University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Library Philosophy and Practice (e-journal)   Libraries at University of Nebraska-Lincoln

2-19-2018

EXAMINING THE INFORMATION SEEKING BEHAVIOUR OF UNDERGRADUATE STUDENTS OF NAVRONGO CAMPUS OF THE UNIVERSITY FOR DEVELOPMENT STUDIES

Joana A. Pwadura
University for Development Studies, jopwadura@yahoo.com

Florence Dedzoe-Dzokotoe Plockey Mrs.
University for Development Studies, fplockey@yahoo.com

Franklina Adjoa Yebowaa
University for Development Studies, ayeboaah123@gmail.com

Follow this and additional works at: https://digitalcommons.unl.edu/libphilprac

Part of the Collection Development and Management Commons, and the Information Literacy Commons

1. Introduction

The business of higher education is knowledge-driven which is dependent on information. Knowing how to access information therefore is very important. Information seeking behaviour can be understood as the way and manner people search for and utilize information for personal use, knowledge updating and development. It is the drive that opens up access to information, data and knowledge utilisation and dissemination.

Universities across the world are an embodiment of knowledge processing and dissemination inherent in their academic and research programmes but these activities will not be possible without the availability and the use of necessary information. It is an indisputable fact that there is abundance of information. It is also common knowledge that this important commodity does not exist in a vacuum because it is needed by everybody but the reasons, degree and depth of its use vary. Where there is an information need it presupposes a vague awareness of something missing thus initiating a search to locate and find that information which eventually contributes to understanding and meaning.

Basically information is transformed into knowledge when it is interpreted and applied to a specific situation. In the academic environment, information comes from different sources and formats aided by a resourceful library, knowledgeable faculty and adequate infrastructure. However, students also need to understand their needs, know where and how to locate relevant information easily to satisfy those needs that serve as catalysts for enhancing their learning. It is not only important for students to understand and able to gather and organize their information needs for academic purposes but also for their overall benefits and for promoting innovation and change for national development. It is said that, "students become experts at what is required and expected of them within the boundaries of the classroom, but what happens when they need to take what is learned in school and use it in the reality of their lives?"(Kozol, 2005).

The maze of information out there particularly with the advent of the Internet and the constant improvement in communications technologies does seem to make searching for information an easy task nowadays. But is it really the case? The fact that there is abundance of information does not necessarily mean students can automatically find needed information without making informed judgment. Kuhlthau (2012), a renowned researcher into information seeking behaviours of

students explains that "advances in information technology that opened access to vast assortment of sources have not eased the students' dilemma and may have intensified the sense of confusion and uncertainty until a focus is formed to provide a path for seeking meaning".

There are a lot of studies that have been carried on at the Navrongo Campus of UDS but none of the studies so far touches on the subject of this research. This study therefore is significant because it will not only address the foregone concerns but also provide a window for the promulgation of policy interventions for improving knowledge processing, use and dissemination as a life-long skill among students and thereby increasing the visibility and competitive edge of the University. This paper focuses on the information seeking behaviour (ISB) of undergraduate students of the Navrongo Campus of the University for Development Studies (UDS).

1.1 Problem statement

Whereas a knowledgeable faculty, adequate infrastructure and information resources serve as catalysts for enhancing students' learning, they also need to understand and be able to gather and organize their information needs not only for academic purposes but their overall benefits and also for promoting innovation and change for national development. However, students' 'lack of knowledge of information search processes makes information seeking an odious task which often leaves them frustrated and dissatisfied with search results. Students therefore need a learning environment that enables them to learn how to learn by becoming aware of their learning process.

Different approaches have been used to explain or examine the information seeking process. The purpose of this study is to provide insight into the importance of preparing students through guided inquiry which will give meaning and understanding to the students' information seeking behaviour. The ultimate aim is to improve the standard and quality of education and students' performance in the university and to the eventual benefit of society. This is intended to be seen as a gateway to further understanding the information research process thereby contributing to knowledge.

2. The Study Area

The University for Development Studies (UDS) was established in May 1992 to run a multi –campus system by the Provisional National Defense Council (P.N.D.C.) Law 279. It became the fourth of ten state-owned

universities in Ghana and the **first public University in Northern Ghana.** Academic work started in September 1993 in Tamale with the admission of thirty-nine students into the Faculty of Agriculture (FOA), Nyankpala. The university gradually expanded into its present four campuses in three of the ten administrative regions of Ghana, namely: Northern, Upper East, and Upper West regions, respectively. It runs eight faculties (Integrated Development Studies, [FIDS], Planning and Land Management [FPLM], and Law and Business Studies [FELBS] all located at Wa in the Upper West Region; Agriculture Technology [FOA], Renewable Natural Resources [FRNR], and Agribusiness and Communication Sciences are located at Nyankpala, near Tamale in the Northern Region; and Applied Sciences [FAS] and Mathematical Sciences [FMS] at Navrongo in the Upper East Region), one School (School of Medicine and Health Sciences [SMHS]), and the Faculty of Education are located in Tamale with two centers of excellence (Graduate School and Center for Continuing Education and Inter Disciplinary Research [CCEIR], also in Tamale). The University runs undergraduate and postgraduate programs in the Social Sciences, Mathematical Sciences, Agricultural Technology, Medicine, and Allied Health Sciences, as well as in the Applied Sciences in the various campuses (http://www.uds.edu.gh). Established as a pro-poor University its uniqueness is in the Third Trimester Field Training Programme (TTFTP) where students are sent to live in deprived communities to gather first hand information that can influence policy making to improve livelihoods.

The Navrongo Campus (NC) which is the focus of this study is located in the Kasena-Nankana Municipality about thirty kilometers away from the Upper East regional capital, Bolgatnaga and situated along the Kolgo-Naga road between the St John Bosco's University College of Education, and the Navrongo Senior High School (Navasco) as in Pwadura , Asapeo and Plockey (2017). The Campus first started in 1995 as the Faculty of Integrated and Development Studies (FIDS) with fifty-nine students transferred from Tamale. Later in 2002 FIDS was relocated to Wa in the Upper West region to pave way for the creation of the Faculty of Applied Sciences (FAS) same year with a hundred and thirty students. Subsequently, in 2010 the Faculty of Computational and Mathematical Sciences (FCMS) which later changed to the Faculty of Mathematical Sciences (FMS) was also created. The Campus saw a gradual increase in student intake over the period depicted in table 1. As at September, 2013 the total number of students admitted was 9541 while the number of teaching staff was 111 according to information provided in the University's 15th Congregation Basic Statistics publication (UDS, 2014). The two Faculties run mainly science-bias undergraduate and post-graduate courses in Chemistry, Physics, Biochemistry, Biology and

Earth Sciences by FAS whiles Statistics, Computer Science, Actuarial Sciences, Mathematics and others are also run by FMS.

Table 1: Showing Navrongo Campus Student Admission from 2002/2003 to 2013/2014 Academic Years in FAS & FMS.

Year	FAS		FMS		TOTAL
	MALE	**FEMALE**	**MALE**	**FEMALE**	
2002/2003	113	17	-	-	**130**
2003/2004	143	46	-	-	**189**
2004/2005	177	63	-	-	**240**
2005/2006	231	61	-	-	**292**
2006/2007	389	95	-	-	**484**
2007/2008	486	163	-	-	**649**
2008/2009	592	117	-	-	**709**
2009/2010	846	155	-	-	**1001**
2010/2011	406	87	570	65	**1129**
2011/2012	1948	369	749	86	**3152**
2012/2013	166	67	304	43	**580**
2013/2014	**275**	**121**	**416**	**175**	987
TOTAL	**5772**	**1361**	**2039**	**369**	**9541**

Source: Culled from UDS 15th Congregation Basic Statistics December, 2014.

Thompson & Pwadura (2014) have noted that, the Library plays an enhanced role in the fulfillment of the University's mission with a Central Library at Nyankpala Campus, SMHS Library and the Graduate School Library all in Tamale as well as the Navrongo and Wa campus libraries. The libraries are stocked with books and other materials to reflect the courses taught in the satellite campuses with professional librarians to provide the necessary information to lecturers and students and to facilitate teaching, Downloaded learning, research, and knowledge dissemination needs of clientele in the easiest, fastest, and most comprehensive way possible

The Navrongo Campus Library serves two science-based faculties namely, FAS and FMS and therefore operates in tandem with the faculties to fulfill the Mission and Vision of the University. Its collections, book and non-book materials as well as other activities are geared towards supporting teaching, learning and research. The library currently has a total collection of seven thousand and eighty-one (7,081) books, five thousand eight hundred and sixteen (816) serials as well as providing access to a wide range of e- resources. A professional Head librarian with ten senior and junior staff compliment the staff list who are always available to serve users of the library in the most professional manner.

3. Literature review

3.1 Perspectives on Information and Information Seeking Behaviour

Information and information seeking behaviour have been viewed from different perspectives by different proponents but they all converge at the point of giving meaning and understanding.

Popoola (2006) views information as essentially the human understanding that guides human actions; it is a central feature of human ecological niche most concisely described as the compulsive organiser. Earlier proponents such as Kuhlthau (1994), Wilson (1997) and Eskola, (1998), view information as something which students need during their studies when they construct meaning about the subjects in the process of learning. Belkin, Brooks and Oddy, (1982), contend that it is an anomalous state of knowledge or as Dervin and Nilan, (1986) put it, a gap in individual's knowledge in sense making situations while on the other hand, Wright and Guy (1997) stipulate that information seeking is undertaken to identify a message that satisfies a perceived need.

Two schools of thought have emerged in the literature with one suggesting that content is crucial to how people seek and use information while the other holds the view that information –seeking is a general process which occurs independently of the content. However, the current observation is that content and the information- seeking process are intertwined and very much relevant today. Hence, information seeking is also about quality both in the search process and content and since

quality is at the heart of education what takes place in the classroom and other learning environments are fundamentally important.

3.2 The role of the library

Ahenkorah- Marfo (2012) emphasizes the role of libraries as front liners in the creation of access to knowledge. He stressed the point that libraries enhance the quality of human intellectual outputs through the processes of information gathering, storage and dissemination which cannot be debated even in this technological age. Thus, libraries provide access to a wide range of resources and guidance in the process of learning. Moreover, they also try to find innovative ways of improving upon their services. This is particularly important in higher institutions as students need to be guided to study and do research because of the multiple sources of information available.

Kuhlthau (2010a) opined that without guidance, students often copy and paste information to fulfill assignment needs with little real learning while guidance enables students to concentrate on constructing new knowledge, gaining personal understanding and transferable skills through the process of inquiry. Alemna (2012) explains that libraries play a great role in national development through the support they offer to the education sector, emphasizing that without libraries there can as well be no universities.

3.3 Information Search Process (ISP) and Guided Inquiry (GI) Models

Kuhlthau's (2010b) ISP Model is defined as the user's constructive activity finding meaning from information in order to extend his or her state of knowledge on a particular problem or topic. This Model uses the following six- stage process from which emanated the Guided Inquiry (GI) Model:
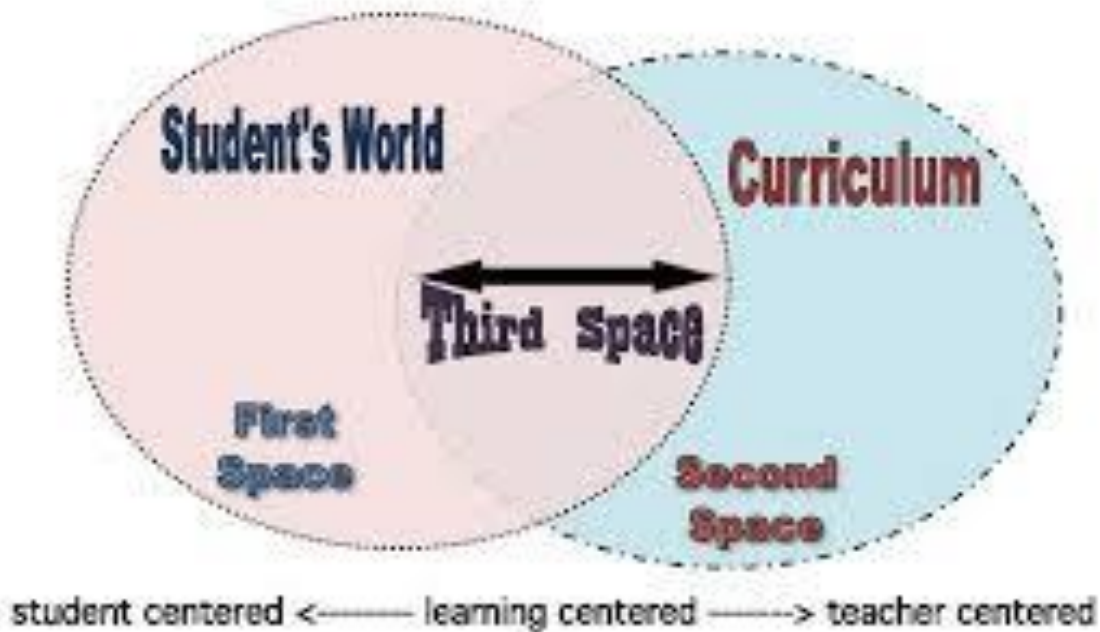
1. Initiationis when a need for information is recognised and the step taken to do searches relating toone's general background knowledge but feelings of uncertainty and apprehension grow with the awareness of lack of understanding;

2. Selection at this stage involves identifying and selecting sources, often general in nature that will yield the best results with the topic in mind. Here, feelings of uncertainty often give way to optimism after the selection is made;

3. Exploration is done in order to extend one's understanding of the topic, by further investigating to locate and evaluate relevance of the information. At this stage, the ability to express an information need properly is important as it determines the formulation of search queries and relevance of retrieval results. Conflicting information may bring about

feelings of confusion, uncertainty, discouragement and even frustration with the information access system itself;

4. Formulation is supposed to be the turning point in the process. Here a focused perspective on the topic emerges from reading and reflecting on information gathered thus resolving some of the earlier conflicting information. While searches may be conducted to verify the working hypotheses, a change in feelings is experienced, with uncertainty reducing and confidence growing;

5. Collection stage involves gathering information related to a focused topic. A comprehensive search of library collections and use of a wide range of sources is most productively useful here. Searches are used to find information to define, extend, and support the focus. Relevance of judgments become more accurate and feelings of confidence continue to increase;

6. Presentation is the final phase when the search is drawn to an end but not without frequently noting and returning information encountered that is either redundant or of diminished relevance. Feelings of relief and satisfaction are expected if the search went well or disappointment if not.

According to Kuhlthau et al. (2012), Guided Inquiry is an efficient way to learn in the 21st Century as it aims at creating a learning environment called the Third Space (TS) shown in the diagram. The First Space (FS) is the student's personal, cumulative outside of school knowledge and ways of knowing. The Second Space (SS) represents the official curricular content which the student has to know the school way of knowing. Thus, when the FS and the SS overlap there is a merger to create a new hybrid in the form of TS.

Fig. 1 depicts Third Space in GI

This means that students are now able to flexibly and fluently use their personal or outside knowledge to interpret, understand, and make sense of in-school curriculum, ideas and ways of knowing. The broken lines represent a permeable boundary around the ever changing official and personal ways of knowing. There may be feelings of uncertainty, confusion, frustration and dissatisfaction during the inquiry process but in the long run its advantages outweigh the challenges when students are able to concentrate on constructing new knowledge, gain personal understanding and transferable skills in the process.

 Behavioural or user studies abound in the literatures that seek to look at how individuals go about finding the materials they need. This activity may be actively or passively done when taking steps to satisfy a felt need. Ikoja-Odongo and Ocholla (2004) described information seeking as a process that requires information seekers, or what might be called ''personal information structures' 'such as a person's cognitive abilities, his or her knowledge, skills in relation to the problem or task domain, knowledge and skills specific to a system and knowledge and skills regarding information

seeking. Meanwhile, Kakai et al. (2004) posit that, often students' information seeking behaviour involves active or purposeful information as a result of the need to complete course assignments, prepare for class discussions, seminars, workshops, conferences, or write final year research papers.

However, behavioural or user studies in the literature as in (Kamanda, 1999; Whitmore, 2002 and Kakai et al.2004) also sought to examine the variables that impact on quality such as those conducted to investigate information –seeking and needs of different library users like graduates and undergraduates, academics and researchers**. Thus,** Majid and Ali (2002) who studied the use of information resources by computer engineering students in Singapore found that the top four information resources in order of preference were books,(94%), , the internet(86%), Lecturers (84%)and friends (84%). They relied heavily on printed sources of information with very low use of electronic journals and databases.

 Hartmann (2001) who studied the perceptions of first year undergraduate students at the University of Ballaratconcluded that the students experienced difficulty in locating items from the library collection and did not understand the processes for retrieving journal articles. Kerins, Madden and Fulton (2004) in another study of graduate engineering and law students in Ireland reported that the majority of students indicated the Internet was the first source of information they used for a project. Hiller (2002) in a study conducted in the University of Washington reported that undergraduates preferred to visit the library to study rather than to seek journals or books. Similarly, Callinan, (2004) conducted a focus group study with undergraduate students from Skidmore College in New York and found that the students had a strong overall preference for digital resources. These preferences were explained to reinforce a lack of familiarity with printed sources.

Having reviewed the various findings of research conducted on various variables influencing or affecting information-seeking behaviour, the present study therefore, sought to establish why the information search process is crucial for information gathering by undergraduate students.

4. Objectives

The study sought to achieve the following objectives:

4.1 Establish the predominant information needs of students,

4.2 Assess the major sources of information used by students

4.3 Investigate the pattern of information gathering by students

4.4 Determine the level of satisfaction of students in the utilization of information sources; and

4.5 Assess the impact of the Internet use on the information seeking behaviour of students and draw conclusions and recommend strategies on how students' information search processes can be improved.

5. Methodology

The purposive sampling technique was employed in this study. The instrument for data collection was mainly the questionnaire comprising mostly closed ended questions with a few open-ended ones. The questions were designed to elicit the following information: predominant information needs, major sources of academic information, pattern of information seeking, accessibility of information, level of satisfaction and internet use of respondents. The questionnaire method is preferred because it is easy to collate results from respondents. While the closed-ended questions gives respondents options to choose from, the open- ended questions gives respondents the opportunity to express themselves thereby bringing other dimensions that may have been overlooked.

The study was restricted to undergraduate students of the two faculties namely Faculties of Applied (FAS) and Mathematical (FMS) Sciences respectively on the Navrongo Campus of University for Development Studies in December, 2013. The campus had a total student population of 987 with 111 teaching staff. With the main objective of producing a sample that can give a logical representation of the population, 300 (30.3%) undergraduate students comprising level 100-400 successfully completed the questionnaire handed them while in the library. Because the library is a convergent point for students, it was easy to reach the 300 targeted samples within a period of ten working days. The purposive method may not be perfect but in this instance care was taken not to allow duplication by using student registration list in the library to tick and cross-check names of respondents administered with the questionnaire. The questions were simple and straight forward for most respondents but there were a few who asked for further clarification. The data

collected from respondents was analysed using the Statistical Package for Social Science (SSPSS v.20) and results presented in form of tables and simple descriptive language.

6. Data Analysis and Discussion

6.1 Faculty / Departmental representation of respondents

The Navrongo Campus at the time of the study had two faculties and seven departments; the Faculties of Applied and Mathematical Sciences (FAS&FMS) respectively. The 2013/2014 academic year consisted of a total student population of 987 out of which 300 (30.3%) participated in the survey as shown in Figure 2.
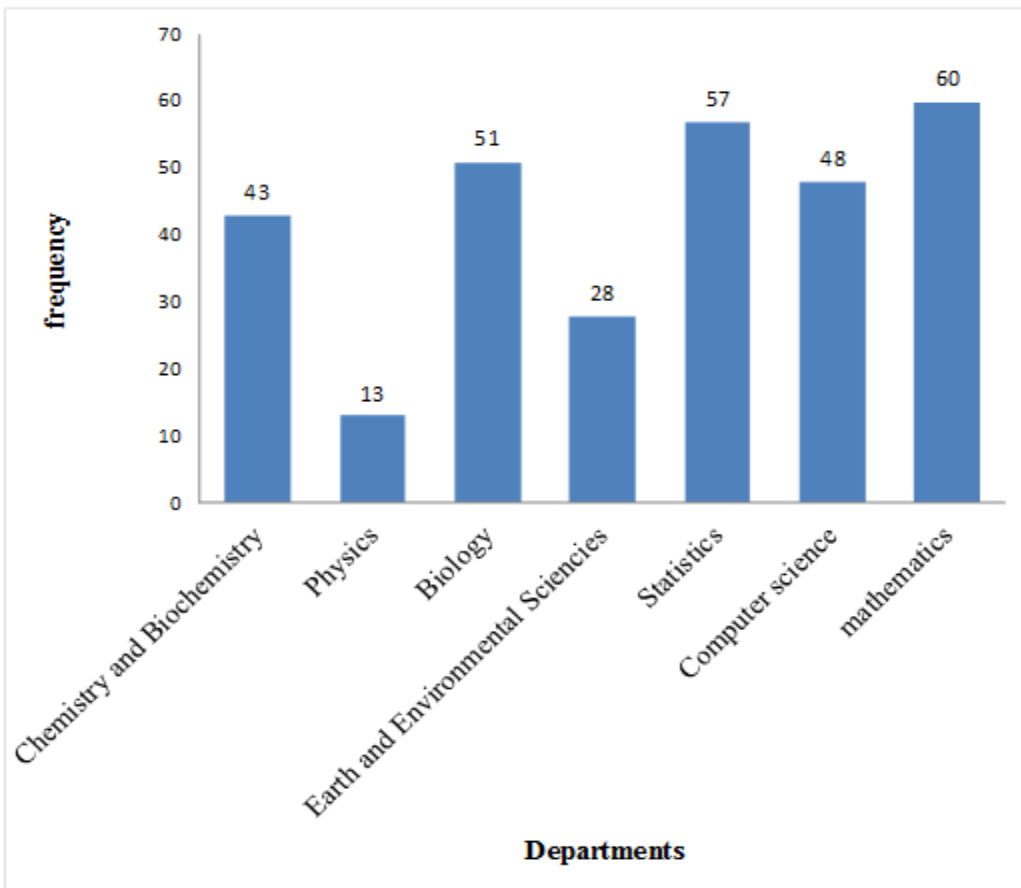

Figure 2. Source: *Author's construct, 2014*

In Figure 2 Physics Department is the least 13(4.3%) withthe majority of respondents 60 (20%) in the Mathematics Department. This is consistent with (Hiiler, 2002; Whitmore, 2002 and Kakai et al. 2004) whose research distinguished between categories of users on the basis of their faculty and a variety of disciplines.

6.2 Age distribution of respondents

In Ghana majority of students who qualify to enter the universities every academic year are those coming straight from the Senior High Schools (SHS) often at age 18 However, qualified matured students from 25years and above are also given admission to pursue undergraduate studies.

Table 2: Age distribution of respondents

AGE	FREQUENCY	PERCENT	CUMMULATIVE PERCENTAGE
Below 20 years	65	22	22
20 – 25 years	126	42	64
26 – 30 years	78	26	90
More than 30 years	31	10	100
TOTAL	300	100%	

In Table 2, majority (42%) of respondents fell within the age bracket of 20 – 25 years while 26% were between 26 – 30 years. The table further shows a normal age distribution of respondents within the scope of study which was limited to level 100 – 400 undergraduate students. What is common with all these age groups was that they had come with their own world of personal cumulative knowledge and experiences already into the university which would have to interact with the curriculum content or official knowledge of the institution for them to achieve a more meaningful and lasting learning environment subject to the properly being guided in their information seeking as prescribe by Kuhlthau et al (2012).

6.3 Level of study of respondents

As a front liner in the knowledge creation, the university library provides access to a wide range of resources open to all its community of students, faculty, administrative staff and researchers but this study was limited to undergraduate students from level 100 to 400.

Table 3: Level of study of respondents

Level of study	Frequency	Percent	Cumulative Percent
Level hundred (100)	76	25.3	25.3
Level two hundred	78	26.0	51.3
Level three hundred	85	28.3	79.7
Level four hundred	61	20.3	100
Total	300	100	

Source: *Author's construct, 2014*

Since the data originated from the Library the results revealed that all categories of students use the campus Library for their information needs. Table 3 shows an almost even distribution of respondents with a 28.3% majority in level three and the least 20.3% in level four hundred.

All categories of students need information for either class assignments, to complete course work or final year projects. Table 3 further reveals a progression in information need from Level 100 reaching a peak at 300 and a dip in Level 400. Perhaps first year students depend more on faculty for their information needs but as they progress the need to look outside the classroom increases their use of the library. It could also be that the higher the students go on the academic ladder, the more academic information they require to tackle the various challenges and therefore the more aggressive their information seeking behaviour.

However, at Level (400) the information search becomes less aggressive because students are more focused in their searches as they have now gathered the relevant information to write project works or dissertations. It can also be deduced that every level comes with its informational needs that guide students in their learning activities thus concurring with Popoola's (2006) view that information is essentially the human understanding that guides human actions.

The library being at the center of all learning activities is therefore better placed to make an impact on students' information seeking behaviour with the necessary tools such as and expertise.

6.4 Predominant information needs of respondents

Since the challenge for education in the twenty-first century is to prepare students to use information in the workplace, in their personal lives and as responsible citizens, it is important for students to understand and be able to gather and organise their information needs not only for academic purposes but their overall benefits and lifelong learning as well. This is because education does not end after school. Indeed, the quality of an educated person is one who has a broad world view of issues which higher education encourages. Students' information seeking therefore should include those variables such as that makes this possible.

Table 4: Predominant information needs of respondents

Types	Frequency	Percentage
Health information	51	17.00
Information for personal development	77	25.67
Academic information	112	37.33
Employment information	48	16.00
Global information	12	4.00
Total	300	100

Source: *Author's construct, 2014*

Table 4 clearly depicts students' personal, unofficial and official academic information needs with academic information (37.33%) being the predominant need while global information (4%) is the least. Students essentially need academic information while in school and are mostly guided or compelled by the curricular to peruse their information needs which are in tandem with Popoola's (2006) "compulsive organizer." It also follows Wright and Guy's (1997) assertion that students' information seeking is undertaken to identify a message that satisfies a perceived need and which involves active or purposeful information gathering as in Kakai et al. (2004).

The results further show that students' information seeking behaviour permeates major areas of life which will continue to be of concern for their overall wellbeing and the inherent opportunities available for lifelong learning. Furthermore, the results indicate that the process of information seeking enables students to concentrate on constructing new knowledge, gain personal understanding and transferable skills when students' personal knowledge and school knowledge merge at a Third Space (Kuhlthau, 2007).

6.5 Major sources of academic information by respondents

The UDS through the Library provides the necessary resources for all academic programmes such as books, journals as well as ICT infrastructure and Internet connectivity for the use of both faculty and students. The use of these resources therefore is very important as it will give a reflection on the information seeking behaviour of students thereby indicating areas for improvement.

Table 5: Showing major sources of academic information by respondents

Sources	Frequency	Percent	Rank
Lecture notes and handouts	69	23.00	3
University Library resources	82	27.34	2
Internet	102	34.00	1

Photocopying colleagues notes	31	10.33	4
CD- ROMs database	16	5.33	5
Total	300	100	

Source: *Author's construct, 2014*

Table 5 shows that majority of respondents (34%) use the Internet as their major and most consulted source for academic information followed by the Campus Library (27.34%) then lecture notes and handouts (23%).The strong preference for the Internet is contrary to the findings of Majid and Ali (2002) whose top five information resources in order of preference were the books,(94%),the internet (86%), lecturers' notes (84%), and friends (84%).

On the other hand, a closer look at Table 4 indicates that majority (66%) do not use the internet whiles the use of multiple sources also agree with Kerins, Madden and Fulton (2004) who reported similar findings in their surveys.

Due to improvements in information communication technologies such as smart phones, tablets and infrastructure, Internet resources may be easily accessible anytime, and anywhere. Unfortunately, this poses serious challenges to the quality of information students gather because not all information that is put on the Internet is authentic or good material. It is very relevant that content is marched with how people seek and use information nowadays. Therefore it is crucial that students are guided to acquire search skills that will improve or enhance their information gathering procedures because it is through this process that students learn better instead of the tendency to just copy and paste information (Kuhlthau, 2010).

6.6 Pattern of information seeking behaviour by respondents

Students engage in information seeking for a number of reasons. It may be for academic and non-academic purposes but there is always a motive which is what drives them to seek and locate information to satisfy their need. Information seeking could be passive, active or purposeful and independent of time.

Table 6: Frequency of information seeking by respondents

Frequency	Tally	Percentage
None at all	4	1.33
Occasionally	74	24.67
Weekly	39	13
Irregular but as situation demands	183	61
Total	300	100

Source: *Author's construct, 2014*

 In table 6, majority (61%) of respondents indicated that their information seeking was done irregularly as the situation demands at least (1.33%) being inactive. The study further revealed that beside the few (13%) who sought information weekly a greater number of 261 (87%) students did not seek information regularly but did purposeful searches only when the need arose, they sought for information when they had to prepare for examination, complete course assignments, prepare for class discussion seminars or write final year research papers. This corroborates Kakai et al. (2004) finding that information seeking behaviour involves active or purposeful information seeking.

On the other hand, one can see a more organised routine in the 13% that sought information weekly does that did not mean their needs arose only on weekly basis or they piled up till a dedicated or convenient day in the week? The question then is how often should students seek information? In any case students need to show a more active than reactive information seeking behaviour. They must develop curious and enquiring minds at all times because information seeking is not static but a life-long process, a continuum.

6.7 Accessibility of Information in the University

Academic libraries' role of enhancing the quality of human intellectual outputs through the processes of information gathering, storage and dissemination cannot be debated but as front liners in the creation of access to knowledge they are often challenged especially in this technological

era. That is why it is important to find innovative ways of improving upon services in order to open up access to and use of information.

Table 7: Accessibility of Information in the University

Level	Frequency	Percentages
Highly accessible	110	36.67
Accessible	71	23.67
Slightly accessible	67	22.33
Inaccessible	52	17.33
Total	300	100

Source: *Author's construct, 2014*

The results in Table 7 show generally low response rates accessibility of information in the university. For example, only 36.67% rated information in the University as highly accessible while 17.3% said information was inaccessible. Also, 119 or 39.3% of respondents were below the accessible line which is quite revealing and cannot be ignored. Perhaps it may be inferred here also that the students lacked search skills to know where or how to search for information.

6.8 Level of satisfaction with information sources

Information seeking can be an odious task for students especially when they do not possess the skills to identify a need, search and locate sources as well as formulate queries to get the desired results. This process is often bedeviled with frustrations and uncertainties but with patience, persistence and guidance satisfaction ensues when the need is met.

Table 8: Level of satisfaction with information sources by respondents

Rating	Frequency	Percentages
Very satisfied	121	40.33
Satisfied	81	27
Less satisfied	67	22.33
Dissatisfied	31	10.33
Total	300	100

Table 8 shows that a greater number of179 (59. 67%) who were in the majority were not very satisfied with the information they obtained from their searches only over 40. 33% said they were very satisfied. While it is possible that respondents might have problems with the sources of information, it is also plausible to say that these problems are occasioned as a result of their inability to apply the necessary search skills as in Ikoja-Odongo and Ocholla (2004) who described information seeking as a process that requires information seekers, or what might be called ''personal information structures' 'such as a person's cognitive abilities, his or her knowledge, skills in relation to the problem or task domain, knowledge and skills specific to a system and knowledge and skills regarding information seeking. Incorporating strategies to improve on resources and students search skills to derive satisfaction from their searches will positively impact on the information seeking behaviour (ISB). According to Kuhlthau (2012) when students are taken through the information search process of initiating, selecting, exploring, focusing, collecting and presenting they learn the process of inquiry which motivates learning and satisfaction.

6.9 Internet use and the information seeking behaviour of respondents

Students' opinions were sought on why they used Internet resources and some of their responses are summarised as follows: The Internet is mostly used for assignments, project works and personal information needs because it has a variety of materials and resources that can be accessed with click of a button anytime and anywhere provided there is connectivity. Even though there are a variety of search engines, the students said they just Google for any kind of information.

Students also revealed that the Internet made it easy for them to do more copying and pasting especially when they were constrained by time. Students' responses also indicated that the library resources were very useful but some of the needed books were either not available or inadequate thus compelling them to rely more on the Internet for information.

From the different responses given it can be inferred that students use the internet just for short, factual information and not necessarily for active learning.

7. CONCLUSIONS

With set objectives, the study sought to examine the information seeking behaviour of undergraduate students of the Navrongo campus of the University for Development Studies.Information gathering could be a challenging and an arduous task for students in tertiary institutions with the maze of information available nowadays. The study revealed that students had both personaland academic information needs with the latter dominating. Therefore there is no deviation from the norm since students essentially need academic information while in school. However, they will need to use their out-of-school knowledge to interpret, understand and make sense of the school curriculum with regards to ideas and ways of knowing. This is where the guided inquiry search process becomes necessary.

The use of the Internet as the major source of information came out clearly as compared to library resources and the others. This growing dependence on the Internet by undergraduate students in the University is universal as most students now possess smart phones with which they can easily access information directly from the Internet but the danger is that they can be overwhelmed by too much information which can result into just copying and pasting without real learning. That is why the library is still a very good source of information because materials and resources, either (print or non-print) excellent are well organised and accessible through adequate guidance.

There is variety in the pattern or frequency with which students search for information but unfortunately students do more erratic, purposeful searches only when the need arises. This shows that students' interaction with information sources is not continuous because they do not know how to apply the search process and therefore may not be able to search and retrieve relevant information. No wonder that the accessibility and satisfaction levels among the respondents were not very encouraging.

8. Recommendations

Based on the study, the following recommendations were made:

- Upgrading of Library resources with state of the art infrastructure and personnel should be the nucleus of the strategies for improving quality of information.

- Information literacy programmes should be intensified to guide students improve on their information seeking with   more faculty and library collaboration. In this regard, a more radical and positive approach must taken to incorporate information literacy studies in the curriculum for all students in the University.
- Professional librarians must also be actively involved in this process by continuously upgrading themselves through research to be able to teach or provide adequate instructions in the information search process. The Guided Inquiry approach is therefore strongly recommended.

9. REFERENCES

Ahenkora- Marfo, M. (2012).Libraries driving access to knowledge in the academic environment, *Ghana Library Journal,* Vol. 24, no.1 p106.

Alemna, A. A. (2012). Libraries: key to national development. *Ghana Library Journal,* Vol. 24, no.1 p2.

Belkin, N.J Oddy, R. &. Brooks, H. (1982). Information retrieval: Pt. 1   Background theory. *Journal of Documentation,* vol.38 (2), pg 61-71.

Callinan, J.E. (2004).Information-seeking behaviour of undergraduate biology students: A comparative analysis of first year and final year students in University of College Dublin. Library Review, 54, (2) 86-99.

Dervin, B. &. Nilan.(1986). Information needs and users. *Annual Review of Information Science and Technology,* 21: 3-33.

Edwin S. Thompson & Joana Pwadura (2014) Library Automation at the University for Development Studies: Challenges and Prospects, *New Review of Academic Librarianship:* http://dx.doi.org/10.1080/1361433.2013.842929.

Eskola, E.L. (1998).University students' information seeking in a changing learning environment- How are students' information needs, seeking and use affected by newTeachingmethods?*Availableat:http://www.shef.ac.uk/`is/publication/infres/isic/eeskol ahtml*.

Hartmann, E. (2001).Understanding of information literacy: the perception of first year undergraduate students at the University of Ballarat. *Australian Academic and Research Libraries.* Vol. 32 (2) pg. 35-43.

Hiller, S. (2002). How different are they? A comparison by academic area of library use, priorities and information needs at the University of Washington, Issues in Science and Technology Librarianship, vol.33, *available at: http:// www,ist.org/02-winter/article.html*.

Ikoja-Odogo, R &Ocholla, D.N. (2004).Information-seeking behaviour of the informal sector entrepreneurs: The Uganda Experience. *Libri,*vol54, pp. 54-66.

Kakai, M,;ikoja-Odongo, R.&Kigongo-Bukeny, I.M.N. (2004).A study of the information seeking behaviour of undergraduate students of Makerere University, Uganda. *World Libraries*, vol. 14(1), pg544 -564.

Kamanda, R.W. (1999).Library-use by university students: Case study of the East African School of Library and Information Science. Kampala: Makerere University. **Unpublished DLS dissertation**.

Kerins, G., Madden, R, &Fulton, C. (2004). Information-seeking and the students studying for professional careers: the case of engineering and law students in Ireland. Information Research,vol.10 (1) p. 208.

Kozol, Jonathan (2005). The Shame of the Nation: the restoration of Apartheid schooling in America. Three Rivers Press.

Kuhlthau C. C. (2010). Guided inquiry: School libraries in the 21stCentury.*School Libraries Worldwide. Vol. 16, number 1, pp 17-18*

Kuhlthau C. C. (2012). Research matters: the long reach of the model of information search process. *Journal of Research on Libraries and Young Adults (JRLYA)*

Kuhlthau et al. (2007). Guided Inquiry: learning in the 21st century. Libraries Unlimited. Available at http://books.google.com.gh/books/about/Guided inquiry...

Kuhlthau, C.C. (1994).Seeking meaning: A process approach to library and information services... Norwood, NJ: Ablex Publishing

Majid, S., & Ai, T.T. (2002).Usage of information resources by computer engineering students: a case study of Nanyang Technology University, Singapore.*Online Information Review,* vol.26 (5),pg 318-325.

Popoola, S.O. (2006). Information accessibility and utilization as factors influencing decision-making of managers in commercial banks in Nigeria.*Ghana Library Journal*, Vol. 18. P6.

Pwadura, J. Asapeo, A. and Plockey, F. D. (2017). Evaluation of Use of E-Resources by Academic Staff of Navrongo Campus of University for Development Studies through Workplace Information Literacy Programmes. *Library Philosophy and Practice(e-journal).1538.* Available at http://digitalcommons.unl.edu/libphiprac

University for Development Studies, (2014). 15th Congregation: Basic Statistics, pp16, 17&30.

Whitemire, E. (2002).Discipline differences and undergraduates' information –seeking behaviour.*Journal of the American society for Information Science and Technology,* vol. 53 (8), pg. 631-638.

Whitemire, E. (2003).Epistemological beliefs and the information-seeking behaviour of undergraduate .*Library and Information Science Research,* vol. 25, pg.127-142.

Wilson, T.D. (1997a).Information behaviour. An interdisciplinary perspective. In P.Vakkari, R. Savolainen & B. Dervin (Eds) *Information seeking in context of Proceeding of an international conference on research in information needs, seeking and use in different contexts,*14-15, August, 1996, Tampere, Finland. London: Taylor Graham.

Wright, M. and Guy, L. (1997).Where do I find it and what do I do with it: Practical problem-solving in the data library, at *http://dphs.dacc.wisc.edu/types/data*