February 2018

Information Literacy, Self-Concept and Metacognitive Ability of Teacher-Librarians at the University of Zululand

Oluwole Olumide Durodolu Dr
woledurodolu@gmail.com

Information Literacy, Self-Concept and Metacognitive Ability of Teacher-Librarians at the University of Zululand

Oluwole O. Durodolu

University of Zululand, University of Lagos

woledurodolu@gmail.com

Abstract

The research scrutinises information literacy, self-concept and metacognitive ability of teacher-librarians at the University of Zululand, South Africa. A total of one hundred and ten (110) copies of questionnaire were distributed among second-year teacher-librarians, out of which fifty-seven (57) copies were returned with valuable responses, giving a response rate of 51.8%. The study chronicled basic issues that concern self-efficacy, personal knowledge, task and procedural knowledge, strategic and declarative knowledge, conditional knowledge and planning ability of teachers. The research revealed, amongst other things, that the teacher-librarians lacked the ability to use computer applications unaided. The teacher-librarians also acknowledged that they had problem with their self-concept, especially pertaining to having the confidence to seek for help in using computers and the Internet. In spite of the apparent advantages of information literacy to teaching and learning, many of them declined that information literacy skill has the potential to enhance their teaching skills. It was also observed that the teacher-librarians lacked the ability to evaluate and identify sources of information resources. In conclusion, the findings will constitute a veritable feedback to the Department of Education and lecturers handling the teacher-librarians in evaluating the progress made in acquiring information literacy skill.

Keywords: Information literacy, Teacher-Librarians, Self-concept, Metacognitive abilities.

1. Introduction

The contemporary setting is overwhelmed by all kinds of information: relevant, irrelevant, current, dependable, authoritative, and so on. In confirming this, Ebersol (2000) acknowledged that among the 500 sites used by Colorado high school students, only 27% were from reliable sources. With the advent of the Internet and the magnitude of information available on it, access

to appropriate and accurate information becomes demanding as a result of many unauthentic sources which information seekers are confronted with on a regular basis (Filson & Kwafoa, 2016:2).

To worsen the situation, the application of information technology requires special skills; therefore employers attract teachers with effective and ethical ability to use, sieve and filter relevant, dependable and accurate information from the irrelevant ones in order to increase productivity (Dadzie, 2008). Therefore, formal education is deficient if devoid of the knowledge of information literacy, especially now that information has become a product through which modern development flourishes. Durodolu and Ocholla (2016:2) affirm that, comparatively, information literacy is to teachers what compass is to sailors. Consequently, without appropriate tools, navigating information resources will be problematic. In view of this, Kurbanoglu (2003:635) suggested that the contemporary information consumer needs to demonstrate confidence, buoyancy, poise and self-assurance which unarguably form the substratum of lifelong learning and trigger the ability to appraise, discover, utilise, fabricate and share information with the aid of modern technology.

The responsibility of teachers in making useful information available to students is significant. As a result of this, teachers should be able to acquire information literacy skills to facilitate their own knowledge-formation activities that will positively influence the abilities of their future students (Purcell & Barrell, 2014:57). The authors further disclosed that many teachers lack the knowledge of information literacy because they were not exposed to the knowledge at the pre-service, graduate and continuing education programmes and this has constituted an impediment to how they can assist students in the classroom. The Association of College and Research Libraries (2011) suggested five standards expected to enhance the quality of information-literate teachers: skills to know when information is needed, appropriate way to access information, information evaluation ability, suitable information use capacity, and ethical use of information. Rapchak, et al (2015: 135) also stated that information literacy is necessary because it will enable teachers to access and navigate the increasing world of information, properly choose trustworthy and dependable information they need, read critically and think independently as they generate their own ideas, and then use that refined information for the promotion of their academic career.

Self-concept symbolises the awareness, understanding and knowledge an individual has of himself or herself which form the foundation for personality development. This inner perception

could be constructive or unconstructive. A teacher's ability to acquire career-transforming ability, such as information literacy, will suffer a major setback without a constructive and an optimistic view of self. However, in the observation of Sanchez and Roda (2003:98), there is correlation between this characteristic trait and academic performance, because it influences social competency, thinking patterns and value systems which are qualities that influence human behaviour, especially that of teachers whose role and responsibility is to interact with student with the goal of motivating them for better performance.

As a result of the overwhelming amount of information that a modern teacher needs to access in order to give students cutting-edge advantage in knowledge and understanding, Erfanmanesh, Abdullah and Karim (2014:48) opined that a high level of self-concept is required of educators, in order to surmount information anxiety which is a major hindrance to quick access to relevant information resources and a leading cause of frustration especially for teachers who need daily information to conduct research, curriculum development and meet the needs of learners with diverse abilities and disabilities. A teacher that is bereft of self-concept can crumble under the weight of these responsibilities, because their role necessitates far-reaching search and use of information resources. Consequently, in the opinion of Onwuegbuzie and Jiao (2004:41) trepidation and nervousness in the course of information search may have a domino effect on students' academic performances and hamper their research productivities.

There are many factors responsible for a teacher's aptitude for high-level performance, both in the classroom and academic attainment. They include self-concept, self-determination, intrinsic motivation, extrinsic motivation, socio-economic standing, working environment, life expectation and association. Put together, these qualities can help to propel teachers in acquiring information literacy skills - which in the opinion of Campbell (2005:82) is a self-defence apparatus for teachers in coping with the information requirements of the 21st century. The teacher-librarian ratio is considerably low and for teachers to attain information self-sufficiency, the ability to seek, find and acquire the skill is paramount Campbell (2005:82) concludes.

Accomplishment in academic endeavour is of dominant significance to teachers, students and parents. The academic outcome depends largely on the quality of information that is available within the academic space. For this reason, efforts should be geared towards the ability to recognise, evaluate, appraise, track and trail development in different field of knowledge. The ability to use current technology that promotes this new development with confidence is also

important. Therefore, modern teachers should be capable of self-motivation in order to inculcate the ability to manoeuvre classroom media resources (Othman and Leng, 2011: 90).

Williams-Mitchell (2014:1) also views information literacy as the potential to identify the type of information that is indispensable, become aware of how the information is structured, recognise the appropriate sources of information for a task at hand, find correct sources, appraise the sources decisively, possess the skill to establish the reliability of the information and ultimately make the information available for the development of the larger society.

2. Background and Context of Teacher-Librarian in South Africa

It is the directive of the Education Library, Information and Technology Services (ELITS) to promote the ambition of schools to offer quality library, information and technology resources and guarantee effective management and utilisation of these resources. These resources are expected to support curriculum development, which entails that learners create knowledge in the course of interfacing with a number of resources. A school library usually provides a foundation for different information resources ranging from print, visual, audio-visual to electronic resources. This gave birth to the School Library Policy which generally upholds three subject matters: School Library Development Programme (SLDP), Information Skills and ICT Programme, and Reading Programme (KZN Department of Education, 2012:1).

Toit and Stilwell (2012) claimed that the disparity in the provision of library services under the auspices of the pre-1994 department of education resulted in prevalent deficient facilities, insufficient resources and inadequate skilled workforce in most of the schools. These problems were amplified by a lack of policy framework, compelling departments of education to offer school libraries and institute library standards. However, the introduction of a new curriculum in 2005 brought a much-desired turn around in South Africa's educational development and a paradigm shift in education that is poised to bring about outcome-based curriculum with its notion of integration and lifelong learning. This new approach brought transformation to the educational system.

Toit and Stilwell (2012:121) observed that the Directorate Education Library, Information and Technology Services (ELITS), a body in charge of school library services in KwaZulu-Natal's Department of Education, frowned at the inability to establish a policy framework for school libraries in line with the national policy scheme in KwaZulu-Natal province in South Africa. De

Jager, Nassimbeni and Underwood (2007:143) made it known that the new policy statements should recognise that information literacy training requires collaboration between teachers and school librarians.

Based on the assessment of the Education Department in KwaZulu-Natal (2014), Education Library Information & Technology Service (ELITS) is a body set up with the vision to promote well-informed learners who can flourish in the complex information setting of the 21st century and ensure equitable access to quality school library services that will promote academic excellence, institute reading culture as an indispensible skill for learning, individual growth and enjoyment in all schools, provision of library-related professional development and support, incorporate information skills into the school curriculum and promote the use of ICT as a tool for accessing information and managing school libraries.

3.   Aims of the Study

The purpose of this study is to appraise the information literacy skills, self-concept and metacognitive ability of second-year teacher-librarians at the University of Zululand.

4.   Objectives of the Study

The objectives of the study are:

1. To investigate teacher-librarians' perceptions about the need for information literacy skills in the implementation of subjects instruction;
2. To examine the purpose of information literacy skills in classroom exercise;
3. To determine the challenges encountered by teacher-librarians in accessing information;
4. To investigate the ability of teacher-librarians in evaluating sources of information;
5. To find out the ability of teacher-librarians in observing ethical guidelines in the use of information;
6. To investigate the frequency of use of information resources by teacher-librarians;
7. To investigate how the information search strategies of teacher-librarians influence their use and satisfaction with online resources;
8. To investigate the effects of self-concept on the information literacy skills of teacher-librarians;

9. To investigate the relationships that exist between demographic variables (gender, age, years of experience and academic qualification) and information literacy skills of teacher-librarians;

10. To find out if there is any significant difference in the perception of the need for information literacy and evaluation of information resources by teacher-librarians;

Hypothesis

H_{01}**:** There is no significant difference in the perception of the need for information literacy and evaluation of information resources of teacher-librarians.

5. Statement of the Problem

Information literacy is without doubt key to classroom activities, especially with the introduction of resource-based teaching and learning introduced to numerous secondary schools in South Africa. Nonetheless, the observed shortage of qualified teachers with the knowledge of information literacy skill has thwarted the expected outcomes. Information literacy skills have the capacity to boost creativity and problem-solving ability in teachers; unfortunately, many schools have failed to develop the skill in teachers by not integrating its techniques in the curriculum delivery. This reflects in the performance of students, especially in township and rural areas where this predicament is more pronounced.

Teachers are expected to be front-liners in the impartation of knowledge and understanding to the next generation. This role is getting threatening as a result of the increase in the use of information resources which need special skills to be utilised. These skills, such as high self-esteem and metacognitive ability which have become scarce characteristics in sub-Saharan countries, obviously are not inborn and, therefore, acquiring them requires effort. This study becomes crucial in an effort to bridge the perceived gap.

Teaching profession is anchored on the richness and quality of information, the dilemma for modern teachers is to exposed students to information that will give them advantage in their future career, playing this role comes with a lot of responsibility on the part of teachers who are supposed to manage their personal information space more efficiently, this study is important because it set out to investigate the information management strategy of teachers because it has been observed that few researchers have venture into that area of research.

6.   Methodology

The quantitative survey method was used in the study to respond to research questions. Teacher-librarians were purposively chosen for the study. The research instrument was given to all the 110 teacher-librarians in the classroom and 57 were returned, representing 51.8%. Simple random sampling technique was used in the selection. First-year teacher-librarians were excluded from the study because they had not been fully introduced to the knowledge of information literacy skill. The entire population of the teacher-librarians was 110 based on the register of the participants in the information literacy programme in 2016. These teacher-librarians were selected from various secondary schools all over KwaZulu-Natal in South Africa. The questionnaire was distributed with the assurance that the privacy and security of information supplied would be protected. The questionnaire was divided into 2 parts. Part A captured the bio-data of the respondents: age, gender and years of experience. Part B contained inquiries about how teacher-librarians perceived information literacy. Questions included perceptions about the need for information literacy, purpose of information literacy skills in classroom exercise, challenges encountered in accessing information, ability to evaluate sources of information, ability of teacher-librarians in observing ethical guidelines in the use of information, frequency of use of information resources, effects of self-concept in information literacy skills and information search strategy and its influence on teacher-librarians. Statistical Package for Social Sciences (SPSS) was used for quantitative data analysis in order to bring intelligibility and understanding to the subject matter. The overall reliability coefficient of the research instrument, when all the items in the questionnaire were taken together, was .800 (r =.800). Therefore, all the items in the questionnaire were found to be reliable, and thus the questionnaire was trustworthy and dependable.

7. Results

This paper centred on the analysis of data, interpretation of data and discussion of findings. A total of one hundred and ten (110) copies of questionnaire designed for the study were administered on the second-year teacher-librarians going through information literacy training in the Department of Information Studies at the University of Zululand, out of which only fifty-seven (57) copies were returned with valuable responses, giving a response rate of 51.8%. This response rate was carefully considered adequate for this study. The data gathered from the returned copies of questionnaire were used for this study and discussed serially according to the

relevant statistical inferential, descriptive statistics of frequency and percentage. This report was on information literacy, self-concept and metacognitive abilities of teacher-librarians at the University of Zululand. Findings from the study are presented based on demographic information of respondents, using pie and bar charts. Research questions were answered in the study using table presentations with frequency count percentage and mean and standard deviation. Tables were equally used to present the findings of hypotheses testing with Correlation and Chi Square techniques.

7.1   Respondents' Social-demographic Characteristics

Figure 1: Pie Chart Distribution of Respondents by Gender
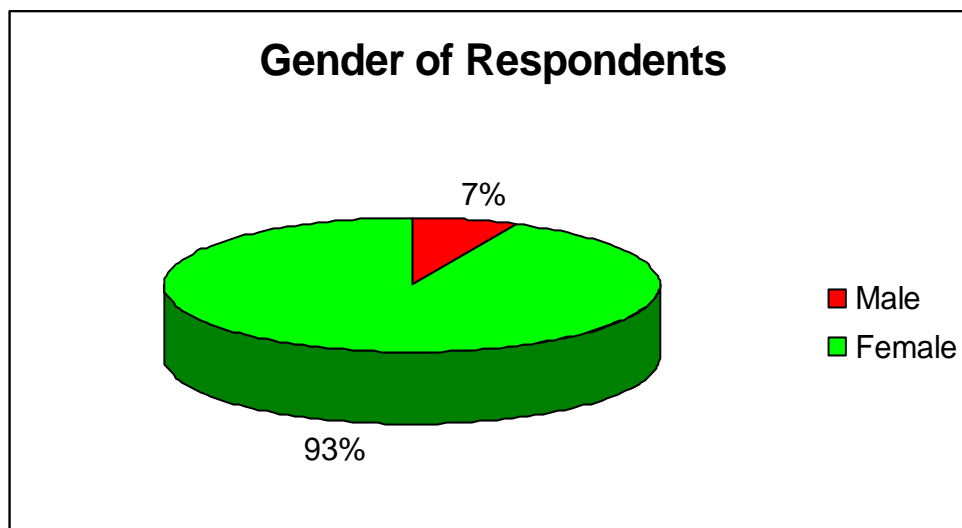
Findings from the background information on gender of respondents (Fig. 1) show that there were more female teacher-librarians (with response rate of 93.0%) than males (7.0%). This could mean that there were more female teacher-librarians undergoing training at the University of Zululand at the time of this study.

Figure 2: Bar Chart Distribution of Respondents by Age
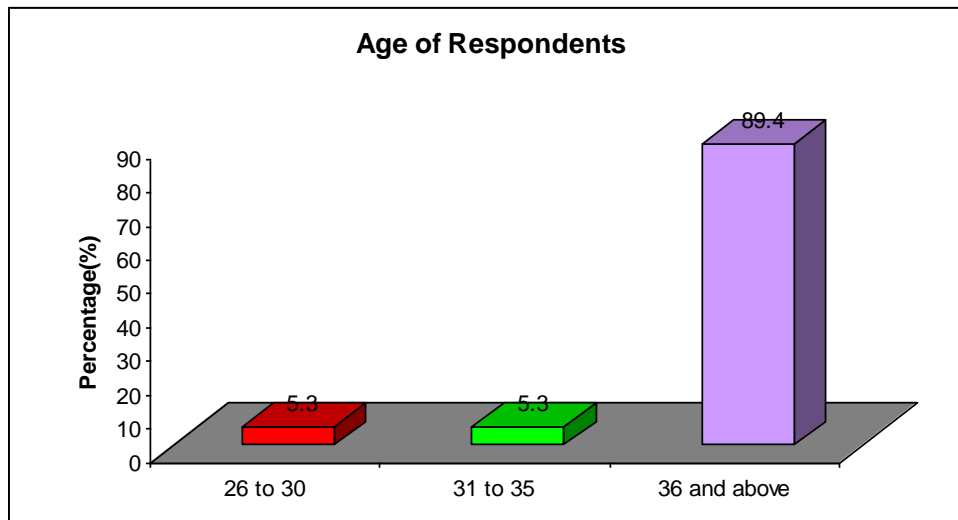
Fig. 2 shows that most of the respondents were from age 36 and above (with response rate of 51 or 89.4%), 3 respondents, representing 5.3%, have their ages between 31 and 35 years, and 3 respondents, also representing 5.3%, have their ages between 26 to 30 years. This means that all the respondents were still in their active years of service.

Figure 3: Pie Chart Distribution of Respondents by Years of Experience
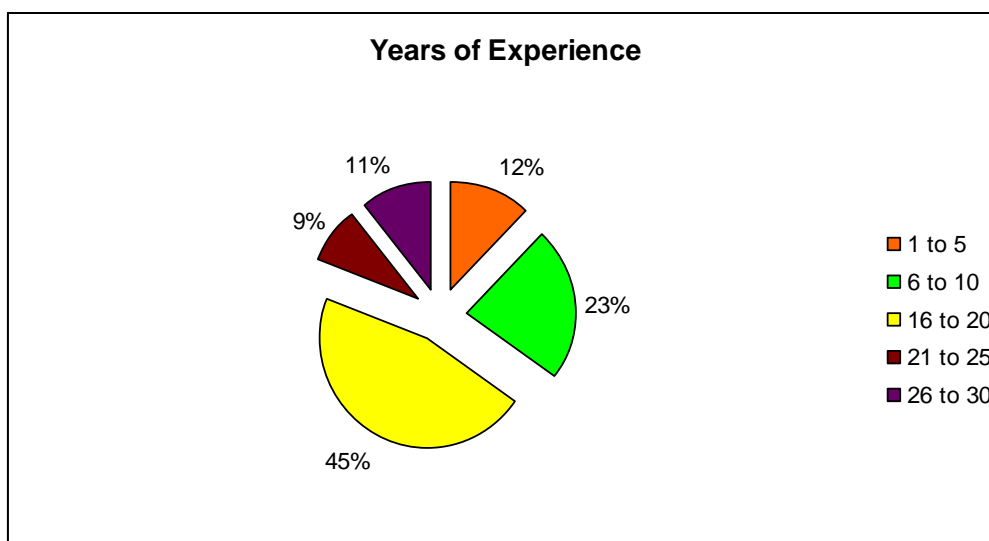
Findings from Fig. 3 show that majority of the respondents (65.0%) have their years of experience ranging from 16-20 years. This implies that majority of the teacher-librarians are experienced since they have worked for between 16 to 20 years.

9

Figure 4: Bar Chart Distribution of Respondents by Educational Qualification
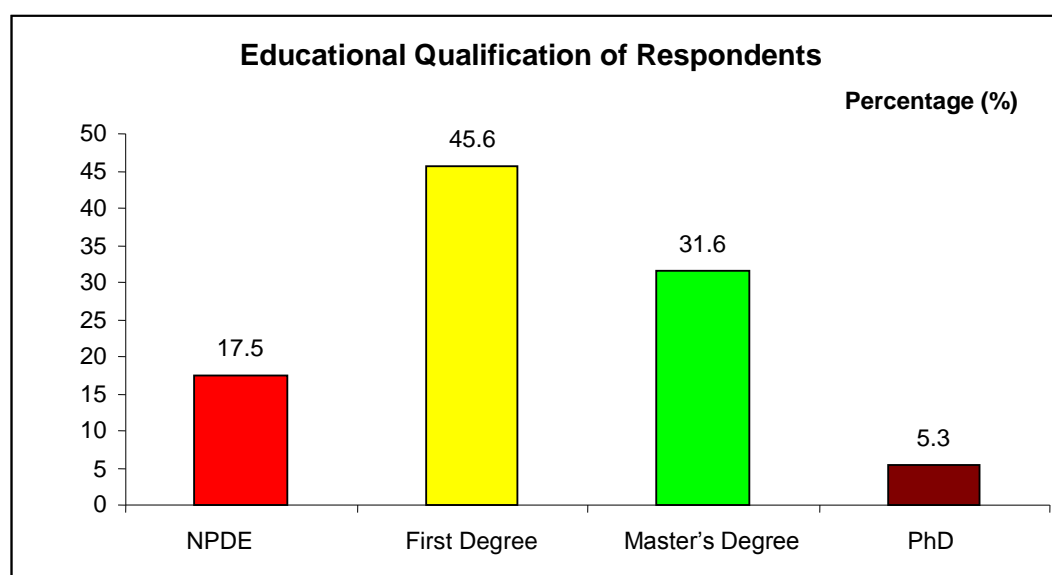
Findings from Fig. 4 show that most of the respondents (45.6%) have first degree qualification, while 31.6% and 5.3% of the respondents hold Masters and PhD degrees, respectively. Only 17.5% of the respondents hold National Professional Diploma in Education (NPDE) qualification. This implies that there are more teacher-librarians (82.5%) with higher qualification among the respondents, and it affirms the fact that teacher-librarians, in going through training at the University of Zululand, are academically and professionally qualified.

7.2   Research Questions

Research question 1: What is the level of teacher-librarians' perception about the need for information literacy skills in the implementation of subjects instruction?

Table 1 below presents information on the perception of respondents about the need for information literacy skills in the implementation of subjects instruction, and it shows that the respondents have positive perception about the need for information literacy skills, as revealed by the weighted mean of 3.12 which is greater than the criterion mean of 2.50 set for positive perception of information literacy skills by the respondents. This implies that teacher-librarians at the University of Zululand, South Africa, have positive perception about the need for information literacy skills in the implementation of subject instruction in schools. This inference is further affirmed by the agreement of majority of the respondents with statements such as '1 need information literacy skill to be an effective teacher' (52, 91.2%), 'I need special training on how to effectively use the Internet' (48, 84.2%), 'I need training on how to use academic electronic

databases' (52, 91.3%), 'I need to be trained on the proper use of the library' (50, 87.7%), 'I need information literacy skill to effectively use a library' (50, 87.7%) and 'I need information literacy skill to effectively retrieve information in any sources' (50, 87.7%), and their disagreement with statements such as 'There is no relationship between my level of information literacy skills and job performance' (38, 59.75).

Table 1: Teacher-librarians' perceptions about the need for information literacy skills

S/N	Perceptions about the need for information literacy skills	SA Freq %	A Freq %	D Freq %	SD Freq %	$\overline{X}$	Std. Dev
1	I need information literacy skill to be an effective teacher.	31 54.4	21 36.8	0 0.0	5 8.8%	3.37	.879
2	I need information literacy skill to effectively use search engines.	25 43.9	25 43.9	5 8.8	2 3.5	3.28	.774
3	I need to be trained on the proper use of the library.	27 47.4	23 40.4	3 5.3	4 7.0	3.28	.861
4	I need training on how to use academic electronic databases.	25 43.9	27 47.4	0 0.0	5 8.8	3.26	.856
5	I need information literacy skill to avoid plagiarism.	22 38.6	30 52.6	1 1.8	4 7.0	3.23	.802
6	I need ability to recognise how current awareness technologies (e.g., RSS feeds, blogs, listservs) can be used to stay informed in areas of interest.	22 38.6	29 50.9	3 5.3	3 5.3	3.23	.780
7	I need information literacy skill to effectively retrieve	24 42.1	26 45.6	2 3.5	5 8.8	3.21	.881

	information from any source.						
8	I need information literacy skill to effectively use a library.	22 38.6	28 49.1	2 3.5	5 8.8	3.18	.869
9	I need special training on how to effectively use the Internet.	20 35.1	28 49.1	4 7.0	5 8.8	3.11	.880
10	I need strategic ability to login and retrieve information.	17 29.8	32 56.1	5 8.8	3 5.3	3.11	.772
11	I need ability to recognise information overload and develop strategies to manage information anxiety.	18 31.6	29 50.9	7 12.3	3 5.3	3.09	.808
12	There is no relationship between my level of information literacy skills and job performance.	5 8.8	18 31.6	9 15.8	25 43.9	2.05	1.059
(N = 57) (Average mean= 3.12)							

Research question 2: For what purposes do teacher-librarians employ information literacy skills?

Table 2 presents information on the purposes of information literacy skills in classroom exercise. The results show that majority of the respondents affirmed all the purposes listed as major purposes for which they employ information literacy skills in classroom exercise. However, using the weighted mean of 1.91 as a benchmark, reading promotion (χ = 2.21), promotion interview (χ = 2.18), general awareness (χ = 2.14), carrying out administrative work (χ = 2.12), job promotion purposes (χ = 2.04), job interview (χ = 1.96), service or job requirement (χ = 1.96) and workshop and seminar presentation (χ = 1.93) ranked highest among the list of purposes for which information literacy skills were employed by the respondents, while purposes such as preparation of lesson notes (χ = 1.89), keeping up with current trends (χ = 1.79), supporting curriculum development (χ = 1.72), teaching preparation (χ = 1.65), guiding students' classroom activities (χ = 1.65) and developing competencies (χ = 1.54) fall below the benchmark and

ranked least among the list of purposes listed. It can, therefore, be deduced from the results above that teacher-librarians employ information literacy skills mainly for the purposes of personal development, administrative task and community service at the expense of teaching and learning purposes.

Table 4.2.2: Purposes of information literacy skills

S/N	Purpose	VF	F	S	R	N	$\overline{\text{X}}$	Std.
		Freq %	Freq %	Freq %	Freq %	Freq %		Dev
1	Reading purposes only	18 31.6	16 28.1	17 29.8	5 8.8	1 1.8	2.21	1.048
2	Promotion interview	16 28.1	23 40.4	12 21.1	4 7.0	2 3.5	2.18	1.037
3	General awareness	16 28.1	25 43.9	10 17.5	4 7.0	2 3.5	2.14	1.025
4	Administrative work	26 45.6	10 17.5	14 24.6	2 3.5	5 8.8	2.12	1.283
5	Job promotion purposes	22 38.6	19 33.3	9 15.8	6 10.5	1 1.8	2.04	1.068
6	Job interview	24 42.1	19 33.3	8 14.0	4 7.0	2 3.5	1.96	1.085
7	Service or job requirement	24 42.1	17 29.8	11 19.3	4 7.0	1 1.8	1.96	1.034
8	Workshop and seminar presentations	24 42.1	20 35.1	7 12.3	5 8.8	1 1.8	1.93	1.033
9	Preparing lecture notes	24 42.1	20 35.1	9 15.8	3 5.3	1 1.8	1.89	.976
10	Keeping up with current trends	29 50.9	17 29.8	8 14.0	0 0.0	3 5.3	1.79	1.048
11	Supporting curriculum development	30 52.6	21 36.8	2 3.5	0 0.0	4 7.0	1.72	1.065

12	Teaching preparation	31	18	6	1	1	1.65	.876
		54.4	31.6	10.5	1.8	1.8		
13	Guiding students' classroom activities	30	20	5	1	1	1.65	.855
		52.6	35.1	8.8	1.8	1.8		
14	Developing competence	31	21	5	0	0	1.54	.657
		54.4	36.8	8.8	0.0	0.0		
(N = 57) (Average mean= 1.91)								

Research question 3: What are the challenges encountered by teacher-librarians in accessing information?

Results of analysis on challenges facing teacher-librarians in accessing information revealed scattering of information in too many sources (36, 63.2%), lack of training in electronic resources/products (26, 63.2%), very expensive cost of information sources (31, 61.4%), lack of computer hardware or software (31. 61.4%) and non-availability of electronic resources (e-journals and databases (33, 57.9%) as major challenges constraining respondents in accessing information. Other major challenges hindering access to information, as affirmed by most of the respondents, include too much class or administrative work (32, 56.1%), lack of technical support (31, 54.4%), unavailability of required material (31, 54.4%), distant location of information sources (31, 54.4%) and lack of support from library staff (30, 52.6%). This implies that proliferation of sources of information, cost of accessing information and lack of relevant equipment and infrastructural facilities are major challenges being faced by teacher-librarians in their quest to access information.

Table 3: Challenges encountered by teacher-librarians in accessing information

S/N	Challenges	Frequency	Percentage
1	Information is scattered in too many sources.	36	63.2
2	Lack of training in electronic resources/products	36	63.2
3	Information sources are very expensive.	35	61.4
4	Lack of computer hardware or software.	35	61.4
5	Non-availability of electronic resources (e-journals and databases).	33	57.9
6	Too much class or administrative work	32	56.1

7	Lack of technical support	31	54.4
8	Required materials are not available.	31	54.4
9	Information sources are located far away.	31	54.4
10	Lack of support from library staff	30	52.6
11	Lack of knowledge in using the library	28	49.1
12	Library staff are incompetent or not well-trained.	27	47.4
13	Latest information sources are not available.	27	47.4
14	Information explosion or too much information	26	45.6
15	Lack of time for searching	26	45.6
16	Lack of information about available sources	24	42.1

Research question 4: What is the type and level of ability possessed by teacher-librarians in evaluating sources of information?

Table 4 presents information on the ability possessed by respondents and it reveals ability to identify research biases within studies (χ = 1.63), ability to identify possible biases, discrimination and prejudices within sources of information (χ = 1.56), ability to apply evaluation criteria in the identification and use of key sources of information such as journal impact factors (χ = 1.53), as well as ability to make use of review tools to evaluate information sources such as book reviews, annotated bibliographies (χ = 1.51) as ranking highest among the listed abilities required of the respondents - while ability to differentiate between scholarly, trade and popular sources of information (χ = 1.40), ability to differentiate between type of research such as qualitative, quantitative (χ = 1.32), ability to seek feedback from peers and scholars (χ = 1.28) and ability to find resources relevant to the topic and subject matter (χ =1.19) ranked least. It can thus be inferred that teacher-librarians possess majorly ability to identify research biases within studies, identify possible biases, discriminations and prejudices within sources of information, apply evaluation criteria in the identification and use of key sources of information and make use of review tools to evaluate information sources.

Table 4: Ability of teacher-librarians to evaluate sources of information

S/N	Ability to Evaluate Information Sources	Frequency	Percentage	χ	Std Dev.
1	I can identify research biases within	21	36.8	1.63	.487

	studies.				
2	I can identify possible biases, discrimination and prejudices within sources of information.	25	43.9	1.56	.501
3	I can apply evaluation criteria in the identification and use of key sources of information (e.g. journal impact factors).	27	47.4	1.53	.504
4	I can make use of review tools to evaluate information sources (e.g. book reviews, annotated bibliographies, etc).	28	49.1	1.51	.504
5	I have ability to evaluate resource of information for authority, accuracy, reliability, coverage and timeliness.	31	54.4	1.46	.503
6	I can evaluate research methods within studies.	33	57.9	1.42	.498
7	I have ability to differentiate between scholarly, trade and popular sources of information.	34	59.6	1.40	.495
8	I can differentiate between types of research (e.g., qualitative, quantitative etc).	39	68.4	1.32	.469
9	I can seek feedback from peers and scholars.	41	71.9	1.28	.453
10	I have ability to find resources relevant to the topic and subject matter.	46	80.7	1.19	.398

Research question 5: What is the type of ability possessed by teacher-librarians in observing ethical guidelines in the use of information?

Table 5 presents information on the types of abilities possessed by respondents in observing ethical guidelines in the use of information and it shows that majority of the respondents affirmed

that they possess abilities to cite sources of information appropriately (51, 89.5%), recognise the essentials of plagiarism and copyright issues (50, 87.7%), cite references using the appropriate reference styles (49, 86.0%), develop an understanding of responsible use of information and types of plagiarism (46, 80.7%), understand the legal and ethical repercussions of using information properly and responsibly (42, 73.7%), recognise ethical and legal considerations particular to their discipline (41, 71.9%) and use information ethically as universal and local citizens (35, 61.4%). It can, therefore, be inferred from the foregoing that teacher-librarians at the University of Zululand possess requisite abilities in observing ethical guidelines in the use of information.

Table 5: Ability of teacher-librarians to observe ethical guidelines in the use of information

S/N	Ability to observe ethical guidelines in the use of information	Frequency	Percentage	χ	Std Dev
1	I understand the legal and ethical repercussions of using information properly and responsibly.	42	73.7	1.26	.444
2	I recognise the essentials of plagiarism and copyright issues.	50	87.7	1.12	.331
3	I can cite sources of information appropriately.	51	89.5	1.11	.310
4	I have developed an understanding of responsible use of information and types of plagiarism.	46	80.7	1.19	.398
5	I recognise ethical and legal considerations particular to my discipline.	41	71.9	1.28	.453
6	I can use information ethically as a universal and local citizen.	35	61.4	1.39	.491
7	I can decide whether to retain author rights for future use of research output.	27	47.4	1.53	.504
8	I adhere to professional ethical guiding principles.	31	54.4	1.46	.503
9	I acknowledge the owner of information	33	57.9	1.42	.498

	content.						
10	I can cite references using the appropriate reference styles.	49	86.0			1.14	.350

Research question 6: What is the frequency of use of information resources of teacher-librarians?

Table 6 presents information on the frequency of use of information resources by respondents. The results reveal books (52, 91.2%), newspapers (47, 82.4%), library resources (43, 75.5%), computer (34, 59.7%), the Internet (32, 56.2%), audio-visual resources (32. 56.2%), journals (29, 50.9%), electronic resources (28, 49.1%) and e-mail (24, 42.1%) as topping the list of frequently used information resources by the respondents. In determining the level of frequency of information resources usage by respondents, the weighted mean of 2.64 was found to be greater than the criterion mean of 2.50 set for high level of frequency of use. Since the weighted mean was greater than the criterion mean, a high level of frequency of use was established. This implies that teacher-librarians at the University of Zululand make regular use of information resources.

Table 6: Frequency of use of information resources by teacher-librarians

S/N	Information resources	VF	F	NF	NA	χ	Std.
		Freq %	Freq %	Freq %	Freq %		Dev
1	Electronic book	4 7.0	11 19.3	8 14.0	34 59.6	3.26	1.009
2	Grey literature	3 5.3	10 17.5	14 24.6	30 52.6	3.25	.931
3	Indexes	5 8.8	17 29.8	5 8.8	30 52.6	3.05	1.093
4	Thesis and dissertation	6 10.5	16 28.1	8 14.0	27 47.4	2.98	1.094
5	CD-ROM	5 8.8	14 24.6	15 26.3	23 40.4	2.98	1.009
6	Monographs	7	14	10	26	2.96	1.101

		12.3	24.6	17.5	45.6		
7	Electronic library	7	15	12	23	2.89	1.080
		12.3	26.3	21.1	40.4		
8	Reports	5	20	9	23	2.88	1.053
		8.8	35.1	15.8	40.4		
9	Journals	9	20	7	21	2.70	1.133
		15.8	35.1	12.3	36.8		
10	Email	9	15	17	16	2.70	1.052
		15.8	26.3	29.8	28.1		
11	Electronic resources	6	22	21	8	2.54	.867
		10.5	38.6	36.8	14.0		
12	Audio-visual resources	7	25	12	13	2.54	.983
		12.3	43.9	21.1	22.8		
13	Computer	14	20	19	4	2.23	.907
		24.6	35.1	33.3	7.0		
14	The Internet	14	18	17	8	2.33	1.006
		24.6	31.6	29.8	14.0		
15	Library resources	14	29	10	4	2.07	.842
		24.6	50.9	17.5	7.0		
16	Newspapers	15	32	7	3	1.96	.778
		26.3	56.1	12.3	5.3		
17	Books	34	18	1	4	1.56	.846
		59.6	31.6	1.8	7.0		
(N = 57) (Weighted Mean= 2.64)							

Research question 7: To what extent does information search strategy influence teacher-librarians' use of online resources?

Table 7 shows the results of analysis of the extent to which information search strategy influences teacher-librarians' use of online resources. It revealed that information search strategy is responsible for a 1.5% influence of the total variance in use of online resources. This implies that for every level of increase in information search strategy of teacher-librarians, a 1.5%

increase in their online resources use would be achieved. Thus, information search strategy was found to have a positive influence on online resources usage by teacher librarians at the University of Zululand.

Table 7: Influence of information search strategy on teacher-librarians' use of online resources

Model	Sum of Squares	Df	Mean Square	F	R	R²	Sig
Regression	211.28	1	211.28	1.851	.033	.015	.179
Residual	6257.33	55	113.77				
Total	6468.61	56					

Research question 8: To what extent does self-concept influence teacher-librarians' use of online resources?

Table 8 presents results of the extent to which self-concept of teacher-librarians influence their information literacy skills. It shows that self-concept is responsible for a 0.4% influence on information literacy skills of teacher-librarians. It reveals also that self-concept is responsible for a 0.4% influence on the total variance in the information literacy skills of teacher-librarians. This implies that for every level of increase in self-concept of teacher-librarians, a 0.4% increase in their level of information literacy skills would be achieved, hence self-concept was found to have a weak positive influence on information literacy skills of teacher-librarians at the University of Zululand.

Table 8: Influence of self-concept on the information literacy skills of teacher-librarians

Model	Sum of Squares	Df	Mean Square	F	R	R²	Sig
Regression	10.37	1	10.37	.304	.061	.004	.853
Residual	2794.19	55	50.80				
Total	2804.56	56					

Research question 9: What type of relationship exists between demographic variables (gender, age, years of experience and academic qualification) and information literacy skills level of teacher-librarians?

Table 9 presents information on the types of relationships between demographic variables of teacher-librarians and their information literacy skills level. It reveals that gender (r=0.005,

p>0.05), age (r=0.129, p>0.05), years of experience (r=0.256, p>0.05) and academic qualification (r=0.049, p>0.05) are all positively related with level of information literacy skills possessed by the teacher-librarians. It can, therefore, be deduced from the foregoing that level of information literacy skills of teacher-librarians increases with age, years of experience and academic qualification, such that older teachers with more years of experience and higher academic qualification tend to have a higher level of information literacy skills than their counterparts with lesser years of experience and lower academic qualification. Hence, age, years of experience and academic qualification are potent factors that determine the level of information literacy skills possessed by teacher-librarians at the University of Zululand.

Table 9: Correlation table showing relationship between demographic variables (gender, age, years of experience and academic qualification) and information literacy skills of teacher-librarians

Variables	$\overline{\text{X}}$	S.D	R	p
Information literacy skills	37.39	6.889	-	-
Gender	193	0.258	.005	0.968
Age	4.84	0.492	.129	0.338
Years of experience	2.82	1.104	.256	.054
Academic qualification	2.25	0.808	.049	.715

 * Correlation significant at 0.05 level

Hypothesis

H_{01}: There is no significant difference in the perception of the need for information literacy and evaluation of information resources of teacher-librarians.

Table 10 shows that there is a significant difference in the perception of the need for information literacy and evaluation of information resources by teacher-librarians. It is observed that the t-Calculated value is greater than t-Critical values (t-Cal=9.076 > t-Crit =1.960), (P<0.05). That is a significant difference. Also the mean difference shows that perception of the need has high mean value of 26.79 than evaluation of information resources mean value of 14.30. Therefore, it was concluded that there is significant difference in the perception of the need for information literacy and evaluation of information resources by teacher-librarians at the University of Zululand, South Africa.

Table 10: Paired t-test of difference in the perception of the need for information literacy and evaluation of information resources of teacher-librarians

Variables	N	Mean	Std Dev	df.	t-Cal	t-Crit	P
Perception of the need for information literacy	57	26.79	9.976	56	9.076	1.960	0.000
Evaluation of information resources	57	14.30	2.777				

8. Discussion of Findings

The focus of this study was to investigate information literacy skills, self-concept and metacognitive abilities of teacher-librarians at the University of Zululand. To achieve this, the researcher set out to evaluate their perceptions about the need for information literacy skills in the implementation of school instructional delivery, purposes, challenges, ability to evaluate various sources of information and observe ethical rules in the use of information and how frequently they utilise information for classroom operations. Questionnaire was used to collect data from 57 teachers. Relevant information content was evaluated relating to the subject matter. The characteristics of the respondents show that 93% of them are female, whereas 7% are male. This shows, without a doubt, that the population of female teachers studying information literacy at the University of Zululand is overwhelmingly more than that of male teachers. This is in line with the assertion by the Department of Education in England (2013:6) in a statistics released which claimed that 80% of teachers are female. Furthermore, Skelton (2003:195) observed the relatively low population of male teachers, and this has attracted the attention of governments of the western world.

The results of this study show that teachers have positive perception about the need for information literacy skills. This is revealed in the weighted mean of 3.12, which is greater than the criterion mean of 2.50 set for positive perception of information literacy skills by the respondents. This is in line with results in Durodolu, Adekanye, and Olorunfemi (2013) who affirmed that arts subject teachers in Lagos State have positive perception about the need for information literacy skills. The implication of this is that teacher-librarians consider information literacy skills as a prerequisite for being an effective teacher, providing the ability to effectively use search engines, the Internet, library and electronic databases to meet their information needs.

The teacher-librarians also hold that the knowledge of information literacy will equip them to use information ethically and avoid plagiarism. The study also establishes that information literacy positively correlates with their job performance. A study by Soleymani (2014) also conforms to this finding that there is positive relationship between information literacy and job performance.

The gap in the research also shows that majority of teachers do not perceive information literacy skill as an important competence for the preparation of lecture notes, keeping up with current trends, supporting curriculum development, teaching preparation, guiding students' classroom activities and developing competencies. This opinion is contrary to the views expressed by Cardiff University (2015) that information literacy is important for writing lecture notes and supporting curriculum development.

The study also reveals that proliferation of sources of information, cost of accessing information and lack of relevant equipment and infrastructural facilities are major challenges being faced by teacher-librarians in their effort to access information. In a similar study conducted by Hollis (2011), it was confirmed that proliferation of information is a serious challenge of the information age.

The study also reveals that teacher-librarians have ability to identify prejudice, discrimination and bias within information sources, which is a major prerequisite and ability to evaluate information resources and ensure trustworthiness of information resources. The result of this study is in tandem with Andreassen & Bråten (2013) whose study presents empirical evidence that teachers have the ability to ascertain the trustworthiness of sources of information.

9.   Conclusion

The study purposely focused on "Information Literacy, Self-concept and Metacognitive Ability of Second-Year Teacher-Librarians at the University of Zululand". Copies of the questionnaire were given to the one hundred and ten (110) members of the class, out of which fifty-seven (57) were duly filled and returned with useful responses, representing 51.8 %. The evaluation of the demographic variables shows that there were more female teacher-librarians, with a response rate of 93.0%, than males (7.0%). Majority of the respondents were from the age group of 36 and above, majority of them having been working for 16 to 20 years. The result of the research also shows that majority of the teachers are academically and professionally qualified. The study reveals the relationship between demographic variables and information literacy; therefore, age,

years of experience and academic qualifications are compelling factors that determine the level of information literacy skills possessed by teacher-librarians at the University of Zululand.

Based on the data analysis and the interpretation done above, the study finds that the respondents have positive perception about the need for information literacy skills, as revealed by the weighted mean of 3.12, which is greater than the criterion mean of 2.50 set for positive perception of information literacy skills by the respondents. The teacher-librarians employ information literacy skills for the purposes of personal development, administrative task and community development, at the expense of teaching and learning purposes. The study reveals challenges faced by teacher-librarians in their effort to access information, including proliferation of sources of information, cost of accessing information and lack of relevant equipment and infrastructural facilities. The results show the ability possessed by respondents as revealed in the use of information resources. Teacher-librarians have ability to identify research biases within studies, discriminations and prejudices within sources of information, apply evaluation criteria in the identification and use of key sources of information and make use of review tools to evaluate information sources. The results show that second-year teacher-librarians possess requisite ability to observe ethical guidelines and frequently make use of information resources. Also information search strategies and self-concept have positive influence on online resources usage by teacher-librarians.

References

ACRL (2011). Information Literacy Standards for Teacher Education Ebss Instruction for Educators Committee 2006-2007 – 2010-2011 Approved by the ACRL Board of Directors at the Spring Executive Committee Meeting May 11, 2011. Retrieved 26/03/14, from http://www.ala.org/acrl/sites/ala.org.acrl/files/content/standards/ilstandards_te.pdf

Andreassen, R., & Bråten, I. (2013). Teachers' Source Evaluation Self-Efficacy Predicts Their Use of Relevant Source Features when Evaluating the Trustworthiness of Web Sources on Special Education. *British Journal of Educational Technology, 44(5),* 821-836. Doi:10.1111/J.1467-8535.2012.01366.X

Campbell, S. (2005). Defining Information Literacy Skill in the 21st Century. *Journal of Academic Libraries. Vol. 6.* Pp. 82 – 86.

Cardiff University (2015). Information Literacy: Guidance Note. Retrieved on 24/08/2016, from http://learning.cf.ac.uk/curriculum-design/informationliteracyguidancenote/

Dadzie, S. P. (2008). Promoting Information Literacy: The Role of the Librarian. INASP Newsletter (Pp. 2-30).

De Jager, K., Nassimbeni, M. & Underwood, P. (2007). Libraries, Literacy and Learning: Retrospect and Prospects. Retrieved on 08/08/2014, from http://www.dissanet.com:8080/ifla/pdf/liasa%2010%20de%20jager,%20nassimbeni%20%26%20underwood.pdf.

Department of Education England (2013). School Workforce in England. Retrieved on 12/08/2016, from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/335413/sfr11_2014_updated_july.pdf.

Department of Education, Kwazulu-Natal (2014). Retrieved on 08/08/2014, from http://www.kzneducation.gov.za/directorates/educationlibraryinformationtechnologyservice.aspx.

Durodolu, O. O & Ocholla, D. O (2017). Search Strategy, Self-Concept and Metacognitive Skills of Secondary School Teachers in Selected Cities in Nigeria and South Africa. LIBRI :International Journal of Library and Information Science, from doi:10.1515/libri-2016-0104

Durodolu, O. O., Adekanye, E. A., Olorunfemi, D. Y. (2013). Information Literacy Skills of Arts Subject Teachers in Lagos State Senior Secondary Schools, Nigeria. *IOSR Journal of Humanities and Social Science (IOSR-JHSS)* Volume 14, Issue 6.

Ebersol, Samuel (2000). "Uses and Gratifications of the Web among Students," Journal of computer-Mediated Communication, Vol. 6 (1): September 2000, www.ascusc.org/jcmc/vol6/issue1/ebersole.html

Erfanmanesh, M., Abdullah, A. & Karim, N. H. A. (2014). Information Seeking Anxiety: Concept, Measurement and Preliminary Research. *International Journal of Information Science and Management, Vol. 12, No. 1,* 2014, 47-64.

Filson, C. K. & Kwafoa, P. Y. (2016). The Impact of Information Literacy Skills on the Performance of Past Students at Their Workplaces: The Case of University of Cape Coast, Ghana. *Journal of Applied Information Science, 4(2),* 1-8.

Hollis, P. (2011). The Problem with "Information Age" Is Proliferation of Wrong Information. Southeast Farm Press, 38(19), P.4-10.

Kurbanoglu, S. S. (2003). *Self-Efficacy: A Concept Closely Linked to Information Literacy and Lifelong Learning.* Retrieved 09 24, 2014, from http://www.bby.hacettepe.edu.tr/yayinlar/dosyalar/self-efficacy__a.pdf.

Onwuegbuzie, A. J. & Jiao, Q. C. (2004). Information Search Performance and Research Achievement: An Empirical Test of the Anxiety-Expectation Mediation (AEM) Model of Library Anxiety. *Journal of American Society for Information Science & Technology, 55 (1)*, 41-54.

Othman, N. & Leng, K. B. (2011). The Relationship between Self-Concept, Intrinsic Motivation, Self-Determination and Academic Achievement among Chinese Primary School Students. Retrieved 10 4, 2014, from http://www.ccsenet.org/journal/index.php/ijps/article/viewfile/10750/7588.

Purcell, S. & Barrell, R. (2014). The Value of Collaboration: Raising Confidence and Skills in Information Literacy with First Year Initial Teacher Education Students. *Journal of Information Literacy, Vol. 8 (2),* 56-70. Doi:10.11645/8.2.1917.

Rapchak, M. E., Lewis, L. A., Motyka, J. K., & Balmert, M. (2015). Information Literacy and Adult Learners: Using Authentic Assessment to Determine Skill Gaps. Adult Learning, (4), 135. Doi:10.1177/1045159515594155.

Sanchez & Roda (2003). Relationships between Self-Concept and Academic Achievement in Primary Students. *Electronic Journal of Research in Educational Psychology and Psychopedagogy , 1* (1), 95 - 120.

Search Strategy, Self-Concept and Metacognitive Skills of Secondary School Teachers in Selected Cities in Nigeria and South Africa. Libri: *International Journal of Library and Information Science,* From Doi:10.1515/Libri-2016-0104.

Skelton, C. (2003). Male Primary Teachers and Perceptions of Masculinity. Educational Review, Vol. 55, No. 2.

Soleymani, M. R. (2014). Investigating the Relationship between Information Literacy and Academic Performance among Students. *Journal of Educational Health Promotion. Vol.3: Issue 95.*

Toit, M. & Stilwell, C. (2012). The Kwazulu-Natal School Library Policy and its Feasibility for Implementation in The Province. *South Africa Journal of Library and Information Science Vol. 78 (2).* Retrieved on 06/08/2014, from file:///c:/users/user/downloads/39-386-1-pb.pdf.

Williams-Mitchell, M. (2014). Becoming 'Information Literate' Starts with Library. Retrieved 04/10/2014, from http://www.cincinnati.com/story/opinion/readers/2014/10/03/becoming-information-literate-starts-with-library/16600511/.