ASSESSING ELECTRONIC INFORMATION SEEKING BEHAVIOR OF ACADEMIC STAFF; A CASE STUDY OF MAICHEW POLYTECHNIC COLLEGE

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''2020

''Maichew

ACKNOWLEDGEMENTS

List of Abbreviations

MPC	Maichew Polytechnic College
ICT	Information and Communication Technology
CoM	Council of Ministers
TPLF	Tigray people's Liberation Front
TVET	Technical and Vocational Education and Training
HRD	Human Resources Development
OPAC	Online Public Access Catalogue

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ABSTRACT

The purpose of this study was to investigate the electronic information seeking behavior of Academic staff of maichew polytechnic College. To do so, mixed method of research were employed to collect quantitative and qualitative data using survey questionnaires and semi-structured interview. A total of 65 academic staff participated in the study. The data generated via open ended questions and semi-structured interview were presented with narrative description. The data generated through survey questionnaire were analyzed using frequency, percentages and Mean. Results showed that respondents more frequently used electronic information for purpose of research, communication, general awareness and teaching purpose. The result of the interview revealed majority of them used the internet on a daily basis. Nevertheless, academic staffs were least frequently used electronic information for entertainment. Majority of the respondents 36(55.38%) were dissatisfied by information literacy training. Moreover the findings suggested that Google search engine is the most consulted electronic channel for academic purposes; however websites and social media were also frequently used electronic channels. The result indicated that most of the respondents 43(66.2%) used electronic information for general awareness. Access restriction and time taken to obtain the right information of online resources were minor problem for academic staff. The result also revealed that respondents were dissatisfied with slow internet connection, The following were recommended in line with the findings of the study:The college should plan to upgrade the speed of internet connection as it was one of the main challenges for the academic staff. Furthermore, college library should subscribe relevant scholarly journals and databases in order to create more access to the academic community. Equally, bandwidth optimization strategies as well as relevant usage policy must be put in place to alleviate the tardiness of the available internet connection.

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CHAPTER ONE: INTRODUCTION

Introduction

This chapter introduces the background, statement of the problem, purpose and objective of the study, as well as significance and limitation of the study.

1.1. Background of the Study

In this era, the integration and intelligent use of information is a prerequisite of success at all levels and inability or deficiency in information usage imposes heavy penalties at the individual, organizational, social and global levels. At this information explosion age, our lives now based on information. To succeed in this information era, one desires a variety of information. Without being well informed people may not be successful in their respective fields (Mahmood and Saeed, 2014).

Information Seeking has been an important human activity since the evolution of human kind. Humans seek information to gather, store, interpret and use for various purposes (Afzal, 2009). Information-seeking behavior is expressed in various forms, from reading printed material to research and experimentation. Scholars, students, and faculty actively seek current information from the various sources available in libraries, e.g., encyclopedias, journals and, more currently, electronic media. Information-seeking behavior depends on the reasons for seeking information and the starting knowledge of the individual.

Electronic information is actually unlimited source of information to satisfy human information needs (Junni 2007).The users require the electronic information to be accessible through effective and efficient information retrieval system in order to meet their information need. Electronic information also empowers people not only to receive information, but also voice their own views, participate in public affairs and taken action to improve lives (Bhatia and Kumar, 2010). Today, electronic information is positioned as main sources of information in Ethiopian higher education. As World Sat reported that Ethiopia is among those countries with the lowest level of internet penetration and use, however the higher learning institution in Ethiopia is increasingly buying more bandwidth to provide better internet to the students and faculties (Derje, 2006). With respect to information seeking various studies (Mulusew, 2012;

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Estub, 2009; Mikyas, 2011; Daniel; 2008) were conducted on health and agricultural information use study in higher education.

Known information seeking behavior of academic staff in the institution of higher learning, enables librarians to plan more on better provision of effective information services as well as ensuring the optimum users' satisfactions (Garcia-Cosavalente et al. 2010). It can therefore be seen that there is a lack of research literature related to electronic information-seeking behavior in Ethiopia and there is no research done on this topic up to now at MPC. Nearly all information sources have increased, at times dramatically, over the last several years. Therefore, MPC library to adequately address the changing needs of academic staff; they need to know more about the electronic information that users use and what influence their information searching, obtaining and use. To address these questions the study investigates electronic information seeking behavior of academic staff at MPC.

1.1 Statement of Problem

It is obvious that with radical change of the world with information technology, successfully searching for and finding relevant information becomes imperative. Kari and Savolainen (2001) explain that skills to search for and find information are especially necessary because there is often a wide range of potentially relevant information sources. Technological reforms are also matters of great importance in education as they affect the information seeking habits of its patrons. Pedro (2007) also stated that E-information literacy has become a crucial skill in the current knowledge and information society particularly in university communities. However, a number of challenges impact on the access of users to electronic information, including those that go beyond just the technologies available to users and the skills they have for using them. Nkebukwa (2019) also indicated that academics are facing many challenges in harnessing web-based resources. Many researchers reveal challenges associated with the information overload, misinformation, shortage of computers, fees, poorly designed navigation and loss of browser abilities, all hamper academics and searchers.

Bhatia and Kumar (2010) indicated that the enormous growth of the Web and the increasing expectation of the users are becoming more and more dependent on the search engines to discover information relevant to their needs. The availability of the desired electronic information, knowledge on the existence of information resources and skills on effective use of access channels are essential for the meaningful utilization of information. The difficulty in

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finding the required Information, low level of awareness of information resources and on ways of optimizing access to them has impeded effective information use at higher education. Without the ability to manipulate and use information effectively by academics, the significant investment by university libraries, and other national and international donor agencies to ensure access to and use of information resources for the use of teaching, learning and research may remain grossly under-utilized and a waste of investments by academics in developing countries like Ethiopia. Similarly academic staff at MPC uses electronic sources of information every day for the teaching and learning process. However, their electronic information need, channel of electronic information sought, the purpose of seeking electronic information, level of satisfaction and problems encountered during electronic information seeking are essentially unknown at MPC. Exploring the role of the electronic sources of information among the users is therefore timely and relevant.

Therefore, this study attempts to explore electronic information seeking behavior of academic staff at MPC by answering the following research questions.

1. What are the electronic information needs of academic staff at the MPC?
2. What are the channels used when searching electronic information?
3. What are the challenges faced by academic staff when searching electronic information?

1.2 General Objective of the Study

The overall objective of the study was to investigate the electronic information seeking behavior of the academic staff of Maichew Polytechnic College.

1.3 Specific Objectives

The specific objectives of the study are:
1. To identify the electronic information needs of academic staff in the study area;
2. To establish the channels used when searching electronic information;
3. To identify the challenges faced when searching electronic information;

1.4 Significance of the Study

Understanding users' information seeking behavior is crucial to the provision of better services to users and the design of information systems. According to Cutrell and Guan (2007), in the emerging electronic environment, knowledge about the information seeking behavior of academic staff on electronic information is crucial for those wishing to help them effectively meet their information needs online.

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This research desired to add to existing knowledge on how academic staff members currently make use of the electronic information to aid them in their studies, research and teaching.

1.5 Scope and Limitations

In the limited time available, the researcher analyzed the electronic information seeking behavior of academic staff at Maichew Polytechnic College (MPC) only. Time and financial constraints meant that the study cannot include other institutions. Selecting just one institution ensured that sufficient time allocated to the respondents to answer questionnaires.

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CHAPTER 2: LITERATURE REVIEW

The purpose of the literature review is to identify studies and thereby factors those have been undertaken on the topic and serve as a reasonable framework for discussing the issues accomplished in electronic information seeking behavior at the higher education level.

2.1. The Concept of Information

Information has been identified as one of the basic resources alongside land, labor, capital and entrepreneurship. It is a basic component of education. However, though information is being sought on a daily basis, it has varied definitions according to the format, and media used to package or transfer (Rutto, 2011). The information sciences professionals agreed that mere presence of information does not guarantee its effective access and use. Mi and Nesta (2006) revealed that professionals are frustrated in their search for relevant and necessary information. Frustrations result because a large number of complex and interacting variables may influence information seeking process.

As changes in higher learning institutions continue to occur because of new technology, change comes with a desire to make that technology better serve its education patrons, be it through the radio, audio-visual media or the Internet/electronic (Nkomo, 2009). According Foster (2005) information need is an individual or group's desire to locate and obtain information to satisfy a conscious or unconscious need. Preez (2008) found that information needs are related to problems and an important issue is how problems are understood, delimited and formulated.

2.2. Information Seeking

According to Kingrey (2002), "The term information seeking often serves as an umbrella overarching a set of related concepts and issues." Kingrey's observations are that discussions of database construction and management, community information needs, reference services, and many other topics all resonate with the term in the library world, although a single, serviceable definition remains elusive. Information seeking is a conscious effort to acquire information in response to a need or gap in one's knowledge (Case, 2002). Information seeking is the ability to scan literature efficiently using manual or computerized methods to identify a set of useful articles and books (Taylor and Procter, 2005).

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2.3.Information Seeking Behaviour

Information seeking behavior is showcased in the act of acquiring information from knowledge sources (Järvelin and Ingwersen, 2004). Hearst (2009) described that information seeking is special case of problem solving. It includes recognizing and interpreting the information problem. According to Nkomo et al. (2010) Information seeking behavior refers to the way people search for and utilize information. Most of the times students` information seeking behavior involves active or purposeful information seeking as a result of the need to complete course assignments, prepare for class discussions, seminars, workshops, conferences, or write final year research papers.

Preez (2008) indicated that behind electronic information seeking behavior, three components were exist, namely sources of information, electronic channel of information and awareness of information. Wilson (2000) "Information seeking behavior is the purposive seeking for information as a consequence of a need to satisfy some goal. In the course of seeking, the individual may interact with manual information systems (such as a newspaper or a library), or with computer-based systems (such as the electronic information)."

2.4.   Electronic Information Seeking Behaviour

Information seeking and information searching are terms that belong to a broader field of user studies, and electronic information seeking is part of information seeking (Fourie, 2003). Nkomo (2009) defines electronic information seeking behavior as the active process of obtaining data from the electronic sources. This simple definition stems from the notion that any activity an individual engages in the internet is a form of information seeking behavior. Hearst (2009) declares that the web is an interface with which a user interacts to seek information, to search for alternatives, and finally to either complete the transaction or move to another electronic site. Keeping in view the importance of the electronic as an information resource as well as its centrality in the information society, many researchers in information seeking and information behavior are examining different aspects of interactions that take place between a user and the internet. The electronic information has now established its importance for providing access to scholarly databases in teaching and research in higher education (Kelly, et al., 2005). Furthermore, White (2006) indicated that the World-Wide web is one of the most accessible tools available for users in higher education because it is an easy way to publish material and has

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a low learning curve. The majority of its browsers are graphical and user-friendly, and above all, it is free to most people.

2.5. **Empirical Literature**

2.5.1. **Electronic Information Seeking Behavior and Higher Education**

The World-Wide web is one of the most accessible tools available for users in higher education because it is an easy way to publish material, has a low learning curve, the majority of its browsers are graphical and user-friendly, and above all, it is free to most people (Nkomo, 2009). Limberg and Sundin (2006) noted that various practices of information seeking play a central role within universities. This is important as academia sees a shift in emphasis from the teacher to the students to bring paradigm shift to one where the student is an active agent who asks questions, searches for information, discusses ideas with others. Milkyas (2012) found out the purpose of Internet usage of faculty were put in following order:- searching information for their research, enhancing teaching knowledge, preparing teaching material, searching scholarships, enhancing research knowledge and teaching in classes respectively. Nkebukwa (2019) also indicated that academic staffs in the institutions of higher learning have been using electronic information sources in teaching and research, since they are emerging in the information revolution.

2.5.2. **Electronic Information Usage in Ethiopia**

Kinfe (2014) indicated that Africa is the second largest continent, after Asia in size and population. However, the number of internet users as compared to other continent was very less (8.6%) and its penetration rate is accounted 21.3%. Ethiopia is among those countries with the lowest level of internet penetration and use. A 2014 World Internet Stats reported that Ethiopia has had only 1.9% internet penetration. Ethiopia's internet policies are part of the country's broader information and communication technology (ICT) policy. The first Ethiopian ICT policy was drafted and submitted to the Council of Ministers (CoM) in 2002. There is much progress to be made regarding the state of internet policy making in Ethiopia.

Currently MPC uses internet. The Internet Technology Service provides slow broadband internet services with capacity of 4MBps. Furthermore, wireless internet connection is deployed which has 1 access points.

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2.5.3. User Satisfaction with Electronic Information Seeking

Rafiq and Ameen (2009) conducted research on information seeking behavior and user satisfaction of University Instructors in Pakistan at National Textile University. The study revealed that instructors were less satisfied with use of electronic catalogue, library Internet facility and comprehensiveness of library electronic site. Bruce (2007) reports that there is no significance differences in the level of satisfaction with the information seeking between academics who have attend an internet training course and those who have not. Fasae and Aladeniyi (2012) revealed that slow internet access speed was the leading problem encountered by the respondents. Overall, most of the respondents are satisfied with the use of the internet services. Devi and Singh (2009) conducted an assessment on the attitude of internet users, taking into account the use of internet satisfaction by research scholars of Manipur University library, India. The findings indicated that, the majority of users are satisfied with the availability of information on the internet.

2.5.4. Challenges on Electronic Information Seeking Behavior

Various challenges were identified by different researchers on the obstacle of online electronic searching. Inadequate infrastructural resources (computer laboratories and computers), skills shortage on the respondent's part, and lack of access to computer facilities, slow internet connection and access restriction and not subscribed some useful journals (Nkomo, 2009). Lack of accessibility, usability issues, information overload and lack of awareness (Ge, 2010). Slow internet access speed was indicated as the most severe barrier faced by the teachers and students (Kaur and Kumar, 2006) Poor communication infrastructure, low bandwidth and frequent network breakdown, low information literacy level and inadequate ICT resources were identified as major problems (Daniel, 2011).

2.5.5. Conceptual Framework

The conceptual framework has been derived mainly from the above literature review. The researcher also tried to adapt a general model of information use (Deltor, 2003).
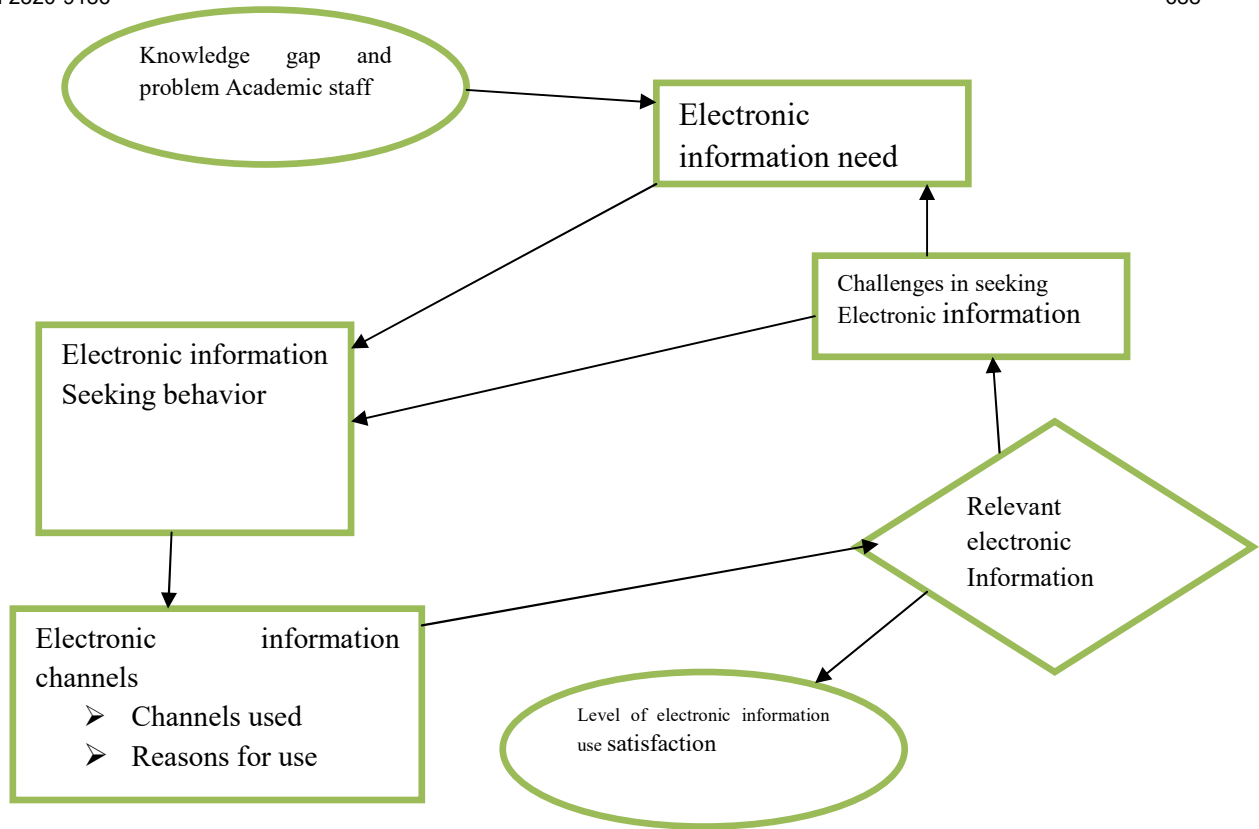
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Figure 1 Conceptual framework adapted from Deltor model

The conceptual framework is based on the electronic information need, preferred electronic channel, level of satisfaction of using electronic information and the challenges faced in seeking electronic information to meet academic need of academic staff at MPC.

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CHAPTER 3: RESEARCH METHODS

This study discussed the research methodology used in the study including location and description of the study areas, data types and data sources, methods of sampling, methods of data collection and analysis.

3.1. Description of the Study Area

Maichew Polytechnic College is located in the southern part of Tigray, in the town of Maichew, approximately 668 kilometers north of the Ethiopian capital Addis Ababa. Though the College has been established recently, it has a long historical background. Originally, it was founded as a Technical School by the Tigrian People's Liberation Front (TPLF) during the armed liberation struggle of 1974-1991. During that period the school was training technicians for the army and peasants to enable them maintain their utilities (pumps, generators etc.) in the liberated areas of the Region. When the civil war ended, the school continued as a technical school in Mekelle, under the name Mekelle Technical School. However, after assessing the needs of the region for middle -level technicians, the school was up-graded to a Technical College in 1997/98 and moved to new premises in Maichew. Starting from 1997E.C to 2000E.C the college had been offering 10+3 programs in the fields of Building Construction, Surveying Technology, Drafting Technology, Road Construction, Wood work technology, Automotive technology, Electronic Technology, General Mechanics, Machining Technology, Information Technology, Accounting and the three water technology in fields of Rural water supply and sanitation, Small scale irrigation and Drainage, and Electro-Mechanical.

As of 2003 E.C, the college was upgraded to a polytechnic level which enabled it to provide Level V training programs.

Currently, Maichew Polytechnic College offers regular program in water technology, Construction Technology, Automotive technology, Manufacturing technology, Electronic technology and Information technology fields, from level I - V based on the market demand of the region and accreditation given by TVET Bureau and satellite degree program by Information technology, Electrical, Manufacturing and Automotive Technology departments.

3.2. Research Design

The methodology employed by the researcher was a mixed method research design using quantitative and qualitative approaches to achieve the research objectives. This complementary method of design was used to acquire greater insight and complete picture of the academic staff of the college (MPC) on their electronic information seeking behavior.

Data for this research come from both primary and secondary sources. The primary data was collected using two different data collection instruments; survey questionnaires and semi-structured interviews. The survey questionnaire was comprised of both open-ended and close ended questions. The survey used statistical package and service solution (SPSS) version 16.0.

3.3. Description of Population

The target population of this study was the academic staff of MPC.

The target population was 68 academic staff of which 19 are MSc degree, 18 Bachelor of science and 30 diploma holders. (MPC HRD Office, 2019).

3.4. Data Collection Tools / Techniques

In the most general sense, techniques are described as the specific procedures that determine how a researcher gathers data. The most commonly used data collection tools in a survey consist of self-administered surveys or questionnaires, personal interviews and/or focus groups. This study employed questionnaires, Observation and interviews. The questionnaire had seven themes:

      I: Demographic Information
      II: Electronic Information Access to Internet & extent of adequacy
      III: Purpose and frequency of Electronic Information Usage
      IV: Frequency Use of Electronic sources of information

      V: Knowledge and Skill of Electronic Information Usage

      VI: Electronic Information Use Satisfaction

      VII: Challenges of Using Electronic Information

The survey used statistical package and service solution (SPSS) version 16.0.

3.5. Sampling and Sample Size

Sampling is a process that allows a researcher to scientifically choose who or what is included in an investigation. According to Trochim (2001), sampling involves selecting units (e.g. people, organizations) from a population of interest so that one may fairly generalize the results of a

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study. Sampling is necessary because surveying every person or a whole set of units in a population is often impossible or, at the very least, very costly in terms of time and money.

Kothary (2004) stated that all items in any field of inquiry constitute a 'Universe' or 'Population.' A complete enumeration of all items in the 'population' is known as a census inquiry. It can be presumed that in such an inquiry, when all items are covered, no element of chance is left and highest accuracy is obtained. This study used the census inquiry as the total population of the academic staff in the study area is small (total of 68).

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CHAPTER 4: RESULTS AND DISCUSSION

This section contained an account of result obtained and corresponding discussions made about the findings in relation to the research questions of the study. The researcher engaged tools such as Mean, Frequency and Percentage.

4.1. Demographic Characteristic

Table 1.below presented demographic characteristics of the sample respondents of MPC academic staff. Out of the 68 questionnaires disseminated, 65 were returned (95.6% response rate). Accordingly, 65 questionnaires were used in the analysis. In addition, interviews were made with five academic staff.

Out of 65 total respondents, the majority 59 (86.8%) were male and 6 (8.8%) of the respondents were female. Regarding the age range 24 (35.3%) respondents were in the age range of 22- 28 years, 22 (32.4%) were in the range of 29-35 years and then 16 (23.5%) were in the range of 36_42 years. The smallest number, 3 (4.4%) respondents were in the range of 43 and above years.

This indicates that greater part of respondents age range were 22 – 35 years of age.

Table 1: Demographic characteristics of academic staff (N=65)

Variable	Category	Frequency	Percentage
sex	Male	59	86.8
	Female	6	8.8
Age in years	22_28	24	35.3
	29_35	22	32.4
	36_42	16	23.5
	43 and Above	3	4.4
Educational qualification	Diploma	10	14.7
	Bachelor Degree	38	55.9
	Masters Degree	17	25.0
Work experience in years	1_5	15	22.1
	6_10	27	39.7
	11_15	15	22.1

4.2. Preference of Information Sources

The preferred medium of information refers to the respondents most preferential sources of information to their information need. Table2, below shows that the most preferred medium of

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information for the academic staff was both print and electronic sources 44 (67.69%) followed by electronic sources 15 (23.08%) and the least preferred source of information was print sources 6 (9.23%).This indicates that, least preferred source of information by the academic staff were print sources. Ukech (2014) also indicated that respondents referred both print and electronic resources as important in carrying out their daily tasks or activities.

Table 2: Preference of Information Sources (N=65)

Information source	Frequency	Percentage
Printed	6	9.23
Electronic	15	23.08
Both Printed and Electronic	44	67.69
Total	65	100

4.3. Method of Internet Access

MPC has both wired and wireless internet connection even though the wireless internet coverage is not as much as needed. As shown in Table 3 below, most academic staff 38 (58.4%) were accessing to internet through wired office terminal. This was followed by respondents accessing internet through both wired office terminal and wireless office terminal 20 (30.8%). Few number of respondents 7 (10.8%) used wireless access. The finding indicated that the majority of academic staff used wired internet access terminal to meet their information need. The result supported by Ani et al. (2010) Nigeria academic staff could access the internet in their offices and university library respectively.

Table 3: Method of internet access

Method of internet access	Frequency	Percentage
Wired office terminal	38	58.4
Wireless office terminal	7	10.8
Wired and Wireless office terminal	20	30.8
Total	65	100

4.4. The Availability of Adequate Electronic Information

The network is composed of a number of information channels that host various online resources to get adequate information for academic purpose. As indicated in the table below, search engine is proved to be very popular. Interestingly most of the academic staff 62 (95.4%) agreed on adequacy

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of information obtained from search engine. The interview results also indicated that Google, yahoo and Face book search engines were used by academic staff. This is similar with the finding of Brophy and Bawden (2009) indicated that Google search engine is more popular than other scholarly channel of information. Luambano (2013) also indicated that academicians prefer search engines as their best tools of information seeking. Ukech (2014) also indicated that the most frequently used internet tools by faculty are general search engines and e-mail.

Table 4 further indicated that most of 57 (87.7%) of academic staff agreed that adequate information found from social network. Therefore it can be concluded that the majority of academic staff agreed that adequate information can be found from social network. However, 33 (51%) of the academic staff disagreed on adequate information can be found from Scholarly Database.

Table 4: Extent of Agreement to the Adequacy of Electronic Channel (N=65)

Channel	Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree	
	F	%	F	%	F	%	F	%	F	%
Search Engine	34	52.3	28	43.1	2	3.1	1	1.5	0	0
Websites	17	26.2	20	30.8	19	29.2	5	7.7	4	6.2
Social network	33	50.8	24	36.9	7	10.8	1	1.5	0	0
Scholarly Database	7	10.8	8	12.3	17	26.2	19	29.2	14	21.5

4.5. Frequency of Electronic information Usage

Electronic information sources play a vital role for academicians. It is assumed that the academic staff of MPC uses the electronic information for their academic purpose. As shown in Figure 2, frequency distribution of academic staff of electronic information usage demonstrates that largest numbers of academic staff 42 (64.6%) used daily. The result confirms the works of (Milkyas, 2012; Nekom, 2009) who found that large number of faculties and use internet several times a day. However, only19 (29.2%) have accessed the internet twice a week. Furthermore, almost all interviewees replied that they use electronic information almost every day and they could find relevant information based on their needs.

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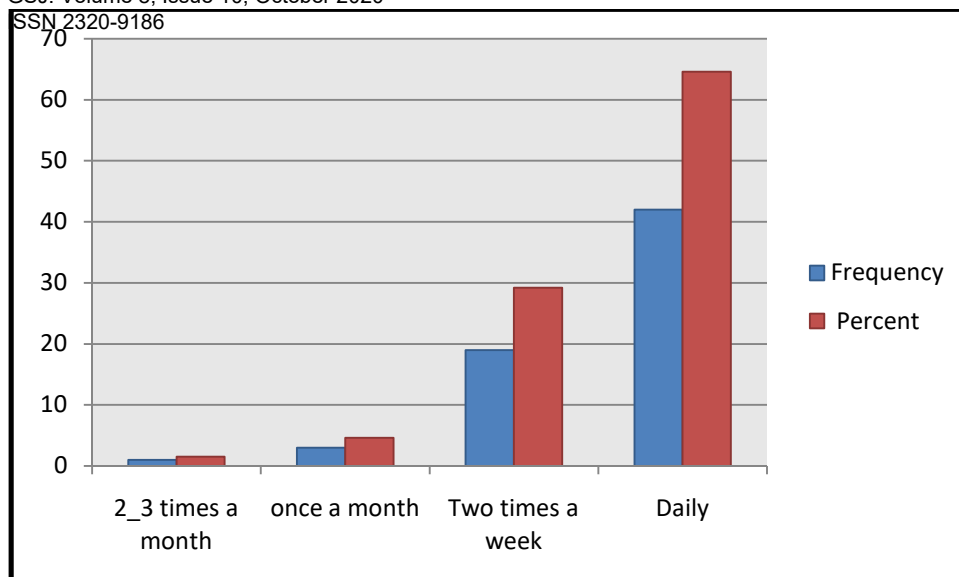
Figure 2 Frequency of Internet Usage

4.6. Purpose of Seeking Electronic Information and Frequency Use

One of the study`s main objective was to identify the electronic information needs of academic staff. Electronic information sources have become the major source of information which academic staff rely on considerably when attempting to fulfill their information needs. As Table 5 shows, majority 20 (30.8%) and 45 (69.2%) of the respondents use electronic information very frequently and frequently for teaching purpose respectively. One can conclude that from the above result, every academic staff used electronic information for teaching purpose. Table 5 further indicated that for research purpose, 10 (15.4%) of academic staff used electronic information very frequently and 21 (32.3%) of them were frequently used for research purpose.

It is clear from the Table 5 that, 22 (33.8%) and 10 (15.4%) of academic staff rarely and very rarely use electronic information for research purpose. The result also indicated that, 11 (16.9%) and 18 (27.7%) of academic staff very frequently and frequently that they use electronic information for entertainment purpose. While, 29 (44.6%) and 5 (7.7%) of academic staff used electronic information for entertainment rarely and very rarely. The result suggests that most of academic staff 34 (52.3%) use electronic information rarely and very rarely for entertainment purpose.

Table 5 further indicated that, the majority of 19 (29.2) and 29 (44.6%) academic staff used electronic resources very frequently and frequently for communication purpose respectively. This indicated that, majority of academic staff used electronic information for communication purpose. The result also indicated that 12 (18.5%) and 3 (4.6%) of the academic staff used electronic information rarely and very rarely respectively. However, Only 2 (3.1%) of the respondents never

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used electronic resources for communication purpose. The interview result also indicated that academic staff used social network for communication purpose.

Table 5 also indicated that only 3 (4.6%) and 11 (16.9%) of academic staff used the electronic information for searching scholarship. However, 18 (27.7%) and 23 (35.4%) of the academic staff used electronic information for searching scholarship information rarely and very rarely respectively. The result in addition indicated that 9 (13.8%) of the respondents never used electronic information for searching scholarship information. The interview result also indicated that academic staff did not use electronic resources to get scholarship but they wait to get the chance of scholarship given by the college once in a year in the country. In relation to the purpose of using electronic information for Regarding the purpose of using electronic information for general awareness, 11 (16.9%) and 32 (49.2%) of the academic staff search for electronic information frequently and very frequently respectively. On the other hand, 16 (24.6%) and 4 (6.2%) of the respondents used electronic information rarely and very rarely respectively. As shown in table 5, the result indicated that most of the respondents 43 (66.2%) used electronic information for general awareness. Similar to this, the interview result of the open ended questions also indicated that academic staff used electronic information for general purpose, especially to know the current politics of the country and foot ball results of the world.

Table 5: Purpose to Seek Electronic Information (N=65)

Purposes to seek	Very frequently		Frequency		Rarely		Very rarely		Never	
	F	%	F	%	F	%	F	%	F	%
Preparing Teaching	20	30.8	45	69.2	0	0	0	0	0	0
Research	10	15.4	21	32.3	22	33.8	10	15.4	2	3.1
Entertainment	11	16.9	18	27.7	29	44.6	5	7.7	2	3.1
Communication	19	29.2	29	44.6	12	18.5	3	4.6	2	3.1
Seeking scholarship	3	4.6	11	16.9	18	27.7	23	35.4	9	13.8
General awareness	11	16.9	32	49.2	16	24.6	4	6.2	2	3.1

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4.7. Frequency Usage of Electronic Channel (N=65)

Table 6 depicted that academic staff electronic channel frequency usage were in the order of: (1): search engine (2) social media (3) websites. The findings indicated that search engine is the most frequently used electronic channel. In contrast Library Online Catalog , scholarly database and subject portal less frequently used where their Mean value is less than the average (Mean= 1.95) value. The finding is also in agreement with Nkomo (2009) that described academic staffs mostly rely on search engine, websites and email.

Table 6: Frequency Usage of Electronic Channel (N=65)

Electronic Channel	Minimum	Maximum	Mean	Std. Deviation
Search Engine	2	3	2.68	.471
Websites	1.00	3.00	2.1385	.63435
social media	1.00	3.00	2.4000	.60725
Library Online Catalog	1.00	3.00	1.4615	.63926
Scholarly Database	1.00	3.00	1.4000	.60725
Subject Portals	1.00	4.00	1.6462	.77924
Average	1.17	3.17	1.9544	0.62306

4.8. Electronic information usage Skill

Table 7 indicates that respondent's electronic information usage skill, 18 (27.7%) rated it, as very good, 31 (47.7%) as good, 14 (21.5%) as average, 1 (1.5%) as poor and the remaining 1 (1.5%) rated it as very poor.

Table 7: Electronic information usage Skill (N=65)

Very good		Good		Average		Poor		Very poor	
F	%	F	%	F	%	F	%	F	%
18	27.7	31	47.7	14	21.5	1	1.5	1	1.5

F= frequency, %= percent

4.9. Information Literacy Training

Table 8 clearly indicates that most of the academic staff 46 (70.8%) had not taken any training on information literacy. Only 19 (29.2%) of academic staff took information literacy training.

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Table 8: Information Literacy Training (N=65)

	Frequency	Percent
Yes	19	29.2
No	46	70.8
Total	65	100

4.10. Perceptions on the Information Literacy Training

This question answers the respondent's perceptions with respect to information literacy training offered by the college. Figure 3 indicated, academic staff who confirmed that information literacy training had been very useful were 16 (80%), useful 3 (15%), and to some extent useful 1 (5%).
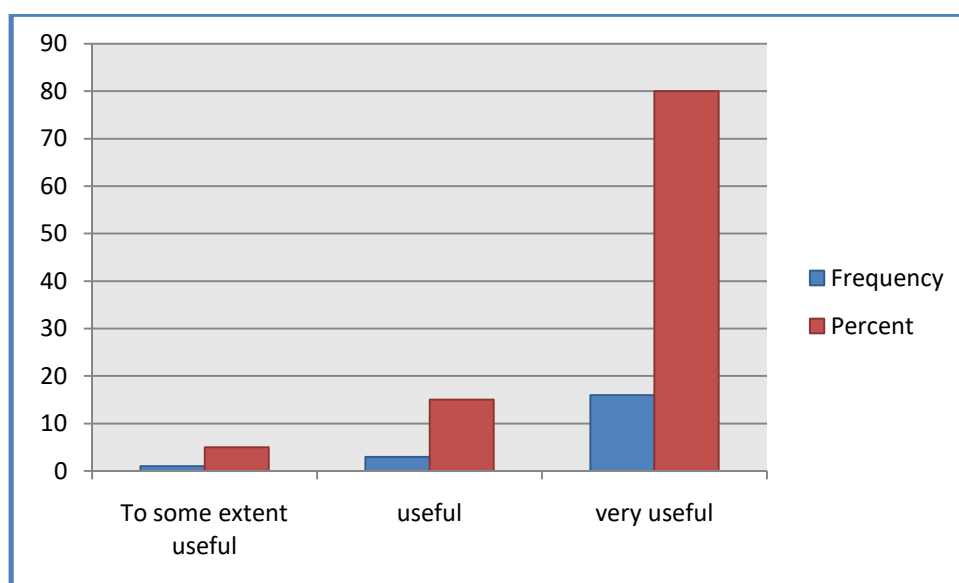
Figure 3 Perceptions of the Information Literacy Training.

4.11. Electronic Information Use Satisfaction

As shown below in Table 9, 11 (16.9%), 18 (27.7%) of the academic staff were very satisfied and satisfied respectively with the information literacy training given by MPC. On the other hand, 12 (18.5%), 5 (7.7%) were dissatisfied and very dissatisfied. 19 (29.2%) of academic staff were neutral on satisfaction of information literacy. The above finding is also supported by the interview, they described that it was difficult to get the right information at the right time from the internet due to lack of appropriate searching and retrieval skills.

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As can be seen from Table 9, what is noticeable is that nearly one third of the respondents 22 (33.8%) were dissatisfied with the speed of internet connection. 6 (9.2%), 14 (21.5%) of the respondents were very satisfied and satisfied respectively with the speed of internet connection.

As shown in Table 9, 8 (12.3%), 17 (26.2%) of the academic staff were very satisfied and satisfied with electronic resources to resolve their problems. 30 (46.2%) of the respondents claimed that they have neutral position on electronic resources to resolve their problems. Table 9 below further indicated, regarding academic staff level of satisfaction with respect to scholarly database only 2 (3.1%), 8 (12.3%) of the academic staff were very satisfied and satisfied respectively. The finding was consistent with Rafiq and Ameen (2009) found that the level of satisfaction of Pakitiastan university instructors with regard to compersivness of database were less as compare to other library resources .

Table 9: Electronic Information Use Satisfaction (N=65)

Level of satisfaction	very satisfied		satisfied		Neutral		Dissatisfied		very dissatisfied	
	F	%	F	%	F	%	F	%	F	%
ICT training	11	16.9	18	27.7	19	29.2	12	18.5	5	7.7
Speed of internet	6	9.2	14	21.5	20	30.8	22	33.8	3	4.6
Resolve problems	8	12.3	17	26.2	30	46.2	6	9.2	4	6.2
Relevance of online scholarly	2	3.1	8	12.3	29	44.6	15	23.1	11	16.9
User interface are easy to use	5	7.7	21	32.3	27	41.5	8	12.3	4	6.2
OPAC	3	4.6	11	16.9	19	29.2	21	32.3	11	16.9

F= frequency, %= percent

4.12.   Challenges in Electronic Information Seeking Behaviour

Respondents were asked about challenges in electronic information seeking behavior with respect to speed of Internet connection. Table 10 below shows accordingly, most number 34 (52.3%) of academic staff said that they face serious problem and 22 (33.8%) moderate problem. On the other hand, only 2 (3.1%) of the respondents said that they face minor problem. There were no respondents 0 (0.0%) reported that no problem with respect to speed of internet in using electronic information. These findings were consistent with the work of Nkomo (2009)

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who found that slow internet connection was identified one of the major problem to seek web information for academic purpose. Moreover, through interview and open ended questionnaire all respondents unanimously mentioned that slow internet connection hindered their electronic information seeking activities. Therefore, it is possible to conclude that the slow internet connection encountered a problem for accessing electronic information.

Table 10 further indicated, 12 (18.5%) academic staff faced neutral problem with access restriction of the electronic information, followed by 19 (29.2%) minor problem and 5 (7.7%) no access restriction problem respectively. The result indicated that the majority of academic staff affected by access restriction. On the other hand, 11 (16.9%) and 18 (27.7%) were reported that access restriction were serious problem and moderate problem respectively.

Table 10 depicts that lack of training on using electronic resources was considered as major problem which hindered electronic information use by academic staff. The majority of academic staff 17 (26.2%) rated lack of training as serious problem, followed by 21 (32.3%) who rated it as a moderate problem. The finding was in conformity with that of Ge(2010) who observed that one of the obstacles to use web information was lack of training on using online electronic resources for academic purpose. Table 10 further depicts that regarding time taken to obtained the right information from electronic resources, The majority of academic staff 32 (49.2%) took time to get the right information from electronic information and considered as a moderate problem and 11 (16.9%) as a serious problem. The large number of academic staff 21 (32.3%) had no problem on searching and retrieving electronic information, further 16 (24.6%) had minor problem. Interviews with academic staff showed that slow internet connection, information overload and lack of information literacy training were among major problems.

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Table 10: Challenges in electronic Information Seeking (N=65)

Problem faced	Serious problem		Moderate problem		Neutral		Minor problem		No problem	
	F	%	F	%	F	%	F	%	F	%
Slow Internet connections	34	52.3	22	33.8	7	10.8	2	3.1	0	0
Access restrictions	11	16.9	1 8	27.7	12	18.5	19	29.2	5	7.7
Lack of training	17	26.2	21	32.3	11	16.9	14	21.5	2	3.1
Information overload	8	12.3	14	21.5	28	43.1	13	20.0	2	3.1
It takes time to get the right information	11	16.9	32	49.2	10	15.4	7	10.8	5	7.7
Required information is not available	9	13.8	19	29.2	19	29.2	13	20	5	7.7
Do not know how to search and retrieve information	2	3.1	9	13.8	17	26.2	16	24.6	21	32.3

F=frequency   %=percent

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CHAPTER 5: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter presents the summary, conclusions about the findings of this research in relation to the research questions and recommendations are made in relation to the findings.

5.1. Summary

The major purpose of this study was to investigate electronic information seeking behavior of academic staff at MPC. In particular, it focuses on identifying electronic information need of academic staff, investigating level of satisfaction toward the use of electronic information. Furthermore, the study also designed to identify the challenges faced in electronic information seeking behavior.

Survey questionnaires were employed to collect data regarding academic staff.

Moreover, five academic staff was chosen purposefully for conducting semi-structured interview. Concerning the topic under study pertinent review of related literature were thoroughly reviewed and included in the study. The study had employed descriptive statistics in order to analyze the gathered data. Academic staff mostly preferred both print and electronic sources of information to meet their information need. Moreover, all interviewees generally agreed that they had greatly relied on both electronic and print sources of information. Besides, with regard to internet usage most of academic staff uses internet daily.

The majority of academic staff agreed that adequate information can be found from search engines such as Google. However, Scholarly databases, online electronic databases, OPAC and subject portal were the least ranked electronic information sources in terms of availability of adequate information for academic purpose. Search engine, Websites, email and social media were the most frequently used electronic information sources. Conversely, OPAC, Scholarly database and Subject portal were the least frequently used electronic information sources.

Academic staffs has more frequently used electronic information for purpose of research, communication, general awareness and teaching purpose. Nevertheless, academic staffs were least frequently used electronic information for entertainment. Electronic information use satisfaction is a factor that can influence the information-seeking behavior of academic staff. Majority of academic staff 36 (55.38%) were dissatisfied by information literacy training.

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Moreover, most of the academic staff 45 (69.23%) were dissatisfied with the speed of internet connection. The interview result also confirmed that most academic staffs were dissatisfied with the speed of internet connection. Access restriction and time taken to obtain the right information of online resources were minor problem for academic staff.

5.2. Conclusions

Based on the above finding the following conclusions were made:-

Most of academic staffs information need is based on both print and electronic sources of information. The main purpose of using electronic information by academic staff is for preparing teaching materials, followed by entertainment, general awareness and for research respectively. The most visited electronic channel in terms of relevance and frequency of usage were: - Search engines, Websites and Social media. Particularly, Google and yahoo search engines were the most visited web due to its comprehensiveness, accessibility and easy to use to meet their information need. However, OPAC and Scholarly databases are the least consulted electronic channels for academic purpose.

5.3. Recommendations

Based on the findings of the study, the researcher recommends the following:-

The college management should conduct need assessment to identify the level of information literacy skill of each user and based on the result information literacy training manual should be prepared in order to narrow the skill gap of the users. Practical trainings and self paced trainings on information literacy must deliver for users using social media, YouTube and through other electronic channels. Moreover, to ensure the lifelong learning the information literacy training program should be incorporated in the MPC plan. The college should organize workshops and seminars to create awareness for academic staff various electronic resources available through subscription, open sources resources and in-house electronic resources that would helpful for academic purposes.

The college should plan to upgrade the speed of internet connection as it was one of the main challenges for the academic staff. Furthermore, college library should subscribe relevant scholarly journals and databases in order to create more access to the academic community.

Further research could be done on a comparative study that can bring higher learning culture and strengthen the polytechnic colleges in Ethiopia, so that result can scale up electronic information seeking behavior of academic staff at national polytechnic colleges.

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Appendix A: Questionnaire for Academic Staff

Dear Instructor,

I am conducting a research which focuses on the electronic information seeking behavior of academic staff: a case study of Maichew polytechnic college. I will be very grateful for your consent to participate in completing a questionnaire, which seeks your perceptions and practices about the electronic information seeking behavior.

All information gathered from you will be collated and coded so that you cannot be identified any report about this research. Your participation in this research will allow me to identify about the electronic information seeking behavior of academic staff at Maichew polytechnic college with a view to make recommendations for bridging the existing gap in issue under investigation. Your participation is voluntary and anonymity is guaranteed.

I thank you in advance for your cooperation.

PART I: Demographic Information

0. Your Department -------------------------------------- (Q0)

Indicate your answer by circling the letter

1. Specify your sex: (Q1)
    - a, Male   1
    - b, Female   2
2. Your Age (Q2)
    - a, 22 – 28   1
    - b, 29 – 35   2
    - c, 36 – 42   3
    - d, 43 and above   4
3. What is your educational qualification? (Q3)
    - a, Diploma   1
    - b, Bachelor Degree 2
    - c, Masters Degree   3
4. . How long is your working experience? (Q4)
    - a, 1 – 5   1
    - b, 6 – 10   2
    - c, 11 -15   3
    - d, 16 and above   4

PART II: Electronic Information Access to Internet & extent of adequacy (multi select)

5. What is your preference medium of information for your information need?

(Q5a)   A, Printed Materials   **0=not selected   1=selected**

(Q5b)   b, online electronic resources (electronic)

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(Q5c)   c, both

6.   How do you gain access to the internet? (you can tick more than one boxes that apply to you appropriately)

0=not selected   1=selected

(Q6a)   a. Wired office terminal (desktop or laptop)

(Q6b)   **b.** Wireless office terminal

(Q6c)   c. Wired home PC

7.   To What extent do you agree that the Electronic information acquired is usually adequate to meet your Information need?

Description: **5= Strongly Agree, 4= Agree, 3= Neutral, 2= Disagree, 1= Strongly Disagree.**

No.	Channel		SA	AG	N	DA	SA
1.	Search Engine (Google)	(Q7a)					
2.	Websites (organization WebPages)	(Q7b)					
3.	Electronic mail and social network (Gmail, face book etc..)	(Q7c)					
4.	Library Online Catalog (OPAC)	(Q7d)					
5.	Online scholarly Database (emerald, EBSCO etc)	(Q7e)					

NB: SA= Strongly Agree; AG =Agree; N= Neutral; DA=Disagree; SD= Strongly Disagree

PART III: Purpose and frequency of Electronic Information Usage

8.   How frequently are you using internet during information seeking activities (Circle **one** Letter from the given alternatives)   (Q8)

a. Daily   1
b. Two times a week   2
c. Once a month   3
 d. 2-3 times a month   4
e. Others, please specify _____5_____

9.   For what purpose do you seek electronic information and how frequently are you using? (Please tick once in each row)

Description: 5= Very frequently, 4= frequently, 3= rarely, 2= Very rarely, 1= Never.

No	Purposes you seek	Very frequently	Frequently	Rarely	Very Rarely	Never
1.	Preparing Teaching Materials (Q9a)					
2.	Research (Q9b)					
3.	Entertainment (Q9c)					
4.	Communication/networking (email, chatting, social					

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	networking) (Q9d)						
5.	Seeking scholarship (Q9e)						
6.	General awareness (Q9f)						
7.	Other, specify (Q9g)						

PART IV: Frequency Use of Electronic sources of information

10. How frequently do you use the following channels of information when seeking electronic information?(please tick once in each row)

Description: 3= every time, 2= Sometimes, 1= Never.

NO	Channel	Every time	Sometimes	Never
1.	Search Engine (Yahoo, Google) (Q10a)			
2.	Websites (Q10b)			
3.	Electronic mail and social network (Q10c)			
4.	Library Online Catalog (OPAC) (Q10d)			
5.	Online Database (emerald, EBSCO) (Q10e)			
6.	Subject Portals (Q10f)			

PART V: Knowledge and Skill of Electronic Information Usage

11. How do you rate your skill to use the electronic Information? (Circle **one** choice) (Q11)

A, Very Good   5

b, Good   4

c, Average   3

d, Poor   2

e, Very poor   1

12. Have you received any formal training on how to use the electronic Information (Information literate)? (circle one choice) (Q12)

     a. Yes   1

     b. No   0

13. If "yes" to what extent you find the training is useful?(circle **one** choice) (Q13)

a. Very Useful   3

b. Useful   2

c. To some extent useful   1

d. Not useful   0

PART VI: Electronic Information Use Satisfaction

14. How do you rate the level of your satisfaction in terms of the following options? (Please tick once in each row)

Description: **5= very satisfied, 4= satisfied, 3= Neutral, 2= Dissatisfied, 1= very dissatisfied.**

No	Level of satisfaction	VS	S	N	DS	VD
1.	Information literacy/ICT training (Q14a)					
2.	Speed of internet connection (Q14b)					

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No.							
3.	Resolve problem and meet needs	(Q14c)					
4.	Use and relevance of online scholarly Databases	(Q14d)					
5.	User interface are easy to use	(Q14e)					
6.	Online public access catalog	(Q14f)					

NB: VS= Very Satisfied; S=Satisfied; N=Neutral DS=Dissatisfied VD= Very Dissatisfied

15. How helpful has the electronic information been in your academic work and research work?
(Circle one choice)   (Q15)
1. Very helpful   4
2. Helpful   3
3. Somewhat helpful   2
4. Not helpful   1

PART VII: Challenges of Using Electronic Information

16. Please indicate the extent of problems faced while using electronic information seeking
(Please tick once in each row)
Description: 5= Serious problem, 4= Moderate problem, 3= Neutral, 2= Minor problem,
1= No problem.

No.	Problem faced	Serious problem	Moderate problem	Neutral	Minor problem	No problem
1.	Slow Internet connections (Q16a)					
2.	access restrictions (Q16b)					
3.	lack of training/help in using online electronic resources (Q16c)					
4.	information overload (Q16d)					
5.	It takes time to get the right information (Q16e)					
6.	Required information is not available (Q16f)					
7.	Do not know how to search and retrieve information (Q16g)					
8.	Other, please specify (Q16h)					

17. Suggest what can be done to address the problems faced it has stated above.

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18. Additional information regarding the issues above that you think is not covered in this

questionnaire and needs to be highlighted

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Interview for Academic Staff

This is a semi structured interview to investigate electronic information seeking

Thank you for your participation behavior of academic staff

1. What influences your preference in a medium when searching for information?

2. What types of electronic information sources do you use? For what purpose do you use?

3. Which sources of electronic information do you use most and how important it is for your academic purpose?

4. How satisfied are you with the electronic information to meet your need in information seeking?

5. How knowledgeable are you in searching and using different electronic channels?

6. What challenges do you think can hinder electronic information searching?

What could be done to improve?

   7. What is your final comment or suggestions regarding electronic information seeking behavior?

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