

# **INFORMATION NEEDS AND SEEKING BEHAVIOUR OF ENGINEERING AND SCIENCE STUDENTS IN CROSS RIVER UNIVERSITY OF TECHNOLOGY, CALABAR**

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## **Abstract**

This study was set to examine the information needs and seeking behaviour of Engineering and Science students of Cross River University of Technology (CRUTECH). The concepts of information and information seeking were explained and analyzed. The study examined five (5) objectives, five (5) research questions and three (3) hypothesis. Also related literature was reviewed both from national and international scholars. The research design adopted for this study was descriptive survey using the simple random sampling technique to draw the population. A questionnaire instrument was used to administer the questionnaire. The data was analyzed using simple percentages. The study revealed among others that students seek information in order to do assignments, write exams/test and also for update of knowledge. The study also revealed the reason why students seek for information to include; to study for exams/test, assignment, research, and general knowledge update. The study further showed the type of information sources used by engineering student to include: Text books, internet, project and journals. The study also revealed that poor power supply, inadequate ICT facilities and lack of the knowledge of library by students are the major problems faced by engineering and science students as they seek and need information. Finally, the study strategized improves power supply, adequate provision of ICT facilities, creating awareness in the use of library and its resources among others. However, the study recommends among others that The library management should ensure that power supply in the library is improved and the environment is made conducive for healthy academic activities to take place.

Knowledge of the information needs and seeking behaviour of students (users) is vital for developing library collections, updating facilities and improving services to

effectively meet the information needs of users. The importance of information to Engineering and Science students in Universities for the purpose of learning, teaching and research cannot be over emphasized. Information is a common term often used by people of different professions to described the extent to which information is required to either solve problems or and answer questions. Information, despite being common and important in all activities, it is a term that is difficult to define because it has several dimensions; meaning different things to different people.

Information seeking is an essential human activity. It is as old as the human race. Early people desired information to hunt, fish, farm and to protect themselves. Today, “it is still an important part of human activities, ranging from decision making and problem solving through resource allocation and system management” (Hertzum, 2008).

The engineering profession is dynamic, and in order to sustain the interest of practitioners in this field, current and relevant information is required. Today’s engineering graduates are not all employed solely to work on the technical design aspects of engineering problems. Nevertheless, their efforts now extent beyond the creation of better computers and radars systems to vigorous efforts to solve socio economic problems such as air and water pollution, urban planning, mass transportation, the discovery of new energy sources, and the conservation of existing natural resources, particularly oil and natural gas. Most importantly, all these will not happen except members become more informed and engineers cannot communicate with one another in a meaningful way unless each term they use is clear and definite, hence Igwe (2012) describes information seeking behavior as an individual way and manner of gathering and sourcing for information for personal use, knowledge updating and development.

Information is a strategic resource for economic, social and personal development. It is considered to be an essential part of every human existence. Information is a basic need of life which helps in the fulfillment of other needs such as food and shelter. However, it can be said that without information, survival and development of any society is not possible.

Information as stated by Oguntuase and Akinbode (2007) is centre to human activities, very essential for survival and the “life wire” of any ideal academic institution. Thus it can be very useful in decision making, planning and evaluating issues.

The concept of “information behaviour” was coined in the late 1990s, but it traces its roots to the concept of “information needs and uses” that arose in the 1960s. Nevertheless, there has been a gradual shift in the focus of information behaviour research from a system orientation to a user orientation (Liswiki, 2007). Thus, at the end of 1970s and the beginning of 1980s researchers began to realize that questions in

information needs, seeking and use could not be seen only from the systems point of view. Hence, the user of the information and his/her needs came into focus (Khan, and Shafique, 2011).

### **Statement of the Problem**

The twentieth century has witnessed an information explosion, owing to the exponential growth of printed materials every minute at the global level (Khan & Shafique, 2011). As the amount of available data grows, the problem of managing the information, the type of information sought, how to get these information becomes a problem and the difficulties faced by the engineering and science students in Cross River University of Technology in getting these information.

Pre-research visit to the departments understudy revealed that engineering and science students encounter a lot of problems during their search for information. These problems range from lack of current information resources in the library. Lack of access to the right information sources, not knowing the type of information and how to get it among others. it is in the light of this that this study is set to examine the information needs and seeking behaviour of engineering and science students in Cross River University of Technology.

### **Purpose of the Study**

The main purpose of this study is to examine the information needs seeking behaviour of engineering and science students in Cross River University of Technology (CRUTECH).

The specific purposes include:

- (1) To examine the information needs and seeking behaviour of Engineering and Science students in Cross River University of Technology.
- (2) To find out the reason for seeking such information
- (3) To identify the types of information sources used by them.
- (4) To identify the problems faced by them
- (5) To suggest ways of improving students' information needs and seeking behaviour.

### **Research Questions**

The following research questions were raised to guide this study

- (1) What type of information is sought by engineering and science students?
- (2) For what reason do students need and seek information?
- (3) What type of sources do they use in seeking for information?
- (4) What problems do they encounter while seeking information?

(5) What strategies could be used to improve students' information needs and seeking behaviour?

### **Hypothesis Testing**

The following hypotheses were formulated to guide this study and were tested at .05 level of significance

- (1) There is no significant influence on types of information sought and information needs and seeking behaviour of engineering and science students.
- (2) There is no significant influence on reasons for seeking information and information seeking behavior by engineering and science students.
- (3) There is no significant influence on the type of information sources used and information needs and seeking behavior of engineering and science students.

### **Literature Review**

Information need is the recognition that your knowledge is inadequate to satisfy a goal (Case, 2007). Such identified information need, according to Ingwersen & Jarvelin (2005) in Moodley, (2013) may lead to information seeking. Information needs are those desires or wants which we have to acquire information. It is described as the extent to which information is required to solve problems as well as the degree of expressed satisfaction or dissatisfaction with the information. Wilson, (2000) in Chinnasamy, (2016) stated that, information seeking behaviour includes those activities a person may engage in when identifying their own needs for information. Information seeking behaviour can be described as an individual's way and manner of gathering and sourcing information for personal use, knowledge updating and development (Aforo & Lamptey, 2012). Information seeking is also an essential activity in the academic environment. Thus, information needed could be for recreation, education, leisure and research. Adekanye (2014), stated that, the information need of people varies according to age, gender, occupation, location, education, exposure, enlightenment, religion and even culture. Adesoji & Olabode, (2010) maintained that everybody needs information to reach his or her potentials. To this end, student generally need a wide range of information to meet their educational needs which includes preparing for tests/examinations, assignments, class discussions etc.

Information seeking behaviour arises from the perceived need of a users, whereby the individual identifies his or her needs for information, searches for information and finally transfers the information obtained (Ikoja-Odongo and Mostert,

2006). Case (2007), opined that information seeking is a conscious effort to acquire information in response to a need or gap in your knowledge.

Several studies have been conducted to investigate information need and seeking behaviour of library users based on their discipline, occupation, information environment and geographical location (Thanuskodi, 2012). Jaavelin and Wilson (2003) in Khan & Shafique, (2011) reviewed different models for information behaviour. Muhammed and Kanwal (2009), investigated the information seeking behaviour and satisfaction level of teachers of National Textile University in Pakistan and found that students prefer both electronic and printed formats equally. Ansari and Zuberi (2010) in their studies focused attention on information needs and seeking behaviour of media practitioner in Karachi and pointed out that when individuals requires information they consult information system, library or interpersonal sources to satisfy their needs. In the same vein Abdullahi (2009) carried out a research on the information needs of the students of Abubakar Tafawa Belewa University and found that, their reason for seeking information is to prepare mainly for test, exams and solve assignments. Adizelu (2010) focuses on the sources of information used by students and found that textbooks, internet, journals among others are the major sources of information used mostly by students. confirming Ugah's (2008) finding which noted that poor indexing and cataloguing of library resources, lack of adequate guide to the library arrangement by library staff, poor electrical power supply as well as inadequate funds and lack of ICT facilities as the challenges affecting the use of information resources by students.

Stilwell (2010) investigated the extent and nature of research into information behaviour in the South African context from 1980 – 2010. She maintained that literature shows that the concept of information behaviour has grown over time and that many approaches have been used in particular contexts and situations. However, she argued that whilst numerous papers have been presented at conferences and published as articles, little is available in terms of an overview of the entire body of such research to date.

Most of the earliest studies of information needs were based on indirect methods, like citation counting of recent documents, library issue records, etc. However, with the advent of information need and seeking behaviour research different models were proposed for identifying different steps involved in this process. Stilwell, (2010) In her investigation, found out that there is an enormous growth in the number of articles and papers from 2000 onwards reflecting a wide array of subjects.

Internationally, studies indicate that research in information behaviour has occupied information scientists. Literature presented reveals that a large number of research studies are carried out to find out the information needs and seeking behaviour of

different groups of people. Anwar (2007) has critically analyzed the beginning of research activity on information needs and presented an analysis of the literature on information needs and seeking behaviour in Pakistan. Thanuskodi (2012) conducted a survey on the information needs and seeking behaviour of the Tamil Nadu Dr. Ambedkar law University faculty member and concludes that adequate knowledge about the information needs and seeking behaviour of users is vital for the development of library collections.

Qureshi (2008) investigated the information needs and seeking behaviour of student in universities of Pakistan and the study concludes that there are many /several factors that have significant effect on student's behaviour such as educational and cultural background, surrounding environment and students participation, which have high positive impact on information needs and seeking behaviour of students. Tahira (2008) studied information needs and seeking behaviour of science and technology teachers. Tahir, Mahmood and Shafique (2008) investigated the information needs and seeking behaviour of Arts and Humanities teachers. In the same vein, Ansari (2007) carried out an investigation to find out the information needs and seeking behaviour of media practitioner in Pakistan. Within the city of Calabar with particular reference to Cross River University of Technology, no study to date has been conducted to find out the information needs and seeking behaviour of engineering and science student in Cross River University of Technology. Keeping this gap in view, this study aims at finding the information needs and seeking behaviour of engineering and science students in Cross River University of Technology, Calabar.

### **Methodology**

The research design adopted for this study is descriptive survey. According to Leary (2010) descriptive research is a research designed to describe the characteristics or behaviours of a particular population in a systematic and accurate fashion. The descriptive survey was applied using the simple random sampling, and a questionnaire instrument was used for data collection. The population used for this study was 200 students of both engineering and science faculty in Cross River University of Technology (CRUTECH). This comprises of both male/female registered library users from year one to final year.

However, out of the two hundred (200) questionnaires distributed, one hundred and ninety two (192) were completed and returned. This represent 90% response rate.

### Data Analysis and Findings

Here, data are presented based on the research questions set to guide the study and were analyzed using simple percentage. 192 copies of the questionnaires were properly completed and returned. During analysis, frequencies were computed from the responses to the questions and were converted to percentages as presented and analyzed as follows:

#### Research question 1:

What type of information is sought by engineering and science student?

**Table 1: Distribution of Respondents Based on the Type of Information Sought**

S/N	Information Sought	Frequency	(%) Percentage
1.	For general knowledge about my field of study	29	15.1
2.	For learning, study and research.	47	24.5
3.	For solving assignment, preparing for exams and test.	81	42.2
4.	To update my knowledge about the recent happenings.	20	10.4
5.	For leisure, sports and politics.	15	7.8
<b>TOTAL</b>		<b>192</b>	<b>100</b>

The results in table 1 shows that majority of the respondents in responding to the question what type of information is ought by engineering and science students 81 (42.2%) agreed that they seek information for assignments, exams and to write test. while 47 (24.5%) of the respondents agreed that information is sought for learning, study and research. Also a good number of them 29 (15.1%) agreed that they seek information for general knowledge about their field and 20 (10.4%) and 15 (7.8%) of respondents seek information for knowledge update and for leisure respectively. The result revealed that engineering and science students of Cross River University of Technology (CRUTECH) seek information to write exams, test and assignments.

#### Research question 2:

For what reason do students of engineering and science faculty need and seek information?

**Table 2: Distribution of Respondents Based on Reasons for Seeking Information**

S/N	Reason for Seeing Information	Frequency	(%) Percentage
1.	To study for Exams, Test, assignment etc.	86	44.8
2.	For research purpose	41	21.4

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3.	To update myself on general knowledge in my field of study.	10	5.2
4.	To borrow library books.	50	26.0
5.	For recreation and leisure.	5	2.6
<b>TOTAL</b>		<b>192</b>	<b>100</b>

The data in table 2 revealed that 86 (44.8%) of respondents gave studying for exams, test and assignment as reason for seeking information while 50 (26%) of the respondents said borrowing of books is the reason they seek information. However, some respondents acknowledged that the reason for seeking information is for research purpose. A few of the respondents 10 (5.2%) and 5 (2.6%) gave update of knowledge and leisure as their reason for seeking information. The result in table 2 shows that, the reason for engineering and science students of CRUTECH seeking information is for studying for exams, test and assignments.

### **Research question 3**

What type of information sources do they used?

**Table 3: Distribution of Respondents Based on the Type of Information Sources Used**

S/N	Types of Information sources used	Frequency	(%) Percentage
1.	Text books	72	37.5
2.	Journals	11	5.8
3.	Internet	76	39.6
4.	Reference materials	26	13.5
5.	Project	7	3.6
<b>TOTAL</b>		<b>192</b>	<b>100</b>

From the table above it is observed that respondents uses internet and text books more as their sources of information with a total of 76 (39.6%) and 72 (37.5%) respectively, only 26 (13.5%) respondents used reference materials as their source of information, while journals and projects had 11 (5.8%) and 7 (3.6%) respectively. The result in table 3 revealed that engineering and science students of CRUTECH uses the internet and text books as their sources of information.

### **Research question 4:**

What problems do they encounter while seeking information?



**Table 4: Distribution of Respondents Based on Problems Faced**

S/N	Problems faced	Frequency	(%) Percentage
1.	Lack of knowledge by students to use he library	38	19.8
2.	Inadequate information resource.	21	10.9
3.	Inadequate ICT facilities	59	30.7
4.	Lack of awareness on user education	12	6.2
5.	Poor supply	62	32.3
<b>TOTAL</b>		<b>192</b>	<b>100</b>

In table 4 above the data revealed that greater percent of respondents agreed that poor power supply is their major problem faced/encountered while seeking information in the library with a total response rate of 62 (32.3%). Inadequate ICT facilities was seen as another problem encountered according to the data with 59 (30.7%) response rate. However, the respondents also agreed that lack of knowledge to use the library posed as a problem to them with a total response of 38 (19.8%). The result shows that poor power supply and inadequate ICT facilities are the major problems faced by engineering and science students while seeking information.

**Research question 5:**

What strategies could be use to improve students information needs and seeking behaviour?

**Table 5: Distribution of Respondents Based on the Strategy Use to Improve Students Information Needs**

S/N	Strategy use	Frequency	(%) Percentage
1.	Improve power supply as a strategy use to improve students information needs.	60	31.3
2.	Adequate provision of ICT facilities as a strategy.	36	18.8
3.	Adequate provision of information resources as a strategy	31	16.1
4.	Proper user Education campaign as a strategy c	15	7.8
5.	Creating awareness in the use of library and information resources as a strategy.	50	26
<b>TOTAL</b>		<b>192</b>	<b>100</b>

The result from table 5 revealed that majority of the respondents 60 (31.3%), 50 (26%), 36 (18.8%) and 31 (16.1%) agreed to the fact that improve power supply, creating

awareness in the use of library and information resources, adequate provision of ICT facilities and adequate provision of information resources are all strategies to improve students information needs and seeking behaviour. However, only 7.8% (15) respondents indicated proper user education campaign as a strategy to improve students' needs. The result in table 5 shows that improved power supply, creating awareness in the use of library and information resources and adequate provision of ICT facilities as strategies to improve student's information needs.

### **Discussion of the Findings**

The findings are presented in the context of the research questions which served as a guide for the collection and analysis of data. The research questions were:-

The result revealed that engineering and science students of Cross River University of Technology (CRUTECH) seek information to write exams ,test and assignments. This finding is in line with the findings of Adesoji & Olabode, (2010), which reveals that student generally need a wide range of information to meet their educational needs which includes preparing for tests/examinations, assignments, class discussions etc.

The result in table 2 shows that, the reason for engineering and science students of CRUTECH seeking information is for studying for exams, test and assignments. This study correspond with Abdullahi (2009) who attested that students of Abubakar Tafawa Belewa University's reason for seeking information is to prepare mainly for test, exams and solve assignments.

The study further revealed that internet and text books are the major types of information sources used by students of engineering and science faculty. However, few of the respondents indicated reference materials, journals and projects as their information source. This is inconsonance with the view of Adizelu (2010) who stressed that textbooks, internet, journals among others are the major sources of information used mostly by students.

The findings of the study also showed poor electrical power supply and inadequate ICT facilities, lack of knowledge of library use as the major problems faced by engineering and science students as they seek information. This confirmed Ugah's (2008) finding which revealed poor indexing and cataloguing of library resources, lack of adequate guide to the library arrangement by library staff, poor electrical power supply as well as inadequate funds and lack of ICT facilities as the challenges affecting the use of information resources by students.

### **Conclusion**

The findings of this study showed that engineering and science students of CRUTECH seek information to do assignments, read for exams/test, to do their research work and also to update general knowledge about their field of study.

The study also revealed that the reason why students seek and need information includes, assignments, exams, test, research and learning. the study further revealed the type of information sources used by engineering students and science students of CRUTECH to includes, textbook, internet, journals, projects and reference materials.

The study further revealed the problems faced by engineering and science students of CRUTECH as they seek and need information to includes poor power supply, inadequate ICT facilities, lack of the knowledge of library by students among others as the major problems faced by the engineering and science students of CRUTECH. However, the study identified some strategies that could be adopted in order to overcome the problems faced by students to includes improve power supply, adequate provision of ICT facilities, creating awareness in the use of library and its resources etc. Understanding the needs of information seekers and taking time to satisfy them is the first step towards effective and efficient service delivery. As librarians, information scientists, managers etc. should always go a step further to know the type of information required by the users the type of sources preferred by them and the likely problems they may encounter, by so doing, information will be available even before the clients ask for it.

As the world continues to become increasingly complex, interconnected, and dynamic, it is imperative for information managers to live up to the information society and one of the key aspects of living of interactions society is the growing level of interactions we have with this complex and increasing electronic environment.

Not only are users required to continually seek and acquire information, but increasingly more sources, reasons and the type of information sought by users are all issues that users go through. This paper looked at how best engineering and science students of CRUTECH seek information.

### **Recommendations**

Based on the findings, the following recommendations were proffered:

1. The University authority should ensure that the library is fully automated and with adequate ICT facilities and online access provided for the students to satisfy their information need.

2. The library management should ensure that power supply in the library is improved and the environment is made conducive for healthy academic activities to take place.
3. The library management should continue in its fights in creating awareness in the use of library and its resources.

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