches to finding and using research evidence: An information literacy perspective," *Educational research*, vol. 49, no. 2, pp. 185-206, 2007.
- [23] D. Williams, and C. Wavell, (2006). Information literacy in the classroom: Secondary school teachers' conceptions. Available: <http://www.rgu.ac.uk/files/ACF4DAA.pdf>