



Gender Differences on the Use of Electronic Information Resources by Undergraduate Students in University Libraries of Jigawa State, Nigeria

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Abstract

The study investigated the gender differences on the use of electronic information resources based on a sample of 380 registered undergraduate students in University libraries in Jigawa state, Nigeria. Analytical survey research was used for the study, and the sample was selected from a population of 1905 registered undergraduate students using a Stratified sampling technique. Data for the study was collected using structured questionnaire. Descriptive and inferential statistics was used to analyse the data collected for the study. Results from the analysis showed that there is a significant gender differences in the use of electronic information resources between male and female undergraduate students while no significant difference in challenges encountered in the use of electronic information resources according to gender. Based on the findings and within the limitation of this study, it was concluded that gender was a barrier in the use of electronic information resources in University Libraries, in Jigawa state. This study thus recommended among others that the Nigerian University system should provide a more robust Internet connectivity and the library management should provide stable electricity in order to promote and enhance the use of the electronic information resources.

Keywords: Gender, e-Resources, Undergraduate Students, Use, Skills

t1.1 Introduction

Electronic information resources are the latest solution to the effort of getting information closer to the people. These e-resources are reliable and convenient, as they provide easy to access to up-to-date, relevant and more information compared to the manual search. In order to utilise the growing range of electronic resources, students must acquire

and practice the skills necessary to exploit them. Kamarudin (2003) opined that the skills required to maximise the potential of electronic resources are much greater than those required for searching printed sources. These skills include knowledge of the structure of the database and the instructions which must be input into the computer by the searcher, as well as an understanding of the

ways in which the instructions are linked with one another.

Gender difference in skills, behaviours and achievement has been an issue of public discussion in research, be it education, social, economic, political, health, governance and religion. It has become the most striking trends in education in the past decades. According to McGinty and Moore (2008), gender issues have been in the forefront of impassioned public discussion regarding higher education. Utulu (2006) observed that the issue of the gender gap in the digital divide and the impact of new technologies on gender in particular on the economic and political spheres are of major importance. Similarly, Waldman (2003) opined that gender is a relevant factor in use of electronic databases. A study by Sacks, Bellissimo, and Mergendoller (1994) of higher school students found that their attitudes to computer and use tended to vary by gender. Waldman (2003) reported that the faculty member use of electronic information resources was influenced by such factors as computing skills of academics. Despite the scope of research on gender issues, significant change in terms of gender equality and access to resources is still very limited.

A survey by Bassi (2010) on attitudes of students towards use of e-resources shows that students constitute the major users of these libraries and they are heterogeneous in nature. This posed a point of concern to the researchers to investigate gender difference in attitudes among students in these libraries towards the use of electronic resources. This is important because electronic information resources open opportunities for both male and female students for their information needs in the pursuit of their educational career and future endeavors.

According to Doosuur and Mwuese (2013), the basic function of any university is to conserve the existing knowledge, to transmit knowledge through teaching, and to

create new knowledge through research. The university library is the university's principal instrument in the conservation of knowledge through its rational, systematic and comprehensive acquisition of all type of human communications records, published and unpublished, written or oral. The use of electronic information resources in the University libraries is aimed at broadening the range of available information within the library and adding value to the content by making them accessible through digital means so that students and researchers can access them anytime and anywhere.

In order to facilitate access to information within the university, Federal Ministry of Education in Nigeria (2000) introduced the virtual library project, which pulled together resources electronically, connecting all academic libraries in Nigeria with the hub at National University Commission. Consequently, University libraries in Jigawa state were not left behind in their efforts at providing electronic resources to their users. Despite the significant efforts made in the investment in e-resources, there seem to be gender disparity in the way they are utilized.

1.2 Objectives of the Study

It is against this background and inadequate documented empirical evidence that the study intends to establish the differences, if any, that exist between male and female undergraduate students' use of electronic information resources. The specific objectives are to:

1. Determine the information literacy skills of the undergraduate students in the universities based of their gender
2. Find out the search strategies employed by the undergraduate students under study based on gender
3. Ascertain the criteria used to evaluate information resources by the undergraduate students based on their gender

4. Find out the use of electronic information resources based on the gender of the undergraduate students in the libraries
5. Find out the challenges faced by the students while utilizing the e-resources according to their gender

1.3 Hypotheses

Ho1. There is no significant gender difference in the information literacy skills of male and female undergraduate students.

Ho2. There is no significant gender difference in the use of electronic information resources between male and female undergraduate students.

2.1 Review of Related Literature

Gender differences research shows that it is difficult to separate innate from learned behaviours, or to understand to what extent stereotyping influences individuals' perceptions and behavioral or cognitive sex differences. Ikolo (2010) in a study on gender difference based on use of electronic information resources revealed that the gender digital divide is manifested in the low number of female users of e-resources compared to men. Similarly, a study on gender analysis of electronic information resources use by Manda and Mukangara (2007) reported that gender is associated with the use of electronic information resources and male students were more likely to use electronic information resources than female students.

In their contribution, Ford, Miller and Moss (2001) observed that females tend to experience more difficulty finding information online, feel less competent and uncomfortable using the internet, use internet less frequently than males and make use of a less varied set of internet applications. Consequently, Enochsson (2005) has concluded that the socio-cultural background of gender still leaves women with more computer anxiety and feelings of lower

self-efficiency. Similarly Jenson (1999) reported computer inexperience for female use as an important factor in determining their attitude and anxieties towards computers.

In a similar study on gender and age difference in computer use and attitude among students, Amkpa (2007) reported that male and female students differ significantly in their attitude toward computer applications which has implications in their job and educational pursue. This corroborates the studies of Losh (2003) and Fallows (2005) which reveal that gender differences exist in the use of Internet between men and women. Similarly, Susol and Sterinerova (2007) assert that gender as a cultural and social construction of personality can be manifested in qualities and behaviour of men and women. Lending credence to this assertion, they have reported that women use the Internet slightly less than men; they show higher proportion of rare use and non use of electronic information resources and a lower proportion of frequent use.

Bassi and Camble (2011) reported that there exists a statistical difference between males and females in using electronic information resources as females have more difficulty in finding information online than males. Similarly, Ono and Zovadry (2003) also found women to be less frequent and less intense users of the internet. A study by Tella and Mutula (2008) on gender difference in computer literacy reported that students with higher computer literacy were more inclined to access and make use of library facilities. They further reported that differences exist between female and male undergraduate students at the University of Botswana with regard to computer literacy.

In the same vein, Ford and Miller (1996) report that gender is a predictor of internet use and attitudes, males seem to enjoy browsing on the internet for enjoyment, while females tend to only use it for work-related purposes. Ford, Miller and Moss (2001) found

that women tend to experience more difficulty in finding information online than men, and Susol and Sterinerova (2007) revealed that statistically, there is high preference for the Internet as the first source of information among men. Men also put more stress on non-paid electronic information resources as opposed to women's more frequent use of licensed resources. Ozoemelem (2009) reports a high frequency of use of electronic information resources by both male and female postgraduate students.

Tella and Mutulu (2008) noted that one of the recurring themes in underutilization of ICTs is the lack of relevant competencies within which females are often cited as more affected than males. On the other hand, Bimber (2000) argued that the gender gap in the internet is larger where more intensive web use is concerned, women are substantially less likely to be frequent users, equally likely to be infrequent users, and more likely to be intermediate users. Consequently, according to Scealy, Phillips & Stevenson (2002) these findings appear to reinforce the widespread assumption that men prefer to use the web for information gathering and entertainment and women prefer to use the internet for communication.

However, the study by Alshankity and Alshawi (2008) which examined the gender differences in Internet usage among faculty members in Saudi Arabia did not see a

significant gender difference in the overall Internet usage. This corroborates the findings by Koohang (1986) who found that neither age nor gender was seriously correlated to computer anxiety, computer confidence or liking. Subsequently, Ikolo and Okiy (2012) found that females use internet more than males in their study on gender differences in computer literacy among medical students in selected southern Nigerian Universities. Consequently, the review shows that the gender gap in electronic information resources usage appears negligible.

3.1 Methodology

Survey research was used for this study. The target population of this study is 1905 registered library users (students) of Federal University Dutse and Sule Lamido University, Kafin Hausa. Stratified sampling technique was employed to get representative sample from each of the Universities. 20% of each stratum was used to determine the sample size based on Nwana's (1981) formula, which states that if a population is in many hundreds, one need a sample size of 20%, but if a population is a few thousands one needs a sample size of 10%, and for a population of several thousands, one needs a sample of 5% or less. Therefore, the total sample size for the study is 380 as shown in Table.

Table 1.0 Population and sample size for each university library and by gender

Name of Library	Group of Users (Strata)	Population	Sample Size
Federal University Dutse	Male	746	149
	Female	342	68
Sule Lamido University	Male	512	102
	Female	305	61
Total		1905	380

Source: Library registration statistics of the two Libraries 2017/2018 session

4.1 Presentation of Data and Analysis

Table 2.0 Response Rate

Questionnaire	Gender	Frequency	Percentage (%)	Total
Questionnaire administered	Male	251	100%	380 (100%)
	Female	129	100%	
Questionnaire returned	Male	217	86.5%	281 (73.9%)
	Female	64	49.6%	
Questionnaire not returned	Male	34	13.5%	99 (26.1%)
	Female	65	50.4%	

Table 2.0 shows that 380 copies of questionnaire were administered to the respondents, out of which majority, 282 (73.9%) were filled, returned and found useful. While 99 (26.1%) were not returned. The result also shows that 217(86.5%) of the 251 questionnaire distributed to male undergraduate students were returned while only 64 (49.6%) of the 129 questionnaire distributed to female undergraduate students was returned. The rate of returned copies of the questionnaire was attributed to the fact that most of the respondents are within the reach of the researcher, and where they were not, several follow ups were made by the researcher to retrieve back the copies of the questionnaire.

Table 3.0 Information Literacy Skills Possessed

Statement	Gender	SA/A		Undecided		D/SD	
		F	%	F	%	f	%
Ability to formulate questions based on my information needs	Male	192	88.5%	10	4.6%	15	6.9%
	Female	33	51.6%	18	28.1%	13	20.3%
Ability to recognize a need for information resources	Male	123	58.5%	67	30.9%	27	12.4%
	Female	25	39.1%	13	20.3%	26	40.6%
Ability to distinguish potential information resources	Male	177	81.6%	14	6.5%	26	40.6%
	Female	21	32.8%	11	17.2%	32	50.0%
Ability to construct strategies for locating information	Male	103	47.5%	37	17.1%	67	30.9%
	Female	26	40.6%	13	20.3%	25	39.1%
Ability to evaluate information obtained from different sources.	Male	192	80.1%	8	12.8%	17	7.1%
	Female	34	53.1%	10	15.6%	20	31.3%
Ability to organize, apply and communicate information	Male	152	78.6%	24	3.9%	41	17.5%
	Female	21	32.8%	21	32.8%	22	34.4%
Ability to organize information for practical application	Male	151	87.9%	28	9.1%	38	3.0%
	Female	28	43.8%	17	26.6%	19	29.7%
Ability to use information in critical thinking and problem solving	Male	150	69.3%	23	10.5%	44	20.1%
	Female	29	45.3%	19	29.7%	16	25.0%
Ability to synthesize and build on existing information	Male	143	89.2%	59	8.3%	15	2.5%
	Female	30	46.9%	17	26.6%	17	26.6%
Ability to integrate new information into an existing body of knowledge	Male	169	91.8%	31	5.5%	17	2.7%
	Female	22	34.4%	30	46.9%	12	18.8%
Ability to locate and access information resources	Male	184	82.6%	10	8.7%	13	8.6%
	Female	38	59.4%	14	21.9%	12	18.8%

Table 3.0 showed that majority (77.8%) of the male respondents possessed high level of information literacy skills. The following results were obtained on the male information literacy skills possessed: 88.5%, 58.5%, 81.6%, 47.5%, 80.1%, 78.6%, 87.9%, 69.3%, 89.2%, 91.8% and 82.6% respectively. Contrastingly, the table showed that less than half (43.6%) of the female respondents possessed information literacy skills according to their responses. The results as obtained on the information literacy skills possessed by the female undergraduate students: 51.6%, 39.1%, 32.8%, 40.6%, 53.1%, 32.8%, 43.8%, 45.3%, 46.9%, 34.4% and 59.4% respectively. The findings corroborates that of Ford, Miller and Moss (2001) which reported that female tended to experience more difficulty finding information online, feel less competent and uncomfortable using the internet, use internet less frequently than males and make use of a less varied set of internet applications.

Table 5.0 Criteria for Evaluating E Resources

Evaluation	Gender	Frequency/Percentage (%)		Total
		Yes	No	
Authority	Male	162/74.7%	55/25.3%	217/100%
	Female	25/43.8%	39/56.2%	64/100%
Objectivity	Male	194/76.5%	23/10.6%	217/100%
	Female	42/68.8%	22/31.2%	64/100%
Authenticity	Male	143/83.4%	74/16.6%	217/100%
	Female	28/50.0%	36/50.0%	64/100%
Reliability	Male	183/89.4%	34/10.6%	217/100%
	Female	35/70.3%	29/29.7%	64/100%
Timeliness.	Male	180/87.6%	37/12.4%	217/100%
	Female	44/79.7%	20/20.3%	64/100%
Relevance	Male	161/74.2%	56/25.8%	217/100%
	Female	37/57.8%	27/42.2%	64/100%
Efficiency	Male	174/80.2%	43/19.8%	217/100%
	Female	34/53.1%	30/46.9%	64/100%

Table 5.0 indicated that majority (80.9%) of the male respondents evaluate the e-resources. The criterion mostly evaluated is reliability (89.4%) which is followed by timeliness (87.6%), the criteria less employed by the male respondents is Authority (74.7%). Similarly, the table showed that more than half (60.5%) of the female respondents evaluate the e-resources, with highest (79.7%) evaluating the timeliness of the resources and the least (43.8%) evaluating authority. The result above indicates that there are slight differences in the way male and female utilize e-resources. This is in agreement with the findings by Obaje, Sani and Lawal (2008) on internet access and usage by staff and students of the university of Jos which revealed that there exists difference in the usage of internet by gender between January-December, 2006, where 6520 (88%) were males and 925 (12%) were females only.

Table 6.0 Types of Electronic Information Resources used

E-resources used	Gender	Frequency/Percentage (%)		Total
		Yes, I use	---	
Audiotape	Male	176/81.1%	41/18.9%	217/100%
	Female	36/56.3%	28/43.7%	64/100%
E-mail	Male	174/80.2%	43/19.8%	217/100%
	Female	34/53.1%	30/46.9%	64/100%
CD- Rom	Male	160/73.7%	57/26.3%	217/100%
	Female	35/54.7%	29/45.3%	64/100%
Video	Male	192/88.5%	25/11.5%	217/100%
	Female	42/65.6%	22/34.4%	64/100%
Internet	Male	188/86.6%	29/13.4%	217/100%
	Female	49/76.6%	15/23.4%	64/100%
E-Journal	Male	194/89.4%	23/10.6%	217/100%
	Female	43/67.2%	21/32.8%	64/100%
E-Book	Male	183/84.3%	34/15.7%	217/100%
	Female	48/75.0%	16/25.0%	64/100%
Database	Male	186/85.7%	31/14.3%	217/100%
	Female	44/68.8%	20/31.2%	64/100%
E-reference	Male	185/85.3%	32/14.7%	217/100%
	Female	42/65.6%	22/34.4%	64/100%
E-news	Male	195/89.9%	22/10.1%	217/100%
	Female	46/71.9%	18/28.1%	64/100%
Social media	Male	188/86.6%	29/13.4%	217/100%
	Female	50/78.1%	14/21.9%	64/100%
E-dissertation and theses	Male	161/74.2%	56/25.8%	217/100%
	Female	44/68.8%	20/31.2%	64/100%

Table 6.0 showed that majority 195 (89.9%) of the male respondents use e-news, followed by e-journal 194 (89.4%). The least used e-resource by the male respondents is CD-Rom 160 (73.7%). The table also showed that majority 50 (78.1%) of the female respondents use social media followed by Internet 49 (76.6%). The table shows that the least used e-resource by the female respondents E-mail with 34 (53.1%) respondents. This study corroborates the findings of Ikolo (2010) on gender difference based on use of electronic information resources which revealed that the gender digital divide is manifested in the low number of female users of ICTS compared to men.

Table 7.0 Use of electronic information resources

Rating	Gender	Frequency	Percentage
Very often	Male	53	24.4%
	Female	23	35.9%
Often	Male	104	47.9%
	Female	11	17.2%
Not often	Male	35	16.1%
	Female	12	18.8%
Never	Male	25	11.5%
	Female	18	28.1%
Total		281	100%

Table 7.0 indicate that majority 157 (72.3%) of the male respondents use electronic information resources often, while 60 (27.7%) of the respondents do not use the electronic information resources often. This showed majority of the male students utilize the e-resources. In contrary, the result of the finding shows that only about half of the female students 34 (53.1%) often use the electronic information resources. While 30 (46.9%) of the female respondents indicate they either do not often use the e-resources or they never use them at all. This mirrors that majority 191 (84.8%) of the total respondents use the electronic information resources even though there is a major difference between male and female usage.

Table 8.0 Challenges in utilizing e-resources

Statement	Gender	SA/A		Undecided		SD /D	
		F	%	f	%	F	%
Inability to seek, obtain and evaluate information	Male	79	32.5%	19	7.1%	119	60.4%
	Female	19	29.7%	11	17.2%	34	53.1%
Lack of requisite computer use skills	Male	56	9.5%	36	22.5%	125	68.0%
	Female	21	32.8%	11	17.2%	32	50.0%
Lack of knowledge of availability of resources	Male	99	58.6%	25	21.9%	93	19.5%
	Female	20	31.3%	10	15.6%	34	53.1%
Unstable power supply	Male	169	83.4%	21	6.5%	27	10.1%
	Female	51	79.7%	8	12.5%	5	7.8%
Poor internet connectivity	Male	183	86.4%	15	8.9%	19	4.7%
	Female	53	82.8%	4	6.3%	7	10.9%
Inadequate facilities for using e- resources	Male	121	9.5%	74	55.6%	22	34.9%
	Female	43	67.2%	10	15.6%	11	17.2%
Do not know URLs	Male	94	37.9%	36	22.5%	87	39.6%
	Female	32	50.0%	9	14.1%	23	35.9%
Getting too much information	Male	74	43.8%	84	26.0%	59	30.2%
	Female	20	31.3%	29	45.3%	15	23.4%
Failing to download	Male	102	60.4%	41	6.5%	69	33.1%
	Female	38	59.4%	12	17.8%	14	21.9%
Failed to access full text	Male	101	77.5%	19	12.4%	97	10.1%
	Female	31	48.4%	13	20.3%	20	31.3%

The data in table 7 indicates the challenges in using e-resources based on the gender of the respondents. Half (50.0%) of the male respondents indicated they faced various challenges in utilizing the e-resources. Similarly, about half (51.3%) of the female respondents indicate they face problems in the utilization of the e-resources. The most apparent problem faced by both male and female respondents is the poor Internet connectivity (183/86.4%-Male and

53/82.8%-Female) and unstable power supply (169/83.4%-Male and 51/79.7%-Female). The result agrees with the findings by Omoike (2013) that among the various factors that militate against effective utilization of electronic information resources are poor electricity supply and poor Internet connectivity.

Conclusion

In conclusion, the study found out that

majority of the students possessed high level of information literacy skills on the use of electronic information resources but there is a difference in the level of information literacy skills possessed based on gender. It was found from the study that the undergraduate students employ various search strategies in order to get information from the electronic environment, but there is a significant difference in the search strategies employed between male and female undergraduate students. It was also found that there is a difference based on gender of the undergraduate students in evaluating electronic resources even though majority noted they evaluated the e-resources.

The study further shows that the undergraduate students use various types of e-resources, and there is a significant difference in the usage based on gender. It was also found in the study that there is no significant gender differences in the various challenges faced by the undergraduate students while utilizing the e-resources.

It was concluded that there is a significant gender difference in the use of electronic information resources in Universities in Jigawa state.

Recommendations

The study therefore recommends that:

- The Nigerian University system should provide more robust internet connectivity to the whole Universities across the country in order to boost the use of electronic information resources by the undergraduate students across the country.
- The University library management should provide stable electricity in order to promote and enhance the use of the library resources, most especially the electronic information

resources.

- The school management should take gender as a factor to consider in building and development of their educational and informational services.

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