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Information access and evaluation skills of secondary school students in Ghana

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Abstract

Information Literacy (IL) is a necessary skill needed by students to survive in the dynamic information environment of the 21st century. This study explored the IL skills of secondary school students in Ghana with specific focus on students' abilities in finding and evaluating information. The study was conducted in two "first-class" secondary schools in the Kumasi Metropolis of the Ashanti Region of Ghana; Opoku Ware Senior High School and Yaa Asantewaa Girls' Senior High School. A survey instrument was developed to assess the skills of the students in that regard. Questionnaires were distributed to an overall sample size of one hundred and seventy (170) students in the two schools. In addition, four teaching staff of the schools were also interviewed to corroborate the findings from the students. The findings revealed that students in the two schools lack the ability to effectively access information for their academic work. The study also discovered that students in the participating schools lack the basic skills to differentiate good information from bad ones. The study recommends, among others, the integration of IL into the secondary school curriculum in Ghana; and collaboration between librarians, teaching staff and the Ghana Education Service to promote IL among students to promote lifelong learning.

Keywords

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1. Introduction

Information users are confronted with an avalanche of information from different kinds of sources making it difficult to verify their authenticity. However, young students have an even stronger need to be able to identify what is relevant for learning and recreational purposes as exposure to too much information may be counter-productive as a result of information overload (Yan, Sha, Yan, & Shang, 2015). Information Literacy (IL) provides students with the critical skills needed to find and evaluate the information they need for their academic work and personal lives. After graduation, IL can help newly-graduated secondary school students to make an easier transition to young adulthood (Maughan, 2001 cited in Badke, 2008), while preparing for university.

Even though secondary school students are expected to be independent information users at the time of graduation (Majid, Chang, & Foo, 2016), this is probably not the case in Ghana, as IL is not integrated into the secondary school curriculum as it pertains in some countries (Majid et al., 2016). Furthermore, a few public and private universities in Ghana have commenced teaching IL to their first-year students. Secondary school students need a basic understanding of this concept before entering university where expectations to be independent in using information is high. Additionally, if lifelong learning capabilities are to be inculcated into students, educational institutions at the pre-university level must integrate IL into their curriculum (Onyebuchi & Ngwuchukwu, 2013).

Despite the awareness of the relevance of IL among library professionals culminating in numerous studies by researchers around the world, there is little, if any that is dedicated to the Ghanaian IL terrain. van Aalst, Hing, May, and Yan (2007) investigated into the Information Search Process (ISP) of 12th Grade students in Hong Kong where they found students' inadequate skills in completing the Information Search Process. Chang et al. (2012) developed a scale to measure the IL skills of students in Singapore and found, among others, that most of their respondents possessed lower-order IL skills in information seeking than higher-level skills such as evaluation. Majid, Chang, and Foo (2016) found positive student IL scores among secondary school students in Singapore, compared to the results of previous studies. They, however, discovered that students preferred easily available human sources for information assistance rather than their school librarians. A quick reading of this summary of findings shows that the contexts of these studies are in the much-developed areas of Asia. In Africa, a recent study on IL at the pre-university level was conducted by Onyebuchi and Ngwuchukwu (2013). Their study was an experiment of IL in primary school libraries in Enugu in Nigeria. They found that pupils in the experimental group who were provided IL instruction performed better in projects than those who were not in the experimental group. To this end, it is appropriate to find out to what extent the IL skills of secondary school students in Ghana are comparable to their counterparts in countries where IL has been integrated into the educational curriculum. Furthermore, most of the existing studies pointed out to students' weak evaluation skills as a result of over-concentration on lower-order IL outcomes. In the light of this trend, this research explores two Ghanaian secondary school students' perspectives of IL with specific reference to their abilities in information seeking (access) skills and evaluation. The uniqueness of this study is in the fact that, unlike some of the countries where literature on IL at the secondary school level abounds, IL has not been integrated into the secondary school curriculum in Ghana.

2. Literature Review

According to the *Library Bill of Rights* (2014) of the American Library Association "The school library plays a unique role in promoting, protecting, and educating about intellectual freedom. It serves as a point of voluntary access to information and ideas and as a learning laboratory for students as they acquire critical thinking and problem-solving skills needed in a pluralistic society". This expression requires schools to provide equitable access to the services and resources of school libraries. However, secondary school students' tendency to access scholarly information is influenced by a number of factors. Some of these factors include the availability of library periods on the school curriculum, availability of relevant information sources, and the provision of information and communication technology (ICT) facilities.

The phenomenon of under-use of school libraries has been noted in the literature (Foo et al., 2014). A research conducted by Foo et al. (2014) to assess IL skills among Singapore secondary school students revealed that various libraries, including school libraries, were underutilised and the assessment of IL skills among the students were found to be unsatisfactory. Specifically, more than 40% of students surveyed seldom used their school library while very few (15%) students made use of librarians to satisfy their information needs. The authors surmised that this could be due to the low relevance of library resources or the lack of awareness of relevant and available resources among students and teachers. They proposed that schools should develop better collections and policies aimed at integrating library resources into teaching and learning in schools in Singapore. This finding is confirmed in van Aalst et al. (2007) who concluded that students in Hong Kong secondary schools reckoned WebPages as the single most important source for completing student projects. These findings point to the need to develop deliberate and affirmative policies to enhance the use of school libraries to improve the IL competencies of students.

Integrating library use in the school curriculum is important for promoting IL of students. Benard and Dulle (2014) in their study of IL in secondary schools in Tanzania noted that school libraries were restricted to students for most periods in the school curriculum and this immensely affected library use. Onyebuchi and Ngwuchukwu (2013) confirmed in their study of IL in Nigerian primary schools that students whose schools had included library periods in their curriculum performed comparatively better than students whose schools did not have library periods. These findings suggest that it is imperative for school leaders and teachers to designate specific times in the school curriculum for library use by students to benefit from the rich resources of the library and expertise of the school librarian.

Regarding the provision of relevant information sources in the school library, many studies show that students use a variety of resources to obtain information. Benard and Dulle (2014) discovered that most students (77.1%) used textbooks compared to other sources to obtain information. In addition, students used dictionaries, novels, magazines among others. However, students tend to use Internet resources much more when they conceive of it as a communication tool rather than an information and communication tool. Malliari, Togia, Korobili, and Nitsos, (2014) found that students in Greek high schools mostly used the Internet (73.6%) compared to other print resources due to the Internet's ability to facilitate communication. It is important to know that print and Internet resources are both important for providing information and it is the responsibility of the school librarian to direct students on the effective use of these resources.

Access to ICT facilities in secondary schools can greatly enhance students' access to information and ultimately result in improved IL competencies of students. A comparative study conducted in Iranian secondary schools by Isfandyaru and Kashi (2011) to find out the role of ICT in IL of students revealed that students who make use of ICT or have access to IT to search for information are more information literate than students who do not have access to IT facilities to search for information. Despite the availability of Internet facilities in schools, students require guidance from the school library to obtain useful information from the Internet. Chang et al. (2012) in their study of two Singapore secondary schools found that even though the majority of students in their study had Internet access at home, this did not improve their evaluative skills of online resources. This implies that students need to be educated to use ICT for effective access to information, a job that librarians are best qualified for (Jurkowski, 2010:53). In spite of efforts to introduce students to more useful Internet resources for information, most students are used to search engines, particularly Google. This is no surprise as most search engines have become the preferred first port of call for Internet searches among the general public (Calhoun, 2014:112). Boger, Dybvik, Eng, and Norheim (2016) in their comparative study of first and third year nursing students found that most first year students used Google as their choice of search system on the Internet. The authors attributed this choice to the ease and convenience of search engines as students are already familiar with search engine techniques. Jurkowski (2010:61) opines that librarians need not discourage the use of these resources but they must educate teachers and students on quality websites and how to evaluate them independently.

In evaluating the credibility of information sources there are several key criteria to consider: the authority of the author, the background of the publisher, the objectivity of the author, the quality of the work, the currency of the work, the relevance of the work, among others (Jurkowski, 2010:61-63). It is a known fact that not all information available and especially on the Internet is authentic. Information is available in a multiple media such as graphical, aural, and textual. These pose special challenges for students in terms of evaluating, understanding, and using information in an ethical and legal manner (Bundy, 2004). Studies of high-school students have found that students have "difficulty evaluating the veracity and objectivity of information" (Adams, 1999). Johnson and Lamb (2003) suggest that it is imperative for students to learn how to evaluate the quality of information they find on the web and any other information available elsewhere.

A study conducted by Julien and Barker (2008) in Alberta, Canada on how high school students find and evaluate information sources revealed that high school students lack skills in investigative procedures during information-seeking. The findings confirmed those of Branch (2003), Brown (2001), and Toad (2004) who also discussed the lack of searching skills and information evaluation skills among students. Heidi and Barker (2009) in their research into how high school students evaluate information sources found that most of the students viewed trustworthiness of information based on the website design rather than the content of the information. They cautioned that evaluating the website design alone is a risky practice and that students need to be better equipped to evaluate web content.

However, Brarranoik (2001) in her study of biology high school students found that over 80% of the students were more particular and concerned with the content of information and, therefore, recommended that teachers should rather give prominence to the process of information searching by equipping the students with the necessary skills and capabilities to search and evaluate for the right sources of information. Schols-Crane (1998) notes that there is a changing face on how students conduct information research because of the World Wide Web (WWW) and that millions of students access information on the web and the process is too simple which has lowered the quality of students' research process. In a similar note, Limberg (2007) also discovered that high school students often sought for facts without questioning or analysing the information they acquire. Consequently, Schols-Crane (1998) points out that librarians are responsible for teaching students the skills necessary for effective evaluation of information sources.

3. Statement of the problem

Most information on the Web is not peer-reviewed and this poses a lot of quality challenges for students. IL is one of the major solutions to the information explosion, as it allows individuals to cope with this situation by providing them with skills to know when information is needed, where it can be located, how to evaluate it and use it effectively and efficiently. Although secondary schools in Ghana, to some extent, have good libraries, it is not clear whether students of secondary schools in Ghana have the necessary skills to access and evaluate available information resources effectively. Additionally, "digital natives" often lack the ability to effectively use the vast array of information sources now available to them and rely heavily on search engines and some questionable tertiary sources such as Wikipedia (Averill & Lewis, 2012). At times "digital natives" have been found to be digitally illiterate and this study was conducted to establish whether the characteristics of "digital natives" worldwide fit the description of students of two secondary schools in Ghana; Opoku Ware Secondary School and Yaa Asantewaa Secondary School.

The study, therefore, seeks to assess the IL skills of students of Opoku Ware and Yaa Asantewaa Girls Senior High Schools in the Kumasi Metropolis of the Ashanti Region of Ghana. However, the specific objectives of this study are to 1) Determine the information seeking skills of secondary school students; and 2) Identify whether or not students of these schools evaluate information sources and with what criteria they achieve this.

4. Background of the two schools

Opoku Ware Senior High School was established in 1952 as one of the first Catholic schools in Ghana. Opoku Ware Senior High School was named after the Asante Monarch, Opoku Ware I and the students are known collectively as Akatakyie, an Asante word meaning "Conquering Heroes". The School which is often referred to as OWASS was originally called Yaa Asantewaa College, but subsequently was renamed Opoku Ware, two weeks after the school opened. By 1955, the school had four hundred and fifty (450) students and the sixth form was established in 1958, and it provided courses in both Sciences and Arts. Currently, the student population has significantly risen to over one thousand, eight hundred (1800), while it runs programmes in Sciences, Arts, Visual Arts, and Technical courses. OWASS was ranked the fourth best among top ten senior high schools in Ghana (Serve Africa, 2013).

Yaa Asantewaa Girls Senior High School is one of the few girls' schools in the Ashanti Region of Ghana. The school was established in Kumasi in 1960 by the first President of Ghana, Dr

Kwame Nkrumah. The school was named after the legendary Yaa Asantewaa, the great historical revolutionary heroine and Queen Mother of Ejisu, in the Ashanti Region of Ghana who led the war against British Colonialists in the year 1900. The School has a population of about Two Thousand five Hundred (2500) girls. The school offers programmes General Arts, General Science, Business, Home Economics and Visual Arts. The school has recorded consistently excellent results, and they are not just complacent with the status quo.

5. Methodology

A mixed method of both qualitative and quantitative was used for data sourcing. Survey research is an efficient method for systematically collecting data from a broad spectrum of individuals and educational settings. The researcher employed cross-sectional survey for this study. Survey research involves the collection of information from a sample of individuals through their responses to questions. The population for the study was drawn from the two schools; Opoku Ware Senior High School and Yaa Asantewaa Girls Senior High school.

The study was focused on only secondary school students. The study considered the final year senior high school students as the ideal population for two reasons. First, most of them will be entering the various tertiary educational institutions where their IL (IL) competencies could considerably affect their learning. The second reason is that a number of tertiary educational institutions where they will seek to pursue higher education are running IL as a credit-bearing course for which they may be expected to demonstrate basic competencies in order to pass the IL course. The total population of secondary school3 Students for the two schools stands at one thousand, six hundred and ninety-eight (1,698).

Table 1.1: Total Population for Students

No.	School	Population of the students
1	Opoku Ware Secondary School	1008
2	Yaa Asantewaa Girls' Secondary School	690
Total		1,698

Convenience sampling technique was used to collect data from the students. The researchers used a proportionate sampling method to select the students to complete the questionnaire to help get the accurate representation of the total number of students offering a particular programme of study. Alreck and Settle (1985) and Fraenkel (1993), recommend a sample size

of 10% of the population, which will ensure adequate confidence and adequate control of sampling error.

6. Data analysis and presentation

This section presents the findings of the data analysis.

6.1 Age of respondents

Table 1.2 is a summary of the ages of students of both schools.

Table 1.2: Age of Respondents

Age Range	YAGSHS		OWASHS		Total	
	No.	%	No.	%	No.	%
12 to 14 years	0	0	0	0	0	0
15 to 17 years	59	85.5	77	76.3	136	80
18 to 20 years	10	14.5	24	23.8	34	20
Total	69	100.0	101	100.0	169	100.0

Source: Field data, 2016

From Table 1.2, the study found that the majority of the respondents were between 15 to 17 years (80%). This was followed by respondents of 18 to 20 years (20%). Detailed information is available in Table 1.2.

6.2 Respondents' subjects of study

Table 1.3 displays the programmes offered by students of both schools.

Table 1.3: Programme of Study

Programmes	YAGSHS		OWASHS		Total	
	No.	%	No.	%	No.	%
Science	21	31.9	50	49.5	71	36.3
Agric science	4	5.8			4	3.5
General Art	21	29	30	29.7	51	27.3
Home Economics	7	10.1			7	12.5
Visual Arts	3	4.3	3	3	6	5.1
Business	13	18.8	18	17.8	31	15.3
Total	69	100.0	101	100.0	170	100.0

Source: Field data, 2016

From Table 1.3, though the majority of the students offered Science and General Arts, students from all programmes were represented in the study. However, looking at the percentages, more males offer Science programme than females.

6.3 Frequency of visit to the library

The study aimed at finding out how frequently students of both schools visited the library. The results of this investigation are summarised in Table 1.4:

Table 1.4: Frequency of visit to the library

Frequency of visit	YAGSHS		OWASHS		Total	
	No.	%	No.	%	No.	%
Every day	2	2.9	12	11.9	14	8
Weekly	52	75.4	55	54.5	107	63.3
Monthly	5	7.2	20	19.8	25	14.7
Not at all	10	14.5	14	13.9	24	14
No response	0	0	0	0	0	0
Total	69	100.0	100	100.0	170	100.0

Source: Field data, 2016

From the findings, it can be observed that a high proportion of students of both schools (63.3%) and (14.7) visited the library weekly and monthly, respectively. 14% of the respondents from both schools had not visited the library at all. These results suggest that students of both schools were serious about the use of the library and therefore value its importance.

6.4 Reasons for using the school library

The study also investigated the reasons for which students of both schools used the library. The findings are presented in Table 1.5.

Table 1.5: Reasons for using school library

Purpose of Visit	YAGSHS		OWASHS		Total	
	No.	%	No.	%	No.	%
Read my notes	3	4.3	10	9.9	13	7.6
Read story books	22	31.9	13	12.9	35	20.7
Read textbooks	4	5.8	11	10.9	15	8.8
Search for info for my coursework	31	44.9	66	65.3	97	57.4
None response	9	13	1	1	10	5.9
Total	69	100.0	101	100.0	170	100.0

Source: Field data, 2016

On the reasons for which students used their school library, it is clear from Table 1.5 that the greater part of the respondents (20.7%) and (57.4%) visited the library for the purposes of reading story books and conducting basic research, respectively. These findings indicate that most of the students visited the library for knowledge-related activities which are acceptable purposes for visiting a school library.

6.5 Library periods on school time-table

The study also interrogated the perspectives of respondents on the availability of library periods on the school timetable. The findings are presented in Table 1.6.

Table 1.6: Availability of library periods on time-table

Responses	YAGSHS		OWASHS		Total	
	No.	%	No.	%	No.	%
Yes	58	84.1	14	13.9	72	42
No	11	15.9	87	86.1	98	58
None response	0	0	0	0	0	0
Total	69	100.0	101	100.0	170	100.0

Source: Field data, 2016

Clearly, Table 1.6 showed that a little over half (58%) of the students from both schools pointed out that their school do not have library periods on their time-table, while little below half (42%) answered in the affirmative. Further, a split observation of the data from the two schools showed that with Yaa Asantewaa Girls School, 84.1% of the student indicated the availability of library

periods on the school time-table, whereas, for Opoku Ware Senior High 86.1% answered in the negative. This finding indicates that while Yaa Asantewaa Girls School had a library period, Opoku Ware Senior High does have library period on the school time-table.

6.6 Finding general background information

The subjects of the study responded to questions on what sources they use to find general background information. The findings are in presented in Table 1.7.

Table 1.7: Sources for finding general background information

Library	YAGSHS		OWASHS		Total	
	No.	%	No.	%	No.	%
Dictionary	3	4.3	6	5.6	9	5.3
Encyclopedia	39	56.6	53	52.5	92	54.2
Almanac	7	10.1	16	15.8	23	13.5
Directory	17	24.6	22	21.8	39	22.9
No response	3	4.3	4	4	7	4.1
Total	69	100.0	101	100.0	170	100.0

Source: Field data, 2016.

The results from Table 1.7 show that most of the respondents used a variety of reference sources to find background information on their research and information needs. However, the findings show that 54.2% of the respondents from both schools used an encyclopaedia for finding background information.

6.7 Finding information from the Internet

The Internet is both an information and communication tool which can be helpful for obtaining academic information and exchanging ideas and information with peers and teachers (Jurkowski, 2010:57). Students were asked to indicate if they accessed information from the Internet since the two schools have ICT facilities. Table 1.8 shows the results of this question.

Table 1.8: Finding information from the Internet

Access to information from the Internet	YAGSHS		OWASHS		Total	
	No.	%	No.	%	No.	%
Yes	20	29	30	29.7	50	29.4
No	22	31.9	47	46.5	69	40.6
Sometimes	26	37.7	23	22.8	49	28.8
No response	1	1.4	1	0	2	1.2
Total	69	100.0	101	100.0	170	100.0

Source: Field data, 2016

From Table 1.8, a few (29.4%) respondents cumulatively from both schools indicated that they accessed information from the Internet, while a few (28.8%) indicated they sometimes accessed information from the Internet. This probably means that students are unable to access information from the Internet, inferring that they lack the requisite skills to access information from the Internet.

6.8 Most visited websites

Table 1.9 presents the results of students' preference of websites from both schools.

Table 1.9: Most visited websites

Preferred Websites	YAGSHS		OWASHS		Total	
	No.	%	No.	%	No.	%
Yahoo	6	8.7	13	12.9	19	11.2
Google	56	81.2	71	70.3	127	74.7
Wikipedia	4	5.8	17	16.8	21	12.4
Others	0	0	0	0	0	0
No response	3	4.3	0	0	3	1.7
Total	69	100.0	101	100.0	170	100.0

Source: Field data, 2016

From the findings, Google emerged as the number one website used by students from both schools (81.2% and 70.3%), while Yahoo was the second most patronised website (8.7% and 12.9% respectively).

6.9 Authentication of information sources

Table 1.11 establishes whether students from both schools verify the quality of the information they find before using them.

Table 1.11: Authentication of sources

Authentication of sources	YAGSHS		OWASHS		Total	
	No.	%	No.	%	No.	%
Yes (Sources Checked)	47	68.1	59	58.4	106	62.4
No (Sources unchecked)	20	29	42	41.6	62	36.4
No response	2	2.9	0	0	2	1.2
Total	69	100.0	101	100.0	176	100.0

Source: Field data, 2016

The responses show that the majority (62.4%) of the respondents from both schools check the sources of the information they used, while a minority (36.4%) of the students said they did not check the sources of the information they used. The focus now is on those who answered in the affirmative.

6.10 How students determine good sources of information

In evaluating the credibility of information source, there are several criteria to consider. The students were asked how they determine good sources of information. Table 1.12 presents the findings from both schools.

Table 1.12: Determining good sources of information

Determinants of a good source	YAGSHS		OWASHS	
	No. of yes	%	No. of yes	%
Check the authors name	25	36.2	41	40.6
Verify the publisher	23	33.3	41	40.6
Country of origin	16	23.2	26	25.7
Qualification of the author	45	65.2	70	69.3
Popularity of author	18	26.1	34	33.7
Data of publication	22	31.9	38	37.6

Source: Field data, 2016

From Table 1.11, 65.2%, 36.2%, 33.3%, 31.9%, 26.1%, 23.2% of students from Yaa Asantewaa Girls School students respectively indicated they would use the qualification of the author, author's name, publisher, date of publication, the popularity of author, and country of origin respectively. Looking at the data, the majority of the students mentioned that they check the qualification of the author which suggests that students of Yaa Asantewaa Girls would consider the qualification of an author to determine a good source of information.

On the other hand, most of the students from Opoku Ware Secondary School indicated they would use the qualification of the author, author's name, publisher, and date of publication, country of origin, date of publication and popularity of an author respectively. This implies that students of Opoku Ware Secondary School to some extent would consider more the qualification of author, author's name, publisher in determining the right sources of information. Since authority of the author, the background of the publisher, the objectivity of the author, the quality of the work, the currency of the work and the relevance of the work are key issues in evaluation a good sources, and not the place of origin and popularity of the author. To a large extent, more of the students got the answers correctly. Table 4.17 explained it graphically.

6.11 Evaluating information on a website

With reference to the earlier question, respondents were asked how they would be able to determine right information from a website, Table 1.12 shows the results.

Table 1.12: Evaluating information on website

Information on website	YAGSHS		OWASHS	
	No. of yes	%	No. of yes	%
Website popularity	26	37.7	47	46.5
Website always used by friends	12	17.4	32	31.7
The author of the information	21	30.4	25	24.8
The currency of the information	8	11.6	17	16.8
Wider coverage	25	36.2	41	40.6
Peer recommendation	6	8.7	27	26.7

Source: Field data, 2016

The findings of this investigation indicate that a third (37.7%) and less than a third of the respondents (36.2%) apply 'the popularity of the website 'and 'wider coverage' respectively in addition to others as a means of evaluating information on a website. This means that students of Yaa Asantewaa Girls School would consider 'the popularity of the website 'and 'wider coverage' more as a way of knowing that the information on the websites is right or not.

On the other hand, the findings also indicate that a little below half (46.5%) and a little above a quarter (40.6%) of the students of Opoku Ware secondary school rely on 'the popularity of the website 'and 'wider coverage' respectively in addition to others. This means that Opoku Ware secondary school students would consider more 'the popularity of the website 'and 'wider coverage' as a way of knowing that the information on the websites is right or not. The authority of the author of the web information, the currency of the web information, and the complete list of works cited, with reference credible and authoritative sources could be considered as a way of evaluating information on a website.

7. Discussion

This section is a discussion of the findings of the study with reference to the extant literature.

7.1 Secondary school students' ability to access information effectively

The findings revealed that both schools have libraries and these libraries are to some extent well-stocked with relevant materials pertaining to the programmes offered in the schools. Furthermore, a sizeable number of students from both schools visit the library. This suggests that most or the majority of the students access their school libraries frequently, which implies further that the school libraries of both schools are well utilised, as opposed to what was found by Foo et al. (2014) among Singapore Secondary school students, where school libraries were underutilised. In both schools the purpose of visiting the library was to carry out information search on coursework and also to read notes and story books. This is very encouraging since it shows that students from Yaa Asantewaa Girls Senior High School and Opoku Ware Senior High School in Kumasi are aware of the importance of the library to their academic performance. Additionally, the findings revealed that both schools do have library periods, though a little more than half of the respondents indicated they had library orientation periods; indicating the high patronage of the library by students from both schools. Even though this finding somehow contradicts Foo et al. (2014), one could only conclude that the conditions in Ghanaian and Singaporean Secondary schools may not be the same in terms of utilisation of the library.

7.2 Secondary school students' ability to evaluate information sources

In respect of the students' ability to evaluate their information sources, the study noted that most of the students from Yaa Asantewaa Girls Senior High School and Opoku Ware Senior High School authenticate print sources of information before they use them by checking the author's name, publisher, date of publication, and qualification of the author. However, the findings showed some imperfection on the evaluation skills of the students of the two schools as they only considered the authors' name, the publisher, and date of publication as the only relevant evaluation criteria for print documents. Contrary to our findings, Brarranoik (2001) found that over 80% of high school students were more particular and concerned with the content of information. It is noteworthy that our findings are in line with Asher and Duke (2010) who concluded that students experience difficulty in evaluating information sources.

On the criteria for evaluating Internet sources, the findings showed that whereas students of Yaa Asantewaa Girls' Senior High School would consider attributes such as the popularity of the website, the author of the information, and wider coverage of the website as a way of knowing that the information on the websites is right or not, students of Opoku Ware Senior High School on the other hand, considered the popularity of the website, wider coverage and how often friends visited the website as a way of knowing that the information on the website is right or not. This again exposed the flaw of the students in evaluating Internet sources. In evaluating the credibility of information sources there are several key areas to consider; and these are include the authority of the author, the background of the publisher, the objectivity of the author, the quality of the content, the currency of the work and the relevance of the work. Previous studies confirm this finding as high school students have been found to experience difficulty in evaluating the veracity and objectivity of information (Adams, 1999). Heidi and Barker (2009) corroborate this finding by pointing out that most students viewed trustworthiness of information based on the website design rather than the content of the information. This clearly shows the difficulty of these students in authenticating Internet sources. It can be concluded that students in this context are not different from those in the international contexts described in the study as they all experience significant challenges when evaluating the quality of information sources.

8. Conclusion and recommendations

The aim of this study was to understand Ghanaian secondary school students' IL skills in specific reference to their skills in accessing information and how they evaluate the information. The findings revealed that students lack the ability to effectively access information for their academic work. The study also concludes that students in the participating schools lack basic skills to differentiate good information from bad ones. Consequently, they may not be good users of information and may not develop and imbibe lifelong learning. Following these findings, we propose a number of measures for consideration by the schools, in particular, and other secondary schools in Ghana, in enhancing their students' IL skills.

It must be noted that IL skills development should not be taught to post-secondary or tertiary students alone as seen or practiced in Ghana. Such skills should be imparted at the beginning of a child's education. Non-integration of IL in academic programmes has contributed to information illiteracy among students and this is not far from what the researcher found in her study. It is therefore recommended that the Ghana Education Service, Heads of Senior High Schools, and all stakeholders in the Senior High School educational establishment must be made aware of the importance of IL.

There is also a need to establish and resource ICT Centres in the senior high schools with modern ICT tools with a connection to the Internet to enable secondary school students have access to quality and current information; this would go a long way to facilitate the teaching of IL skills if it is to be introduced in the senior high school curriculum. Furthermore, students can evaluate information sources by checking for details such as the authority and qualification of an author of a print book, for example, from the Internet.

Library periods must be part of the school time-table to expose students to the use of library services and information resources. Attendance to the library at the designated periods must be compulsory for all students as this will create the necessary space and time for students to embark on independent research and learning. This will enhance students' access to library resources. Furthermore, school authorities need to engage the services of professional information workers who will be in the position to educate the students on the use of the materials in the library, and direct them to relevant information sources to be used for a particular information need. The staff should also be able to handle the IL programme when introduced into the schools. The work of the professional staff will help students and teachers to be able to identify good sources and resources useful for academic work, and how to determine the quality and relevance of these in their academic and recreational activities.

Finally, all these efforts will not succeed without collaboration. There is a need for collaboration among librarians, teachers and all stakeholders of the educational sector to establish contact, discuss, formulate plans and strategies to incorporate and implement IL in the schools. For instance, when teachers are aware of information literacy and are information literate themselves, they would be able to educate their students on how to access and evaluate information during their teaching. It must be emphasised that teachers are considered trustworthy sources of information by their students (Afful-Broni, Owusu-Ansah, & Takyi, 2016) and when IL is spearheaded by teachers, it is likely to have a deeper pedagogical impact.

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