

Information Needs and Behavior of Undergraduate Students towards the Utilization of Electronic Information Resources in Selected South African Universities

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KEYWORDS E-Resources. Information Behavior. Libraries. Rhodes University. Students. University of Fort Hare

ABSTRACT This study focused on Information need and behavioral of undergraduate students towards the utilization of e-resources in the selected university of RU and UFH, Eastern Cape, South Africa. Out of the 377 questionnaire copies distributed, 266 copies were returned, giving a response rate of 70.6 percent. The results were analyzed using the Statistical Package of the social Sciences (SPSS Version 32). The results revealed that more males (that is, 119-55.1% respondents), who are within the age bracket of 21 to 30 years old accessed and utilized electronic resources through the residences than their female counterparts. Additionally, Chi-square test of independence was also performed to survey the level of correlation between age and access to E-resources, and the result further revealed that age has no influence on access of respondents to electronic resources through cybercafé.

INTRODUCTION

Universities are storehouses of structured knowledge, as well as harbingers of storage and information retrieval, provide diverse information resources to the general public, promote character and sound judgment, thereby developing quality individuals required for nation building. Universities also stock information in diverse formats, including print and electronic information materials. Most universities today, have transited from manual to digital (computerized) electronic information service delivery systems that give access to their users (Sun et al. 2012). Universities are higher education institutions that serve the academic needs of students (at undergraduate and postgraduate levels) in addition to teaching and non-teaching staff. Tilbury (2011) posited that tertiary institutions have a crucial commitment towards meeting academic, social, governmental, psychological, and economic information needs of the society at large. The existence of electronic resources in HEI operations has greatly enriched information services delivery and led to better management of information behavior, and this has also led to the qualitative and productive development of university services. The information behavior, is considered as a human behavior to search for

information in purposeful way to meet with and satisfy their needs, this behavior sometimes is very undefinable. It examined problems in their searching habits, use and retrieval of information in satisfying their needs.

Information is an important tool used in the realization of any objective or goal set by an individual or group. It is valuable resources required in any society, therefore acquiring and using information are critical and important activities. However, the library is unarguably one of the most organized store houses of information where students source information. The increase of information accessible through the Internet and the development of ICT in the application of electronic resources have encouraged great quantity of electronic resources and services in the library and HEI. The abrupt change to electronic resources have brought about the significant challenges and opportunities to information users. Perhaps the countless types of information as well as numerous search engines in different locations to be available in a single platform needs special searching skills to assist students to meet their needs. Many universities in Africa, including University of Fort Hare and Rhodes University, are anonymously investing in electronic resources to increase access to their growing output in various horizons. The academic librarians who have over the years developed interest in the area of user information seeking international behavior have

been exemplary regarding the development of access points that best suits the language of different categories of users. The library is providing thousands of scholarly journals through the subscriptions to number of academic databases along with web based resources. It is obvious that provision of those electronic resources will need some technical library settings for accommodating the growing information needs. Evaluation of copiously available resources is highly vital for designing, developing and maintaining effective information retrieval and information uses in a real-life operational environment.

According to Singh and Rani (2013), who focused on the manner in which utilization of e-information resources has influenced information behavior of academics and discovered that academics seldom stopovers at the university library, at the favor of reading more e-journals than the printed versions. This also underpinned the perception of undergraduate students on electronic resources use. Previous reports have identified the information behavior and perception of respondents to e-resource use (Okello-Obura 2010; Rajagopal and Chinnasamy 2012; Mawere and Sai 2018). Perception into information behavior is harnessed through the conceptualization of how users seek information sources as well as their choice of contents to meet their needs. In the digital environment, users' dilemma is on what is acceptable and selecting what is best. In practice satisfactory translates into judgment that the information is good enough to achieve searcher's needs, In addition the formation of the habit that leads to the undergraduate students for underutilizing the electronic resources is as a result of perceived ease of use of the e-resources when sourcing for information materials. Academic libraries as centre of information sources play vital role to develop lifelong learning skills among the university students. Students need to develop their skills in information management and the use of information tools and databases that will lead them in searching the accurate information sources that related to their studies and courses. Moreover, it will also contribute to the self-development of oneself. Thus library effectiveness can be potentially envisioned as customization of information delivery approach to meet individual needs and the meantime students learn

more on how to use digital information resources effectively. Borlund (2016) observed that "undergraduates endeavor to cope in their information search in a bid to garner adequate information to carry out assignment with minimum cost in terms of social efforts and time" users are faced with several unevaluated information and select sources based on familiar authors they often refer to.

Research Problem

Undergraduate students in HEIs are required to optimally utilize the academic storehouses as one of their major information sources. However, literature informs that undergraduate students in the selected Eastern Cape universities do not often utilize most of the library information resources, due to the problems undergraduate experienced, such as behavioral perception, ICT literacy competence, and financial problem and so on. It was discovered from literature that undergraduate students like finding comfort at their convenient places such as residence, home, great hall, cyber café and so on and these made their information needs to be high because they do not want to inconvenience themselves in searching for information and this act lead to their information behavior. That is why the study investigated Information need and behavioral of undergraduate students towards the utilization of e-information resources in RU and UFH, Eastern Cape, South Africa.

Aim of Study

This study sought to investigate the information needs and behavior of undergraduate students towards the utilization of e-information resources in University of Fort Hare (UFH) and Rhodes University (RU).

Literature Review

Several academic authors have written and carried out investigation on the information needs and behavior of various categories of users especially in the academic environment over the years, in relation to the definition and significance of information. Nonetheless, information has evolved into a significant element

for the development of society as it plays a germane role in our professional and individual lives. There is virtually no field of human endeavor where information is not a component, be it in business and industry, research and development, information must be developed, managed, retrieved, stored, and disseminated for the purpose of communication (Chang 2013). Additionally, information is defined as the comprehensible accumulation of data, with the capability of communicating and using facts for the realization of meaning (Pitoy 2012). Information is also conceptualized as the presentation of data to which meaning has been credited within the perspective of its use (Laurier and Riguidel 2015).

According to Stonier (2012), information is that which diminishes indecision, which may exist as data in computers, electronic books, humans, records and several other sources. In a related study by Head and Eisenberg (2010), discovered that the search for online information by undergraduate students discontinues when they have adequate information for their school work. These findings are coherent with Suskie's (2018) argument that students source for adequate information required for their academic needs. Hence, it is imperative for academic libraries to be adequately informed about their users' needs, and librarians are required to play a fundamental role as regards clear understanding of the needs of the academic community in sensitizing users on information resources and facilities and particularly students for their learning enrichment. According to Ossai-Onah et al. (2013), information needs are varied and continually changing in every field such as social, economy, politics, culture and education. Nevertheless, information is categorized mostly by the information behavior of the individual in need of information. It involves a set of actions in expressing information needs, information seeking, evaluating and selecting information and finally using this information to satisfy that individual's needs. In addition, the undergraduate students' behavior on the use of electronic resources can be viewed under the role and rational choice theories.

In the 21st century, students must adopt a positive behavior towards the utilization of e-information resources. Students especially need

to be trained and re-trained in exploitation of digital resources in order to take part in the modern technology. Students need to be trained in the utilization of searching elements like e-database, the utilization of online catalogues etc. In this regard, Neal (2012) reiterated the need for acquisition of expertise and capability in the e-resource use by the students is essential to obtain quality and efficient information search. For instance, the advent of open access journals and other e-resources has resulted in different behavioral dispositions towards e-resources. According to Kirkwood and Price (2013), behaviour toward electronic resources are attributable to challenges encountered when accessing e-resources. For example, in a situation of insufficient computer technology in accessibility to e-resources or deplorable internet connectivity, students' positive attitudinal behavior could be negatively influenced. It is on this premise that problems faced affect access to e-resources in universities. The opinions for students using digital resources are convincing. A satisfactory knowledge of computers and retrieval techniques is necessary to search these resources efficiently. For these reasons, students need to be trained in the use of searching tools like e-databases, the use of online catalogues, online journals, etc. so as to change their behavior towards satisfying their information needs. In many African HEIs, efforts have been put into action to provide electronic information services to the universities. Some universities are in the process of installing computers, and internet services, while some others have already installed the internet services for the purpose of satisfying the information needs of the users. Nevertheless, information of ICT apparatus and retrieval methods is desirable to explore these resources efficiently, and has implications regarding users' attitude towards e-resources use and self-efficacy. Self-efficacy therefore is defined as an individual's perception regarding his/her competence in organizing and executing a determined development of action that is essential to the attainment of certain performance levels. Self-efficacy beliefs enhances enthusiasm of the aims that individuals envisage for themselves, their expended effort, as well as the longevity of their perseverance in the face of challenges. The respondents who have self-assur-

ance exhibit great confidence regarding their abilities. These problems consequently have a negative influence on the academic productivity of the undergraduate students. As previously reported by other empirical literature (such as Okello-Obura 2010; Mawere and Sai 2018), it was also revealed that electronic resources use by undergraduate students are being under-utilized. On account of this study, the researcher has shed light on the behaviour of the undergraduate students towards under-utilization of information resources. Hence, this papers was envisioned to discuss the Information need and behavioral of undergraduate students towards the utilization of Electronic resources and aims at discussing the merits students derive from e-information resources utilization.

METHODOLOGY

This study focused on the information needs and behaviour of varsity students towards the utilization of electronic resources in Rhodes University (RU) and University of Fort Hare (UFH), Eastern Cape, South Africa. In carrying out this research, a total of 377 copies of survey questionnaire were randomly distributed to undergraduate students in all the faculties of both institutions (260 in UFH and 117 copies in RU respectively), out of which 266 were returned. Further, this research utilized the five-point Likert scale in the measurement, evaluation and assessment of the questionnaire items relating to attitudes and perceptions of undergraduate students in relation to electronic resources use. The study utilized the Likert scale, which allows respondents to select a choice that best demonstrates their level of agreement with a given statement, and out of the 377 copies of the questionnaire that were distributed, 266 copies were returned, giving a response rate of 70.6 percent. The analysis of results were operationalized with the Statistical Package of the social Sciences (SPSS Version 32).

RESULTS AND DISCUSSION

The results of this study begins with the analysis of the demographic factors of gender. Table 1 is depicting the gender distribution of the respondents.

Table 1: Gender statistics of the respondents

<i>Gender</i>	<i>Frequency</i>	<i>Percentage (%)</i>
Male	159	59.8
Female	107	40.2
Total	266	100.0

Source: Author, 2019

Generally, gender is an essential element that determines undergraduate students behavior towards e-resource utilization of respondents to electronic resources form different accessibilities, for instance through the home and from other sources. Table 1 revealed that 159 (59.8% of the respondents) were males, while the remaining numbers, that is, 107 (40.2%) were females. Also, English language is the main language of communication in the selected higher education institutions. In a study conducted by Lillis (2013), he revealed that the language of communication was English for 62 (51.4%) of the respondents; only 35 (28.1%) utilized Arabic and 27 (21.6%) of the respondents could effectively communicate in both languages.

Table 2 depicts the behavior of undergraduate students towards electronic resources use. The result indicates that 89 (41.4%) of the surveyed undergraduate students are of the opinion that E-Resources are readily available for use, while 100(47.6%) are of the opinion that E-Resources require ICT Skills because it is technical to know and understand, hence the finding was aligned with the core argument of the study. The next section explains the purpose for use of electronic resources.

Purpose for Use of Electronic Resources

Table 3 explains that majority of the surveyed students, that is, 143(62.7%) indicated that they use electronic resources to do school work. Also 81(38.0%) of the surveyed respondents confirmed that they utilize e-information resources to chat with people while 115(51.8%) of the respondents use E-resources to obtain course-related information. In addition, 69(32.2%) of the respondents were neutral in their use of E-resources in listening to sport news, while 61(28.2%) of the undergraduate students surveyed use E-resources to download music and

Table 2: Behavior of undergraduate students towards e-resources use

<i>Behavior of undergraduate students</i>	<i>Strongly disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly agree</i>
E-resources are readily available for use	15 (7%)	19 (8.8%)	59 (27.4%)	89 (41.4%)	33 (15.39%)
E-resources are easy to use	13 (6.1%)	42 (19.6%)	61 (58.5)	72 (33.6%)	26 (21.1%)
E-resources require technical knowhow to understand	7 (3.3%)	18 (8.6%)	50 (23.8%)	100 (47.6%)	35 (16.7%)
E-resources are readily accessible for ICT infrastructure is an expensive venture	10 (4.7%)	25 (11.8%)	59 (57.8%)	90 (42.5%)	28 (13.2%)
I have phobia for the use of e-resources	11 (5.4%)	28 (13.7%)	69 (33.7%)	70 (34.1%)	27 (13.2%)
I feel dizzy when using e-resources	56 (26.5%)	64 (30.3%)	41 (19.4%)	36 (16.1%)	16 (7.6%)
The use of e-resources can negatively affect eyesight	64 (30.2%)	67 (31.6)	43 (20.3%)	25 (11.8%)	13 (6.1%)
	21 (9.8%)	34 (15.9%)	61 (28.5%)	60 (28.0%)	38 (17.8%)

Source: Author, 2019

Table 3: Analysis to show specific operationalization of electronic resources for different purposes

<i>Purpose of utilizing of e-information resources</i>	<i>Strongly disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly agree</i>
Obtain course related information (research education)	5 (2.3%)	3 (1.4%)	18 (8.1%)	81 (36.5%)	115 (51.8%)
Obtain non-course related information (research education)	20 (9.8%)	17 (8.3%)	59 (28.8%)	65 (31.7%)	44 (21.5%)
Course registration	14 (6.7%)	9 (4.3%)	37 (17.8%)	72 (34.6%)	76 (36.5%)
Do school work	5 (2.2%)	3 (1.3%)	10 (4.4%)	67 (29.4%)	143 (62.7%)
Communicate by email	7 (3.2%)	6 (2.7%)	30 (13.6%)	83 (37.6%)	95 (43.0%)
Chat with other people	10 (4.7%)	14 (6.6%)	46 (21.6%)	62 (29.1%)	81 (38.0%)
Listen to sport news	24 (11.2%)	22 (10.3%)	69 (32.2%)	51 (23.8%)	48 (22.4%)
Watch online video	15 (6.9%)	18 (8.3%)	39 (18.1%)	69 (31.9%)	75 (34.7%)
To download music and video	21 (9.7%)	26 (12.0%)	42 (19.4%)	66 (30.6%)	61 (28.2%)
Entertainment	17 (8.0%)	18 (8.5%)	46 (21.6%)	71 (33.3%)	61 (28.2%)
Health	11 (5.4%)	12 (5.9%)	56 (27.7%)	68 (33.7%)	55 (27.2%)

Source: Author, 2019

video. The specific use of e-resources for different purposes is stated in Table 3.

In Table 4, a preponderance of the surveyed respondents 101 (71.6%) specified that they never utilized HINARI. On the contrary, 34 (18.1%) of the surveyed UFH and RU respondents confirmed their usage of E-Journals every time, while 29 (15.6%) of the respondents use E-books every time. JSTOR 94 (63.9%), EbscoHost 88 (59.1%), OARE 98 (71.0%), DOAJ 81 (57.0%), AJOL 92 (67.2%), ScienceDirect 91 (46.9%), ERIC 83 (60.1%), SAGE 77 (52.7%), PUBMED CENTRAL 85 (61.2%), CD-ROMs 52 (34.0%) and OPAC 40 (24.7%) were never used by the respondents. Also, in the course of the in-depth research interview, most of the interviewees make use of CD-ROMs, E-JOURNALS and E-books to do their school assignments. The frequency in the utilization of e-information resources by the surveyed students, as illustrated in Table 4.

Difficulties Encountered in the Operationalization of E-information Resources

In a bid to effectively utilize the ever-increasing array of e-information resources, students must ensure the acquisition and mastery of the skills essential for their exploitation. "for students using a variety of on-line database, it is as though they were parking lot attendants, where every vehicle is not only a different make and model but has a different configuration" (Ozomelem 2010). In the Table 5, 57 (26.6%) encountered too much information on the Internet, while 53 (24.9%) respondents complained about high cost of Internet access. Furthermore, 35 (16.7%) respondents were of the opinion that there were inadequate computer workstations. Also, 55 (25.8%) respondents agreed to low ICT literacy skills as a difficulty, while 53 (26.2%) respon-

Table 4: Analysis to show frequency in the operationalization of e-information resources by the respondents

S. No.	Electronic resources	Never	Almost never	Occasionally/ Sometimes	Almost every time	Every time
1.	JSTOR	94 (63.9%)	11 (7.5%)	24 (16.3%)	12 (8.2%)	6 (4.1%)
2.	HINARI	101 (71.6%)	24 (17.0%)	11 (7.8%)	5 (3.5%)	
3.	EBSCOHost	88 (59.1%)	18 (12.1%)	24 (16.1%)	13 (8.7%)	6 (4.0%)
4.	OARE	98 (71.0%)	22 (15.9%)	11 (8.0%)	6 (4.3%)	1 (0.7%)
5.	AJOL	92 (67.2%)	21 (15.3%)	13 (9.5%)	10 (7.3%)	1 (0.7%)
6.	DOAJ	81 (57.0%)	16 (11.3%)	26 (18.3%)	15 (10.6%)	4 (2.8%)
7.	E-JOURNALS	25 (13.3%)	14 (7.4%)	65 (34.0%)	51 (27.1%)	34 (18.1%)
8.	E-BOOKS	26 (14.0%)	12 (6.5%)	76 (40.9%)	43 (23.1%)	29 (15.6%)
9.	ERIC	83 (60.1%)	22 (15.9%)	18 (13.0%)	8 (5.8%)	7 (5.1%)
10.	SAGE	77 (52.7%)	25 (17.1%)	21 (14.4%)	17 (11.6%)	6 (4.1%)
11.	SCIENCE DIRECT	91 (46.9%)	15 (10.2%)	30 (20.4%)	18 (12.2%)	15 (10.2%)
12.	PUBMED CENTRAL	85 (61.2%)	26 (18.7%)	21 (15.1%)	5 (3.6%)	1 (0.7%)
13.	CD-ROM DATABASES in the library	52 (34.0%)	21 (13.7%)	48 (31.4%)	21 (13.7%)	11 (7.2%)
14.	OPAC	40 (24.7%)	16 (9.9%)	58 (35.8%)	30 (18.5)	18 (11.1%)

Source: Author, 2019

dents complained of financial constraint. In addition, inaccessibility of some databases was a problem experienced by 75(36.2%) respondents, while 31(14.8%) respondents agreed to the problem of inexperienced staff. The difficulties encountered while using e-resources are shown in Table 5.

CONCLUSION

This section highlights the attitudes and perception on electronic resources use among

undergraduate students. As previously reported, many undergraduate students possess low levels of ICT literacy skills on their utilization of e-information resources, as depicted. The outcomes of this study revealed that most of the surveyed UFH and RU respondents possess low frequency levels in their utilization of electronic information resources, for example, Table 1 indicated that JSTOR 94 (63.9%), EbscoHost 88(59.1%), OARE 98(71.0%), DOAJ 81(57.0%), AJOL 92(67.2%) ScienceDirect 91(46.9%), ERIC 83(60.1%), SAGE 77(52.7%), PUBMED CEN-

Table 5: Difficulties encountered while using electronic resources

Problems	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
a. Too much information on the Internet	21 (9.8%)	32 (15.0%)	37 (17.3%)	67 (31.3%)	57 (26.6%)
b. Lack or poor search skill	21 (9.9%)	61 (28.6%)	49 (23.0%)	51 (23.9%)	31 (14.6%)
c. High cost of Internet access	12 (5.6%)	32 (15.0%)	43 (20.2%)	73 (34.3%)	53 (24.9%)
d. Power outage	19 (9.0%)	42 (20.0%)	54 (25.7%)	64 (30.5%)	31 (14.8%)
e. Slow downloading	17 (8.1%)	23 (10.9%)	49 (23.2%)	68 (32.2%)	54 (25.6%)
f. Inexperienced staff	17 (8.1%)	54 (25.8%)	69 (33.0%)	38 (18.2%)	31 (14.8%)
g. Inaccessibility of some databases	7 (3.4%)	33 (15.9%)	62 (30.0%)	75 (36.2%)	30 (14.5%)
h. Inadequate computer workstations	13 (6.2%)	34 (16.25)	59 (28.1%)	69 (32.9%)	35 (16.7%)
i. Low Information and Communication Technology (ICT) literacy skills	21 (9.9%)	47 (22.1%)	62 (29.1%)	55 (25.8%)	28 (13.1%)
j. My religion does not support the use of the internet	104 (48.4%)	64 (29.8%)	27 (12.6%)	10 (4.7%)	10 (4.7%)
k. Inadequate Information and Communication Technology (ICT) facilities	24 (11.3%)	58 (27.4%)	58 (27.4%)	57 (26.9%)	15 (7.1%)
l. Financial constraint	21 (10.4%)	35 (17.3%)	61 (30.2%)	53 (26.2%)	32 (15.8%)

Source: Author, 2019

TRAL 85(61.2%), CD-ROMs 52(34.0%) and OPAC 40(24.7%), HINARI 101(71.6%), the respondents never used the aforementioned software respectively. On the contrary, 34(18.1%) and 29 (15.6%) of the respondents affirmed that they use the E-journals and E-books every time, this is because they make use of the e-resources to do assignments and obtain relevant literature for their coursework and dissertations. Also, in the course of the in-depth research interview, most of the interviewees make use of CD-ROMs, E-JOURNALS and E-books to do their school assignments. The findings support the assertion that the attitudes and perception of the respondents negatively affect their use of the e-resources because they do not see any need to utilize other e-resources such as e-journals, CD-ROMs and e-books. Previous reports have identified the attitudes and perception of respondents to e-resource use. At this juncture, it is important to state that positive attitudes and perceptions on e-resource use results in the utilization of the e-resources. From the foregoing, several factors contribute to the attitudes and perception of undergraduate students to e-resource use, such as interest, awareness, beliefs, acceptance and adoption of technology. The results from the study depicts that that a preponderance of students graduate from HEIs lacking essential skills to cope within the challenges posed by the larger ICT-compliant society. In the same vein, scholars also noted that most users embrace the benefits of utilization of e-information resources over printed ones, and this brought about the attitudes and perception of the respondents in favor of e-journals, CD-ROMs and e-books. According to the theories identified for this study (TAM, DOI and TRA). Correspondingly, before an electronic resource is utilized, there must be awareness and acceptance of the resource, hence, the perceived usefulness is dependent on the awareness of electronic resources, thereby resulting in the behavioral intention to utilize e-information resources. This explains further that the negligence of the undergraduate students on their utilization of e-information resources depends on their perception of and attitudes to the use of the e-resources, which is still centered on perceived usefulness. The findings from Table 4 revealed that 100 (47.6%) respondents stated that e-resources require technical know-how to understand.

In support of this, as analyzed in Table 5, 57(26.6%) respondents encountered too much information on the Internet, in addition to 53(24.9%) respondents, who complained about the high cost of Internet access. Furthermore, 35(16.7%) respondents were of the opinion that there were inadequate computer workstations, this viewpoint also aligns with 55(25.8%) respondents, who agreed to low ICT literacy skills as a difficulty, and 53(26.2%) respondents complained of financial constraint. In addition, inaccessibility of some databases was a problem experienced by 75(36.2%) respondents, while 31(14.8%) respondents agreed to the problem of inexperienced staff.

RECOMMENDATIONS

In view of the above findings, the study made precise recommendations regarding students' attitude and perception towards the use of electronic information resources (EIRs) among selected universities in Eastern Cape, South Africa. Therefore, based on the findings of this study, there is necessity for the motivation and drive on the use and benefits of E-resources among undergraduate students through training and re-training, seminars, and workshops, since attitudinal behavior/perception analysis revealed a moderate behavior amongst the sampled students. Also, there is need for intervention focusing on the application of some E-resources and software where the students are ranked low. It is also recommended that the universities should persistently improve orientation of students on the use of all the numerous e-resources in the universities. Also, more computers should be offered in the universities, the students should be trained on the use of electronic resources. Additionally, ICT literate academia should be appointed at the resource unit of the universities to deal with technical problems. Furthermore, there should be provision of electronic databases, which will help to address the difficulties encountered in online internet environments.

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Paper received for publication in September, 2019
Paper accepted for publication in September, 2019