
CHAPTER FIVE

INFORMATION NEEDS AND INFORMATION-SEEKING BEHAVIOUR OF STUDENTS OF FEDERAL COLLEGE OF DENTAL TECHNOLOGY AND THERAPY (FCDT & T), ENUGU, NIGERIA.

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Abstract

The study examines the information needs and information-seeking behavior among the students of the Federal College of Dental Technology and Therapy, Enugu, Nigeria. A total sample population of Two Hundred (200) respondents was selected from the four existing departments in the 2017/2018 academic session. The questionnaire was used as the research instrument for data collection. Simple percentages, tables, and frequencies were used for data analysis and presentation for easy interpretation. The findings indicate that the main information needs of students pertain to tasks involving academic research (190:97.44%) and information on tests and examinations (185: 94.89%). Consultation with lecturers and colleagues in the field (191: 97.95%) and browsing through the internet (189: 96.92%) are methods of seeking information for academic research. Conversely, the use of card catalogue (190:97.44%) is the tool for seeking information. The findings reveal that the College library (191:97.95%), personal collections (189:96.92%) and electronic database (187:95.90%) are the most consulted and preferred source of information. Meanwhile, doing assignments, class work, project research and preparing for examination (191:97.95%) are the main purposes of seeking information. The main barriers to information-seeking by students are the lack of reading and inadequate information materials (191:97.95%) which negatively correlates to the perception of success in meeting their information needs. In general, students appear to be well satisfied with the selection of information sources and collection in meeting their needs. Hence, the study recommends the adequate provision of resources and the organizing of library user education at the beginning of every semester for all students to enhance their information seeking, and usage, in this dynamic information technology-driven era.

Key Words: Information, Information Needs, Information Seeking Behavior, Students; Federal College of Dental Technology and Therapy, Enugu; Nigeria.

Introduction

Information is a very important resource for academic study, teaching, research, and development. Information needs can be educational, economical, political, cultural or social. However, information need is characterized mostly by the information-seeking behaviour of the person in need of information (Okonoko et al, 2015). Various factors may determine the information-seeking behaviour of an individual or a group of individuals. It is, therefore, desirable to understand the purpose for which information is required, the environment in which the user operates user skills in identifying the needed information, channels and sources preferred for acquiring information, and the barriers to information. Students and research scholars need information to work properly in their various academic fields. Students need information to be able to improve their academic studies, while researchers and professionals also do to be up-to-date and well informed in their areas of specialization. For any meaningful information to be provided, certain relevant information sources must be consulted. It is only through such sources that information seekers can obtain information that is ideal for meaningful decision-making, leading to an increase in academic performance and knowledge. In the course of seeking information, scholars and students may interact with manual information systems (such as books, journals, periodicals, annual reports, monograph, thesis, project reports or a library), or with computer-based systems such as World Wide Web (Ansari et al, 2010). The library plays an important role in the process of information seeking. The mission of the library is to acquire, organize and preserve scholarly materials for research scholars and students for their teaching, learning, and research. Hence, the library is a primary resource for research and academic learning among academic staff and students. However, the inadequacy in library collections and the infiltration of digital technologies are making more students and researchers, of recent, rely more on

electronic sources than the use of the traditional library resources for their academic learning and research processes. Therefore, a library must understand the information needs of students and research scholars in order to address those needs since information-seeking behaviour differs among user groups. The findings of the study will be useful to library management for adequate planning. It is also an aspect of scholarly work most interesting to academic librarians who strive to develop collections, services, and organizational structures that facilitate the seeking of information. Furthermore, this study will help to overcome the dearth of such studies in developing countries, especially in Nigeria.

Federal College of Dental Technology and Therapy Enugu Library

Federal College of Dental Technology and Therapy, Enugu was established in 1982 and has achieved academic and research excellence with its four departments. The FCDT&T library has a rich collection of 5000 information resources and subscribes to 5 international and national journals and 3 CD-ROM databases. It also has bound archives of core medical and dental journals. 1000 peer-reviewed titled journals and E-books are available online through a digital library program. The college has entered into an agreement with the various organizations and the Information and Library Network to participate in their e-journal consortium. The college computer network has a state-of-the-art fibre optic network and wireless network link to internet providers. The library provides Internet Access Facility (IAF) service to all library members with 50 computers, at a minimal fee, for browsing e-resources. The library acquires a variety of resources in print, audiovisual, and electronic formats to support study and research. The library also offers a wide range of services, including Readers and Lending, Reference and Research, Reprographic, information, Internet and Online E-resources, News Paper, Magazine and Journal, Special Category Membership, OPAC, indexing, etc.

Information

Several attempts have been made to define "information". Kaniki (2001) defines information as "ideas, facts, imaginative works of the mind, and data of value, potentially useful in decision making, question answering and problem-solving. It leads to a state of knowing" (Moodley, 2013). According to Ajiboye and Tella (2007), information is data that has been processed to be well understood to satisfy the user's query. They go further in their definition to say that "information is data value in planning, decision making and evaluation of any programme". Also, information means many things to many people, depending on the context. Scientifically, information is processed data. Information can also be loosely defined as that which aids decision making. Information, though abstract, can also be visualized as a commodity, which can be bought or sold. Other writers have defined information as any potentially useful fact, quantity or value that can be expressed uniquely with exactness. Information is whatever is capable of causing a human mind to change its opinion about the current state of the real world (deWatteville and Gilbert 2000 cited in Eghworo et al 2015).

Information needs

Information need is defined as a state or process started when one perceives that there is a gap between the information and knowledge available to solve a problem, and the actual solution of the problem (Miranda et al, 2007). Case (2002) states that: information need is the recognition that your knowledge is inadequate to satisfy a goal. Such an identified information need may lead to information seeking and the formulation of requests for information (Ingwersen & Järvelin, 2005). Also a Taylor (2008) states that information needs are a personal and unconscious condition. He articulates four levels of information need that an individual passes

through before making formal encounters with information professionals. These levels include: visceral need, conscious need, formalized need and compromised need. Leug (2002) further states that the goal of user information-seeking activities is to find information that satisfies his or her information needs.

Information Source

Information is considered as an essential ingredient in decision making, planning, and forecasting. To obtain quality information, students need to understand the nature of information sources available. According to Hertzum, Andersen, Andersen and Hansen (2002), information source could be oral or written, human or virtual, in-house or external, lay or authoritative, and easily accessible or hard to get. Adomi (2012) reiterates that information sources are resources or materials from which people receive ideas, meaningful messages, enlightenment and direction that will enable them to accomplish tasks, make decisions and solve problems. This definition sums up the fact that information source is the vehicle through which ideas, news, facts, symbols, and sounds are stored and transported across time and space appearing in various documents or record forms that aid the dissemination of information and knowledge (Nnadozie, 2014). Taylor (2000) notes that the information sources (e.g. the library) that a user actually needs may not eventually tally with what is practically available, due to constraints either in the stock or the user's own inability. Any form of information seeking activity will require information sources, which provide the means to which information-seekers can satisfy their information needs. According to Leckie et al (1996), information sources are manifested in different formats which can be categorised in terms of their formality (i.e. formal vs. informal sources) or the medium in which they are transmitted (i.e. oral vs. written sources).

Information Behaviour

Dattatray Sankpal et al (2017) describe "Information Behaviour" as the behaviour of humans to sources and channels of information. This behaviour includes both active and passive information seeking; that is to say, an active face to face discussion as well as the information received through television that indicates a source of passive information. Information received in this concept does not serve any purpose. Information behaviour is a broad term that covers information needs, information-seeking behaviour, information searching, and information use (Case, 2000). Wilson (1999) presents an outline of models of information-seeking and other aspects of information behaviour, with the aim of reviewing the status of models of information behaviour to discover how they may relate one to another and to propose an integration of these models into a more general framework. Information behaviour encompasses information-seeking as well as the totality of other unintentional or passive behaviours (glimpsing or encountering information), as well as purposive behaviours that do not involve seeking, such as actively avoiding information (Case, 2002). Ingwersen and Järvelin (2005) cited in Moodley (2013) define information behaviour as the "human behaviour dealing with generation, communication, use and other activities concerned with information, such as information-seeking behaviour and interactive information retrieval (IR). Wilson (2010) describes "information behaviour" as the totality of human behaviour in relation to sources and channels of information, including both active and passive information seeking and information use. This can be to complete course assignments, prepare for class discussions, seminars, workshops, conferences, or to write research papers.

Information-Seeking

Information seeking is a conscious effort to acquire information in response to a need or gap in your knowledge (Case, 2002). Ikoga-Odonga and Mostert (2006) define information-seeking as the purposive search and acquisition of information from selected information resources to satisfy certain needs. Information-seeking is a form of human behaviour that involves seeking information by means of the active examination of information sources or information retrieval systems to satisfy the information need, or to solve a problem (Ingwersen & Järvelin, 2005). In order to acquire information, the user has to select information from a particular source, system, channel or service. Kingrey (2002) states that information-seeking means different things in different contexts that involve the search, retrieval, recognition, and application of meaningful content. Information-seeking, according to Amin and Shima (2007), is a basic activity indulged in by all people and manifested through a particular behaviour. It is also an aspect of scholarly work of most interest to academic librarians who strive to develop collections, services, and structures that facilitate information-seeking.

Information-seeking Behaviour

Information-seeking behaviour arises from the perceived need of a user, whereby the individual identifies his or her need for information, searches for information, and finally transfers the information obtained (Ikoga-Odonga and Mostert, 2006). Information-seeking behaviour differs among different users. Igwe (2012) describes "information-seeking behaviour" as an individual way and manner of gathering and sourcing for information for personal use, knowledge updating, and development. Information-seeking behaviour, according to Uhegbu (2007), is the way in which users conduct themselves when searching for information. In the words of Aina, (2004), the information-seeking behaviour of users depends on education, access to library and the length of time a user devotes to information-seeking. He goes further to say that no matter how comprehensive the resources and services of a library are, it is important that the services are publicized widely so that users can seek information from the libraries. The research scholars may seek the required information by referring books, browsing periodicals, consulting abstracting and indexing periodicals, consulting colleagues, and friends. They also seek information from teachers, senior research scholars, post-doctoral fellows, and information centres. They also seek information through seminars, conferences, workshops, symposiums, etc. The majority of the information is sought by the research scholars from the sources and services of the library in which they are the users. (Manjunath and Surendra Babu, 2018). David Ellis information seeking model (1989) identifies six actions that users follow to satisfy an information need and in sourcing for information. These include: starting, chaining, browsing, differentiating, monitoring, and extracting. Ellis (1989) defines 'starting' as identifying the initial materials to search through and selecting starting points for the search. It is usually undertaken at the beginning of the information-seeking process to learn about a new field. "Starting" includes locating key people in the field or obtaining a literature review of the field. Ellis (1989) explains "chaining" as following leads from the starting source to referential connections to other sources that contribute new sources of information. Ellis (1989) explains *browsing* as casually looking for information in areas of interest. This activity is made easy by the nature of documents to have tables of contents, lists of titles, topic headings, and names of persons or organizations. "Differentiating", one of the search strategies as explained by Ellis, means selecting among the known sources by noting the distinctions of characteristics and value of the information. Monitoring is keeping up-to-date on a topic by regularly following specific sources. Using a small set of core sources, including key personal contacts and publications,

developments can be tracked for a particular topic. Extracting" is methodically analyzing sources to identify materials of interest (Ellis, 1989). Applying Ellis' model to information-seeking involves actions such as starting (using lectures and, to some extent, reading lists, colleagues and the card catalogue); browsing (especially on the open shelves); chaining (using references at the back of consulted books); monitoring (using the card catalogues, lists on library notice boards, and colleagues); extracting (using the card catalogue) and differentiating (differentiating between the many documents identified by a user and selecting what is appropriate for use to satisfy an identified need). In the Ellis model, users may move from one activity to another and no order is assumed. Knowledge of the information needs and information-seeking behaviour of users is vital for developing library collections, upgrading facilities and improving services to effectively meet the information needs of users of the Federal College of Dental Technology and Therapy, Enugu. The relationship between these concepts is that where there is a need, a user usually seeks information in order to meet the need. For this study, the concepts of information needs and information-seeking behaviour will be explored within the context of College library users.

Purpose of the Study

The purpose of this study is to examine the information needs and information-seeking behaviour of students of the Federal College of Dental Technology and Therapy (FCDT&T) Enugu, Nigeria, engaged in learning, research, and development in the field of dental technology and therapy. The specific objectives of the study are to:

- Identify the information needs of students.
- Determine the frequency of library visits and their purposes.
- Explore the information-seeking behaviour of students.
- Ascertain the sources and methods of obtaining information by students and their satisfaction levels.
- Identify the tools for seeking information, and the format of materials preferred.
- Identify the constraints faced in using and searching for information in the library by students.

Methodology

This study adopted a survey research design. The targeted population is one thousand and two hundred (1200) of FCDT&T in the 2017/2018 academic session of which a total sample size of two hundred (200) respondents was selected using the stratified random sampling technique. The questionnaire was the main instrument for collecting data; while personal observation was used as a follow-up to verify the information given in the questionnaire. The questionnaire was distributed to the respondents by hand and equally shared with the departments in order to ensure even representation for better and accurate results. observation of the students' information-seeking processes was done in the College's library reading room and the ICT section of the library. The observation focused on particular points in the College library where students interact with the library system and staff. From table no.1, a total of 200 questionnaires were personally distributed to the selected population in April 2018, and one hundred and ninety-five (195) were returned with an overall ninety-seven point five percent (97.5%) response rate within two weeks of distribution. The data obtained through the questionnaire are presented in tables and analyzed using frequency, simple percentage and mean.

Results and Discussion

Table 1: Distribution of Questionnaires to Students

Departments	Number of Distributed Questionnaire	Frequency	Percentage
Dental Technology	50	49	24.5%
Dental Therapy	50	49	24.5%
BioMedical	50	49	24.50%
Dental Nursing	50	48	24.%
Total	200	195	97.5%

Table No. 1 shows the number of distributed questionnaires to respondents. A total of 200 questionnaires were equally distributed to the students in the four departments; while a total of 195 valid questionnaires were collected with a response rate of 97.5%.

Table 2: Gender of the Students

Gender	Frequency	Percentage
Male	92	46%
Female	103	51.5%
Total	195	97.5%

Table No.2 shows the gender distribution of the respondents. 51.5% are female respondents and 46% are male respondents. The above table shows that female respondents are more than the male respondents in the study.

Table 3: Frequencies of the Library Visit

Frequency	Frequency	Percentage
2 - 3 times per week	190	97.44%
Everyday	140	71.79%
Weekly	120	61.54%
Monthly	55	28.21%
No response	5	2.56%

Respondents were asked about visits to the library on information gathering, and they were required to indicate more than one response to the items in the questionnaire. The analysis from Table 3 shows that 190(97.44%) visit 2-3 times per week; 140(71.79%) visit every day; 120(61.54%) visit weekly; 55(28.21%) visit monthly; while 5(2.56%) had no response.

Table 4: Purpose of Library Visit

Purpose	Frequency	Percentage
To study	190	97.44%
To use reference materials	140	71.79%
To borrow books	120	61.54%
Read newspapers and magazines	90	46.15%
Read journals	80	41.03%
Browsing the shelves/e-resources	50	25.64%
Know the latest arrivals	20	10.26%

Respondents were asked about the purpose of visits to the library, and they were required to indicate more than one response to the items in the questionnaire. The analysis from Table 4 shows that 190(97.44%) visit to study and research; 140(71.79%) visit to use reference materials; 120(61.54%) visit to borrow books; 90(46.15%) visit to read newspapers and magazines; 80(41.03%) visit to read journals; 50(25.64%) visit browsing the shelves and e-resources; while 20(10.26%) visit to know the latest arrivals.

Table 5: Kind of Information Needs of Students

Information Needs	Frequency	Percentage
Academic/research information	190	97.44%
Information on tests and examination	188	96.41%
Health-related information	185	94.87%
Internship attachment information	78	40%
Information on scholarship and bursary	60	30.77%
General knowledge information	21	10.77%

Respondents were asked about the kind of information needs, and they were required to indicate more than one response to the items in the questionnaire. The analysis from Table 5 shows that 190(97.44%) seek academic research information; while 188(96.41%) seek information on tests and examination; 185(94.89%) seek health-related information; 78(40.00%) seek information for internship attachment training; 60(30.77%) seek Information on scholarship and bursary, and 21(10.77%) prefer general knowledge information.

Table 6: Purpose of Information Seeking

Purpose of Information Seeking	Frequency	Percentage
To do assignment, classwork, and examination preparation/term paper/research works	192	98.46%
To update lecture notes	191	97.95%
Developing competencies	90	46.15%
To find internship training attachment	88	45.13%
To keep up with current developments	70	35.9%

Respondents were asked about the purpose of seeking information, and they were required to indicate more than one response to the items in the questionnaire. The analysis from table No. 6 shows that 192 (98.46%) seek information to do assignments and class work, as well as to prepare notes for examinations. 191 (97.95%) seek information to update lecture notes; 90 (46.15%) seek information to develop competencies; while 88 (45.13%) reveal that they needed internship training information, and 70 (35.9%) seek information to keep up with current general knowledge developments.

Table 7: Method of Seeking Information

Method of Seeking Information	Frequency	Percentage
Consulting lecturers and classmates	191	97.95%
Browsing the internet	189	96.92%
Browsing shelves in the library	110	56.41%
Browsing publishers' catalogues in the library	80	41.03%
Consulting reference Librarian	76	38.97%
Searching the journal, abstracting and indexing tools	10	5.13%

Respondents were asked about the method of seeking information, and they were required to indicate more than one response to the items in the questionnaire. The analysis from Table No.7 shows that 191(97.95%) seek help from lecturers and classmates; 189(96.92%) indicate that they go through internet; 110(56.41%) browse through shelves in the library directly when seeking for information; 80(41.03%) seek information by browsing the publishers' catalogues; while 76(38.97%) indicate that they discuss and seek help from reference librarian. Still, 10(5.13%) indicate searching the recent issues of abstracting and indexing tools.

Table 8: Library Tools for Seeking Information

Library Tools	Frequency	Percentage
Card catalogue	190	97.44%
Reference for periodicals	188	96.41%
Internet	185	94.87%
Books/article reviews	80	41.03%
Indexing journals	78	40%
Abstracting journals	68	34.87%
Bibliographies'/Citations	56	28.72%

Respondents were asked about library tools for seeking information sources, and they were required to indicate more than one response to the items in the questionnaire. The analysis from Table No. 8 shows that 190(97.44%) seek information using a card catalogue, while 188(96.41%) seek information through a reference for periodicals. 185(94.84%) use the internet as a tool for searching information; 80(41.03%) prefer the use of books and articles reviews; 78(40.00%) use indexing journal as a tool; 68(34.87%) use abstracting journals as a tool, and 56(28.72%) note the use of bibliographies and citations as their preferred information sources searching tool.

Table 9: Sources of Information Available to Students

Sources of Information	Frequency	Percentage
College library	191	97.95%
Personal collections	189	96.92%
Electronic databases	187	95.9%
Workshops, seminars/conferences	85	43.59%

Respondents were asked about the sources for acquiring information materials, and they were required to indicate more than one response to the items in the questionnaire. The analysis from Table No. 9 shows that 191(97.95%) indicate that the college library is the most preferred information source; while 189(96.92%) show that personal collections are their source. 187(95.90%) show electronic databases and 85(43.59%) indicate that they source their information through seminars, workshops, and conferences.

Table 10: Preferred Format of information

Information sources	Frequency	Percentage
Printed format	191	97.95%
Electronic format	160	82.05%

Respondents were asked about their preferred format of seeking information, and they were required to indicate more than one response to the items in the questionnaire. The analysis from Table No. 10 shows that 191(95.5%) indicate the usage printed format of information materials such as textbooks, journals, encyclopaedia, etc; while 160(82.05%) indicate electronic format such as the

internet, online databases, CD-ROM, etc as major sources of information in the library.

Table 11: Satisfaction with Library Services and Collections

Satisfaction Level	Frequency	Percentage
25%	60.00	30.77%
50%	170.00	87.18%
75%	100.00	51.28%
100%	10.00	5.13%

The main function of the library is to provide efficient services to its users. Therefore, users' awareness of services provided by the library is very important for the effective use of its collection. Respondents were asked about their satisfaction with library services and collections and were required to indicate more than one response to the items in the questionnaire. The analysis from Table No. 11 shows that the majority of respondents rated the library services and collections at 50% of their satisfaction level.

Table 12: Problems faced by students in seeking information

Problems	Frequency	Percentage
Lack of reading/information materials	191	95.5%
Lack of knowledge in the use of library resources such as Catalogue, e-journal, etc	190	95%
Lack of support from library personnel	189	94.5%
Lack of time to access information resources	188	94%
Lack of internet facility in departmental libraries	188	94%
Outdated reading materials	187	93.5%
Information is scattered in many resources	186	93%

Respondents were asked about problems of seeking information, and they were required to indicate more than one response to the items in the questionnaire. The analysis from Table No. 12 shows that 191(95.50%) indicate lack of reading and information materials as a problem; 190(95.00%) indicate lack of knowledge in the use of library resources such as catalogue as the problem; while 189 (94.5%) state a lack of support from library personals as the problem. Similarly, 188(94.0%) are of the view that lack of internet facility in the departmental libraries and lack of time to access the information resources are some of the problems. 187(93.5%) indicate outdated reading materials as a problem, and 186(93.0%) indicate scattered information in many resources as a challenge in seeking information.

Table 13: Suggestions on how to improve information needs and information-seeking Behaviour of Students

Suggestion	Frequency	Percentage
Provision of dental journals/textbooks/reference materials	192	96%
Training of students on the use of library resources	187	93.5%
Protection of library resources/materials	186	93%
Provision of Internet access in the departmental libraries	178	89%
Employment of qualified librarians and change of attitude of library staff	168	84%

Respondents were asked to make suggestions on how to improve ways of seeking information. The analysis from table No.13 indicates the suggestions for improving access in seeking information. 192(96.0%) affirm that the library should be stocked with the relevant materials; 187(93.50%) contend that students should be trained on the use of library resources, and 186(93.0%) indicate that information material should be adequately protected. 178(89.00%) opine that the provision of internet facilities in the departmental libraries is a solution. In the same view, 168(84%) say that qualified librarians should be employed. and library staff should change their approach to work.

Conclusion

Information is a very important resource in Dental and Therapy education and professional competency development. Students use the information for their personal and educational purposes; hence, information needs and information-seeking are diverse. The core functions of the library remain the same, but various tools and methods for information needs and seeking information continues to change and grow. Therefore, the library staff must understand the information needs and information-seeking behaviour of their users in order to provide their services and information effectively and efficiently. The results from the study show that students of Federal College of Dental Technology and Therapy (FCDT&T) Enugu seek a variety of information sources to satisfy their educational and academic information needs, as this influences them to seek for information. The major problems associated with the realization of students' information needs and seeking behaviour are the non-availability of information materials, and the lack of time to access information resources. It is interesting to note that, although students perceive the library as effective in meeting their information needs, they prefer to consult the internet and their personal mobile phone internet facilities first. Therefore, the FCDT & T library should review its electronic information resources.

Recommendations

Based on the research findings, the following are recommended to improve information needs and seeking:

- The provision of adequate and current Dental and Therapy resources in the library for academic study and research.

- The recruitment of qualified librarians to assist students in the easy access to information resources, and available services in the library.
- Internet connectivity should always be available in the library to enable students to make use of the available electronic databases.
- The training of Dental and Therapy students on the electronic resources in searching for information to meet their information needs.
- The provision of instructions to the library users in the art of literature searching, and the location of information.

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