



## ANALYSING USAGE OF E-RESOURCES AMONG COLLEGE STUDENTS

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### ABSTRACT

The aim of the present study is analysing the use of e-resources among college students. The sample was 888 college students selected from Chennai district, Tamil Nadu, India. Stratified random sampling method was adapted to select the sample for the present study. E-resource knowledge test questionnaire were used constructed and standardized by Dr.P.C. Nagasubramani (2015). Data collected were analyzed using t- test were implied between e-resources and demographic variables such as gender, Residence, locality of home, subject group, type of family, internet users and nature of Institution. Results revealed that there is no significant difference in their e-resources knowledge among college students.

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## INTRODUCTION

The twentieth century was shaped by sweeping changes in communication technologies. The emergence and use of information technology is the century's most significant development affecting scholarly communication. The application of computers to information processing has brought several products and services to the scenes. Consequently, the academic community has undergone tremendous changes during these years, assuming new dimensions influenced by technology-driven applications. Libraries have witnessed a great metamorphosis in recent years both in their collection development and in their service structures. Thus Libraries are using technology to improve the management of scholarly information to strengthen and speed access to scholarly information not held locally. Over the last several years a significant transformation has been noticed in collection development policies and practices. Print medium is increasingly giving way to the electronic form of materials (Sharma, 2009).

Ani (2008) states that "the transition from print to electronic medium apart from resulting in a growth of electronic information, has provided users with new tools and applications for information seeking and retrieval. Electronic resources are invaluable research tools that complement the print-based resources in a traditional library setting. Commenting on the advantages of electronic resources, Dadzie (2007) writes that electronic resources are invaluable research tools that complement the print – based resources in a traditional library setting. Their advantages, according to her include: access to information that might be restricted to the user due to geographical location or finances, access to more current information, and provision of extensive links to additional resources related contents. This rapid emergence and development of electronic information technologies therefore makes it possible to envision radically different ways of organizing the collections and services the library has traditionally provided. While libraries approach a crisis point in financing collection development, these new technologies offer possible ways to mitigate costs and revolutionize ways to access information. Naidu (2007) also finds that speedy publication and availability on the desktop are the key advantages that attract research scholars.

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**Electronic e-resources:** Electronic resources are the electronic representation of information. There are available in various forms like e-books, digital libraries, online journal magazine, e-learning tutors and on line test. Because of the effective presentation with multimedia tools, these e-resources have become the source of information. Electronic resources delivers the collection of information as full text databases, e-journals, image collections, multimedia in the form of CD, tape, internet, web technology etc. E-resources may include e-journals, e-discussions, e-news, data archives, e-mail on line chatting, etc can be called as an e-resources. Electronic information source are a wide range of products going from electronic periodicals to CD-ROMs, from mailing list to databases, all of them having a common feature of being used and some time modified by a computer.

**Review of literature:** The importance and wide ranging scope of electronic resources for general communication, information retrieval and instructional delivery to support teaching and research activities in tertiary educational institutions is acknowledged world wide. The literature also shows that a number of relevant studies have been carried out on the use of e- resources by lecturers, research scholars and students worldwide. General user opinion towards the use of electronic resources, in particular CD-ROM, has been positive, with students enjoying using these sources and finding relatively few problems while using them (Ray and Day, 1998). This is clearly confirmed in the case of a survey undertaken at Oakland University by (Milne, 1998) into students' satisfaction with CD-ROMs.

Ali (2005) found out that 83% of students surveyed felt that using this source saved them time, and found it relatively easy to use. Two thirds of those surveyed stated that if the CD-ROM was busy, they would wait for it to become free rather than use the print tool. However, a study of online searching of scientific information in science and technology libraries of Delhi reveals a sizeable number of users (almost 60%) are facing numerous problems while browsing electronic information, such as lack of knowledge about the resources, lack of trained staff and inadequate terminals). Studies have also been carried out on the use of electronic resources by teachers, students and research scholars of universities and research organizations. Seventy-eight percent (78%) of the respondents feel that the use of the UGC – Info net e-journals has created high dependency value on their research work and they needed current article alert services and electronic document supply services (Madhusudhan, 2008). In the context of developing countries, Okello-Obura and Magara (2008) investigated electronic information access and utilization at the East African School of Library and Information Science, Makerere University, Uganda. Out of the 250 targeted students, 190 responded, giving a response rate of 76%. The study revealed that users derived a lot of benefits from electronic resources gaining access to a wider range of information and improved academic performance as a result of access to quality information.

**Significance of the study:** In the present era of information explosion-more and more publications are becoming Web-concerned. Most of the social science libraries have changed the contemporary outlook towards functions and services. The environment is rapidly changing to an electronic one. Researcher decided to conduct this study for measuring the usage of e-resources among college students.

**Objective of the study:** To find out whether there is any significant difference between the background variables in respect of their e-resources knowledge among college students.

- A. E-books
- B. E- journal
- C. E- thesis
- D. E- library
- E. E- Data
- F. E- Portfolio
- G. E-governance.

**Hypotheses:** There is no significant difference between the background variables in terms of their knowledge of e-books, e-journal, e-thesis, e-library, e-data, e-portfolio, e-governance.

- A. E-books
- B. E- journal
- C. E- thesis
- D. E- library
- E. E- Data
- F. E- Portfolio
- G E-governance

## MATERIALS AND METHODS

**Procedure:** This study implemented survey method the self reported questionnaires were used to collected the data for two variables of the study along with the personal data sheet. The selected college students of (N=900) were given the standardized questionnaire under personal supervision. In spite of supervision it was found that some questionnaires were partially responded and hence only 888 were considered for the analysis.

**Sample:** Random sampling technique was used to the sample; the sample was collected from about 888 college students studying in the colleges in Chennai district, Tamil Nadu, India. There are about 1464 colleges which include Arts and Science colleges, Physical education colleges, Oriental colleges, Schools of Social work, and Colleges of Education are functioning under the administrative control of the Directorate of Collegiate Education. The number of college students studying in Government, Government aided and Self-Finance College, arts and science colleges in Chennai District is approximately about 86,500 . By using the Stratified Random Sampling Technique, I have only about selected only 888 Students from about 10 Colleges from Chennai, Tamil Nadu.

### Tool Used

E-resource knowledge test was constructed and standardized by **Dr.P.C. Nagasubramani (2015)**. E-resources knowledge test was constructed and standardized by Dr.P.C. Naga subramani (2015). E-resources knowledge test consists of 49 items. An individual score is the sum of the scores of all the 49 items. Therefore one can get a maximum score of '49' and a minimum score of '0' for this test. The scores range from 1-49. Higher score indicates the high E-Resources Knowledge and the Lower score indicates the low E-Resources Knowledge.

## RESULT AND DISCUSSION

**Hypothesis 5a:** "There is no significant difference between the background variables in terms of their knowledge of e-

books". The details of the calculations are given in Table 4.14. The 't' value is found to be 0.42 which is lesser than the table value (1.96) and not significant at 0.05 level. Therefore, the null hypothesis is accepted and it is concluded that there is no significant difference between the male and female college students in terms of their knowledge of e-books. The 't' value of residence is found to be 2.01 which is greater than the table value (1.96) and significant at 0.05 level. Therefore, the null hypothesis is rejected and it is concluded that there is significant difference between the hosteller and day scholar college students in respect of their knowledge of e-books. Moreover, the hostel students (Mean = 4.67) are found to be better than their day scholar counter parts (Mean = 3.27) in their knowledge of e-books.

The 't' value of locality is found to be 0.86 which is lesser than the table value (1.96) and not significant at 0.05 level. Therefore, the null hypothesis is accepted and it is concluded that there is no significant difference between the rural and urban area college students in terms of their knowledge of e-books. The 't' value of subject group is found to be 2.06 which is greater than the table value (1.96) and significant at 0.05 level. Therefore, the null hypothesis is rejected and it is concluded that there is significant difference between the arts and science group students in respect of their knowledge of e-books. Moreover, the science group students (Mean = 4.92) are found to be better than their arts group counter parts (Mean = 3.65) in their knowledge of e-books. The 't' value of family type is found to be 2.12 which is greater than the table value (1.96) and significant at 0.05 level. Therefore, the null hypothesis is rejected and it is concluded that there is significant difference between the college students who belong to joint and nuclear family in respect of their knowledge of e-books. Moreover, the nuclear family students (Mean = 4.89) are found to be better than their joint family counter parts (Mean = 3.24) in their knowledge of e-books.

The 't' value of internet users is found to be 2.86 which is greater than the table value (1.96) and significant at 0.05 level. Therefore, the null hypothesis is rejected and it is concluded that there is significant difference between the college students who belong to internet users and non users in respect of their knowledge of e-books. Moreover, the internet users (Mean = 5.23) are found to be better than their non users counter parts (Mean = 3.14) in their knowledge of e-books. In respect of Government and Aided college students ('t' value = 0.44), in respect of Government and Self-finance college students ('t' value = 0.92) and in terms of Aided and Self finance college students ('t' value = 0.85) the 't' values are not significant at 0.05 level. Therefore, the null hypotheses concerning (a), (b) and (c) are accepted. It is concluded that there is no significant difference between the Government and Aided, Government and Self finance and Aided and Self - finance college students in respect of their knowledge of e-books.

**Hypothesis 5b:** "There is no significant difference between the background variables in respect of their knowledge of e-journal". The details of the calculations are given in Table 4.15. The 't' value is found to be 0.37 which is lesser than the table value (1.96) and not significant at 0.05 level. Therefore, the null hypothesis is accepted and it is concluded that there is no significant difference between the male and female college students in respect of their knowledge of e-journal. The 't' value of residence is found to be 2.03 which is greater than the table value (1.96) and significant at 0.05 level.

Therefore, the null hypothesis is rejected and it is concluded that there is significant difference between the hosteller and day scholar college students in respect of their knowledge of e-journal. Moreover, the hostel students (Mean = 3.57) are found to be better than their day scholar counter parts (Mean = 2.17) in their knowledge of e-journal. The 't' value of locality is found to be 0.82 which is lesser than the table value (1.96) and not significant at 0.05 level. Therefore, the null hypothesis is accepted and it is concluded that there is no significant difference between the rural and urban area college students in respect of their knowledge of e-journal. The 't' value of subject group is found to be 2.07 which is greater than the table value (1.96) and significant at 0.05 level. Therefore, the null hypothesis is rejected and it is concluded that there is significant difference between the arts and science group students in respect of their knowledge of e-journal. Moreover, the science group students (Mean = 3.86) are found to be better than their arts group counter parts (Mean = 2.45) in their knowledge of e-journal. The 't' value of family type is found to be 2.02 which is greater than the table value (1.96) and significant at 0.05 level. Therefore, the null hypothesis is rejected and it is concluded that there is significant difference between the college students who belong to joint and nuclear family in terms of their knowledge of e-journal. Moreover, the nuclear family students (Mean = 3.79) are found to be better than their joint family counter parts (Mean = 2.22) in their knowledge of e-journal. The 't' value of internet users is found to be 2.62 which is greater than the table value (1.96) and significant at 0.05 level. Therefore, the null hypothesis is rejected and it is concluded that there is significant difference between the college students who belong to internet users and non users in terms of their knowledge of e-journal. Moreover, the internet users (Mean = 4.45) are found to be better than their non users counter parts (Mean = 2.31) in their knowledge of e-journal.

In respect of Government and Aided college students ('t' value = 0.46), in respect of Government and Self-finance college students ('t' value = 0.83) and in terms of Aided and Self finance college students ('t' value = 0.89) the 't' values are not significant at 0.05 level. Therefore, the null hypotheses concerning (a), (b) and (c) are accepted. It is concluded that there is no significant difference between the Government and Aided, Government and Self finance and Aided and Self - finance college students in terms of their knowledge of e-journal.

**Hypothesis 5c:** "There is no significant difference between the background variables in respect of their knowledge of e-thesis". The details of the calculations are given in Table 4.16. The 't' value is found to be 0.62 which is lesser than the table value (1.96) and not significant at 0.05 level. Therefore, the null hypothesis is accepted and it is concluded that there is no significant difference between the male and female college students in respect of their knowledge of e-thesis. The 't' value of residence is found to be 2.05 which is greater than the table value (1.96) and significant at 0.05 level. Therefore, the null hypothesis is rejected and it is concluded that there is significant difference between the hosteller and day scholar college students in respect of their knowledge of e-thesis. Moreover, the hostel students (Mean = 5.57) are found to be better than their day scholar counter parts (Mean = 4.17) in their knowledge of e-thesis. The 't' value of locality is found to be 0.72 which is lesser than the table value (1.96) and not significant at 0.05 level.

**Table 1 t – Test values for the knowledge of e-books scores**

Variables	Sub-sample	N	Mean	SD	t value	Level of significant at 0.05 level
Gender	Male	452	4.13	0.97	0.42	NS
	Female	436	4.25	0.93		
Residence	Hosteller	399	4.67	1.00	2.01	S
	Day scholar	489	3.27	0.98		
Locality	Rural	426	4.21	1.00	0.86	NS
	Urban	462	4.03	0.75		
Subject Group	Arts	395	3.65	0.98	2.06	S
	Science	493	4.92	0.75		
Type of family	Joint	222	3.24	1.05	2.12	S
	Nuclear	666	4.89	0.88		
Internet users	Yes	652	5.23	0.88	2.86	S
	No	236	3.14	1.06		
Type of Management	Government	136	4.01	0.92	0.44	NS
	Aided	290	4.20	0.82		
	Government	136	4.01	0.92	0.92	NS
	Self finance	462	4.25	1.00		
	Aided	290	4.20	0.82		
	Self finance	462	4.25	1.00		

**Table 2 t – Test values for the knowledge of e-journal scores**

Variables	Sub-sample	N	Mean	SD	t value	Level of significant at 0.05 level
Gender	Male	452	3.23	0.87	0.37	NS
	Female	436	3.35	0.85		
Residence	Hosteller	399	3.57	1.02	2.03	S
	Day scholar	489	2.17	0.97		
Locality	Rural	426	3.25	1.04	0.82	NS
	Urban	462	3.63	0.76		
Subject Group	Arts	395	2.45	0.88	2.07	S
	Science	493	3.86	0.65		
Type of family	Joint	222	2.22	1.06	2.02	S
	Nuclear	666	3.79	0.98		
Internet users	Yes	652	4.45	0.76	2.62	S
	No	236	2.31	1.21		
Type of Management	Government	136	3.07	0.93	0.46	NS
	Aided	290	3.24	0.86		
	Government	136	3.07	0.93	0.83	NS
	Self finance	462	3.27	0.81		
	Aided	290	3.24	0.86		
	Self finance	462	3.27	0.81		

**Table 3 t – test values for the knowledge of e-thesis scores**

Variables	Sub-sample	N	Mean	SD	t value	Level of significant at 0.05 level
Gender	Male	452	5.12	1.01	0.62	NS
	Female	436	5.37	1.04		
Residence	Hosteller	399	5.57	1.05	2.05	S
	Day scholar	489	4.17	1.02		
Locality	Rural	426	5.27	1.04	0.72	NS
	Urban	462	5.65	0.92		
Subject Group	Arts	395	5.35	0.97	2.09	S
	Science	493	6.21	0.94		
Type of family	Joint	222	4.62	1.07	2.06	S
	Nuclear	666	5.79	1.02		
Internet users	Yes	652	5.45	1.09	2.57	S
	No	236	4.35	1.03		
Type of Management	Government	136	5.02	0.97	0.48	NS
	Aided	290	5.23	0.88		
	Government	136	5.02	0.97	0.87	NS
	Self finance	462	5.25	0.85		
	Aided	290	5.23	0.88		
	Self finance	462	5.25	0.85		

Therefore, the null hypothesis is accepted and it is concluded that there is no significant difference between the rural and urban area college students in terms of their knowledge of e-thesis. The 't' value of subject group is found to be 2.09 which is greater than the table value (1.96) and significant at 0.05 level. Therefore, the null hypothesis is rejected and it is concluded that there is significant difference between the arts and science group students in terms of their knowledge of e-journal.

Moreover, the science group students (Mean = 6.21) are found to be better than their arts group counter parts (Mean = 5.35) in their knowledge of e-thesis. The 't' value of family type is found to be 2.06 which is greater than the table value (1.96) and significant at 0.05 level. Therefore, the null hypothesis is rejected and it is concluded that there is significant difference between the college students who belong to joint and nuclear family in terms of their knowledge of e-thesis. Moreover, the nuclear family students (Mean = 5.79) are found to be better

**Table 4. t – Test values for the knowledge of e-library scores**

Variables	Sub-sample	N	Mean	SD	t value	Level of significant at 0.05 level
Gender	Male	452	5.02	0.98	0.47	NS
	Female	436	5.27	1.02		
Residence	Hosteller	399	5.47	1.03	2.03	S
	Day scholar	489	4.36	0.99		
Locality	Rural	426	5.28	1.02	0.76	NS
	Urban	462	5.01	0.97		
Subject Group	Arts	395	5.26	0.91	2.07	S
	Science	493	6.27	0.89		
Type of family	Joint	222	4.28	1.07	2.05	S
	Nuclear	666	5.86	1.02		
Internet users	Yes	652	5.92	1.09	2.45	S
	No	236	4.37	1.03		
Type of Management	Government	136	5.06	0.97	0.52	NS
	Aided	290	5.27	0.88		
	Government	136	5.06	0.97		
	Self finance	462	5.31	0.85		
	Aided	290	5.27	0.88		
	Self finance	462	5.31	0.85	0.95	NS

**Table 5. t – Test values for the knowledge of e-data scores**

Variables	Sub-sample	N	Mean	SD	t value	Level of significant at 0.05 level
Gender	Male	452	2.02	0.95	0.39	NS
	Female	436	2.27	0.98		
Residence	Hosteller	399	2.47	1.02	2.01	S
	Day scholar	489	1.36	0.96		
Locality	Rural	426	2.28	0.97	0.62	NS
	Urban	462	2.01	0.94		
Subject Group	Arts	395	2.26	0.89	2.05	S
	Science	493	3.27	0.72		
Type of family	Joint	222	2.28	1.03	1.99	S
	Nuclear	666	3.86	1.01		
Internet users	Yes	652	3.92	1.07	2.37	S
	No	236	2.37	0.99		
Type of Management	Government	136	2.06	0.95	0.53	NS
	Aided	290	2.27	0.82		
	Government	136	2.06	0.95		
	Self finance	462	2.31	0.85		
	Aided	290	2.27	0.82		
	Self finance	462	2.31	0.85	0.82	NS

**Table 6 t – Test values for the knowledge of e-portfolio scores**

Variables	Sub-sample	N	Mean	SD	t value	Level of significant at 0.05 level
Gender	Male	452	2.12	0.93	0.45	NS
	Female	436	2.28	0.96		
Residence	Hosteller	399	2.32	1.01	2.06	S
	Day scholar	489	1.39	0.94		
Locality	Rural	426	2.26	0.95	0.58	NS
	Urban	462	2.12	0.91		
Subject Group	Arts	395	2.22	0.86	2.07	S
	Science	493	3.56	0.71		
Type of family	Joint	222	2.34	1.02	2.03	S
	Nuclear	666	3.89	1.03		
Internet users	Yes	652	3.97	1.04	2.54	S
	No	236	2.42	0.97		
Type of Management	Government	136	2.17	0.93	0.47	NS
	Aided	290	2.21	0.81		
	Government	136	2.17	0.93		
	Self finance	462	2.27	0.86		
	Aided	290	2.21	0.81		
	Self finance	462	2.27	0.86	0.71	NS

than their joint family counter parts (Mean = 4.62) in their knowledge of e-thesis. The 't' value of internet users is found to be 2.57 which is greater than the table value (1.96) and significant at 0.05 level. Therefore, the null hypothesis is rejected and it is concluded that there is significant difference between the college students who belong to internet users and non users in terms of their knowledge of e-thesis. Moreover, the internet users (Mean = 5.45) are found to be better than their non users counter parts (Mean = 4.35) in their knowledge of e-thesis.

In terms of Government and Aided college students ('t' value = 0.48), in respect of Government and Self-finance college students ('t' value = 0.87) and in respect of Aided and Self finance college students ('t' value = 0.92) the 't' values are not significant at 0.05 level. Therefore, the null hypotheses concerning (a), (b) and (c) are accepted. It is concluded that there is no significant difference between the Government and Aided, Government and Self finance and Aided and Self - finance college students in terms of their knowledge of e-thesis.

**Table 7. t – test values for the knowledge of e-governance scores**

Variables	Sub-sample	N	Mean	SD	t value	Level of significant at 0.05 level
Gender	Male	452	2.24	0.91	0.42	NS
	Female	436	2.37	0.94		
Residence	Hosteller	399	2.43	0.99	2.02	S
	Day scholar	489	1.48	0.92		
Locality	Rural	426	2.37	0.93	0.56	NS
	Urban	462	2.24	0.89		
Subject Group	Arts	395	2.34	0.84	2.04	S
	Science	493	3.68	0.71		
Type of family	Joint	222	2.46	1.03	2.01	S
	Nuclear	666	3.97	1.07		
Internet users	Yes	652	3.99	1.02	2.51	S
	No	236	2.53	0.95		
Type of Management	Government	136	2.28	0.91	0.45	NS
	Aided	290	2.32	0.83		
	Government	136	2.28	0.91		
	Self finance	462	2.39	0.89		
	Aided	290	2.32	0.83		
	Self finance	462	2.39	0.89	0.69	NS

**Hypothesis 5D:** “There is no significant difference between the background variables in terms of their knowledge of e-library”. The details of the calculations are given in Table 4.17. The ‘t’ value is found to be 0.47 which is lesser than the table value (1.96) and not significant at 0.05 level. Therefore, the null hypothesis is accepted and it is concluded that there is no significant difference between the male and female college students in terms of their knowledge of e-library. The ‘t’ value of residence is found to be 2.03 which is greater than the table value (1.96) and significant at 0.05 level. Therefore, the null hypothesis is rejected and it is concluded that there is significant difference between the hosteller and day scholar college students in respect of their knowledge of e-library. Moreover, the hostel students (Mean = 5.47) are found to be better than their day scholar counter parts (Mean = 4.36) in their knowledge of e-library.

The ‘t’ value of locality is found to be 0.76 which is lesser than the table value (1.96) and not significant at 0.05 level. Therefore, the null hypothesis is accepted and it is concluded that there is no significant difference between the rural and urban area college students in terms of their knowledge of e-library. The ‘t’ value of subject group is found to be 2.07 which is greater than the table value (1.96) and significant at 0.05 level. Therefore, the null hypothesis is rejected and it is concluded that there is significant difference between the arts and science group students in respect of their knowledge of e-library. Moreover, the science group students (Mean = 6.27) are found to be better than their arts group counter parts (Mean = 5.26) in their knowledge of e-library. The ‘t’ value of family type is found to be 2.05 which is greater than the table value (1.96) and significant at 0.05 level. Therefore, the null hypothesis is rejected and it is concluded that there is significant difference between the college students who belong to joint and nuclear family in terms of their knowledge of e-library. Moreover, the nuclear family students (Mean = 5.86) are found to be better than their joint family counter parts (Mean = 4.28) in their knowledge of e-library. The ‘t’ value of internet users is found to be 2.45 which is greater than the table value (1.96) and significant at 0.05 level. Therefore, the null hypothesis is rejected and it is concluded that there is significant difference between the college students who belong to internet users and non users in terms of their knowledge of e-library. Moreover, the internet users (Mean = 5.92) are found to be better than their non users counter parts (Mean = 4.37) in their knowledge of e-library.

In terms of Government and Aided college students (‘t’ value = 0.52), in respect of Government and Self-finance college students (‘t’ value = 0.81) and in respect of Aided and Self finance college students (‘t’ value = 0.95) the ‘t’ values are not significant at 0.05 level. Therefore, the null hypotheses concerning (a), (b) and (c) are accepted. It is concluded that there is no significant difference between the Government and Aided, Government and Self finance and Aided and Self - finance college students in terms of their knowledge of e-library.

**Hypothesis 5e:** “There is no significant difference between the background variables in terms of their knowledge of e-data”.

The details of the calculations are given in Table 4.18. The ‘t’ value is found to be 0.39 which is lesser than the table value (1.96) and not significant at 0.05 level. Therefore, the null hypothesis is accepted and it is concluded that there is no significant difference between the male and female college students in terms of their knowledge of e-data. The ‘t’ value of residence is found to be 2.01 which is greater than the table value (1.96) and significant at 0.05 level. Therefore, the null hypothesis is rejected and it is concluded that there is significant difference between the hosteller and day scholar college students in respect of their knowledge of e-data. Moreover, the hostel students (Mean = 2.47) are found to be better than their day scholar counter parts (Mean = 1.36) in their knowledge of e-data. The ‘t’ value of locality is found to be 0.62 which is lesser than the table value (1.96) and not significant at 0.05 level. Therefore, the null hypothesis is accepted and it is concluded that there is no significant difference between the rural and urban area college students in terms of their knowledge of e-data.

The ‘t’ value of subject group is found to be 2.05 which is greater than the table value (1.96) and significant at 0.05 level. Therefore, the null hypothesis is rejected and it is concluded that there is significant difference between the arts and science group students in terms of their knowledge of e-data. Moreover, the science group students (Mean = 3.27) are found to be better than their arts group counter parts (Mean = 2.26) in their knowledge of e-data. The ‘t’ value of family type is found to be 1.99 which is greater than the table value (1.96) and significant at 0.05 level. Therefore, the null hypothesis is rejected and it is concluded that there is significant difference between the college students who belong to joint and nuclear family in terms of their knowledge of e-data.

Moreover, the nuclear family students (Mean = 3.86) are found to be better than their joint family counter parts (Mean = 2.28) in their knowledge of e-data. The 't' value of internet users is found to be 2.37 which is greater than the table value (1.96) and significant at 0.05 level. Therefore, the null hypothesis is rejected and it is concluded that there is significant difference between the college students who belong to internet users and non users in terms of their knowledge of e-data. Moreover, the internet users (Mean = 3.92) are found to be better than their non users counter parts (Mean = 2.37) in their knowledge of e-data. In terms of Government and Aided college students ('t' value = 0.53), in respect of Government and Self-finance college students ('t' value = 0.65) and in respect of Aided and Self finance college students ('t' value = 0.82) the 't' values are not significant at 0.05 level. Therefore, the null hypotheses concerning (a), (b) and (c) are accepted. It is concluded that there is no significant difference between the Government and Aided, Government and Self finance and Aided and Self - finance college students in respect of their knowledge of e-data.

**Hypothesis 5F:** "There is no significant difference between the background variables in terms of their knowledge of e-portfolio". The details of the calculations are given in Table 4.19. The 't' value is found to be 0.45 which is lesser than the table value (1.96) and not significant at 0.05 level. Therefore, the null hypothesis is accepted and it is concluded that there is no significant difference between the male and female college students in terms of their knowledge of e-portfolio. The 't' value of residence is found to be 2.06 which is greater than the table value (1.96) and significant at 0.05 level. Therefore, the null hypothesis is rejected and it is concluded that there is significant difference between the hosteller and day scholar college students in terms of their knowledge of e-portfolio. Moreover, the hostel students (Mean = 2.32) are found to be better than their day scholar counter parts (Mean = 1.39) in their knowledge of e-portfolio. The 't' value of locality is found to be 0.58 which is lesser than the table value (1.96) and not significant at 0.05 level. Therefore, the null hypothesis is accepted and it is concluded that there is no significant difference between the rural and urban area college students in terms of their knowledge of e-portfolio.

The 't' value of subject group is found to be 2.07 which is greater than the table value (1.96) and significant at 0.05 level. Therefore, the null hypothesis is rejected and it is concluded that there is significant difference between the arts and science group students in terms of their knowledge of e-portfolio. Moreover, the science group students (Mean = 3.56) are found to be better than their arts group counter parts (Mean = 2.22) in their knowledge of e-portfolio. The 't' value of family type is found to be 2.03 which is greater than the table value (1.96) and significant at 0.05 level. Therefore, the null hypothesis is rejected and it is concluded that there is significant difference between the college students who belong to joint and nuclear family in respect of their knowledge of e-portfolio. Moreover, the nuclear family students (Mean = 3.89) are found to be better than their joint family counter parts (Mean = 2.34) in their knowledge of e-portfolio. The 't' value of internet users is found to be 2.54 which is greater than the table value (1.96) and significant at 0.05 level. Therefore, the null hypothesis is rejected and it is concluded that there is significant difference between the college students who belong to internet users and non users in terms of their knowledge of e-portfolio.

Moreover, the internet users (Mean = 3.97) are found to be better than their non users counter parts (Mean = 2.42) in their knowledge of e-portfolio. In terms of Government and Aided college students ('t' value = 0.47), in terms of Government and Self-finance college students ('t' value = 0.59) and in respect of Aided and Self finance college students ('t' value = 0.71) the 't' values are not significant at 0.05 level. Therefore, the null hypotheses concerning (a), (b) and (c) are accepted. It is concluded that there is no significant difference between the Government and Aided, Government and Self finance and Aided and Self - finance college students in terms of their knowledge of e-portfolio.

**Hypothesis 5g:** "There is no significant difference between the background variables in terms of their knowledge of e-governance". The details of the calculations are given in Table 4.20. The 't' value is found to be 0.42 which is lesser than the table value (1.96) and not significant at 0.05 level. Therefore, the null hypothesis is accepted and it is concluded that there is no significant difference between the male and female college students in terms of their knowledge of e-governance. The 't' value of residence is found to be 2.02 which is greater than the table value (1.96) and significant at 0.05 level. Therefore, the null hypothesis is rejected and it is concluded that there is significant difference between the hosteller and day scholar college students in respect of their knowledge of e-governance. Moreover, the hostel students (Mean = 2.43) are found to be better than their day scholar counter parts (Mean = 1.48) in their knowledge of e-governance. The 't' value of locality is found to be 0.56 which is lesser than the table value (1.96) and not significant at 0.05 level. Therefore, the null hypothesis is accepted and it is concluded that there is no significant difference between the rural and urban area college students in terms of their knowledge of e-governance.

The 't' value of subject group is found to be 2.04 which is greater than the table value (1.96) and significant at 0.05 level. Therefore, the null hypothesis is rejected and it is concluded that there is significant difference between the arts and science group students in terms of their knowledge of e-governance. Moreover, the science group students (Mean = 3.68) are found to be better than their arts group counter parts (Mean = 2.34) in their knowledge of e-governance. The 't' value of family type is found to be 2.01 which is greater than the table value (1.96) and significant at 0.05 level. Therefore, the null hypothesis is rejected and it is concluded that there is significant difference between the college students who belong to joint and nuclear family in terms of their knowledge of e-governance. Moreover, the nuclear family students (Mean = 3.97) are found to be better than their joint family counter parts (Mean = 2.46) in their knowledge of e-governance.

The 't' value of internet users is found to be 2.51 which is greater than the table value (1.96) and significant at 0.05 level. Therefore, the null hypothesis is rejected and it is concluded that there is significant difference between the college students who belong to internet users and non users in terms of their knowledge of e-governance. Moreover, the internet users (Mean = 3.99) are found to be better than their non users counter parts (Mean = 2.53) in their knowledge of e-governance. In terms of Government and Aided college students ('t' value = 0.45), in respect of Government and Self-finance college students ('t' value = 0.57) and in terms of Aided and Self finance college students ('t' value = 0.69) the 't' values are not significant at 0.05 level.

Therefore, the null hypotheses concerning (a), (b) and (c) are accepted. It is concluded that there is no significant difference between the Government and Aided, Government and Self finance and Aided and Self - finance college students in terms of their knowledge of e-governance.

### Recommendation

This study showed that the uses of e-resources are very common. It was however, revealed that practical uses of e-resources are not up to the worth in comparison to investments made in acquiring these resources. Moreover, infrastructure and training, programmes are essential for better use of electronic resources campus-wide. It is evident from the analysis that the availability of e-resources on the campus is almost sufficient for all the existing disciplines but that the infrastructure to use the resources is not adequate and is actually hindering the ability to meet the requirements of users. This observation is common to libraries and universities in developing countries as is observed by Ali (2005).

In order to improve the facilities and services for effective use of electronic resources, in the University of Lagos, a number of suggestions can be made.

- User training is essential for the better use of electronic resources in the library since a good number of users are searching electronic literature on their own.
- Electronic resources users should be taught about advanced search strategies and the use of controlled vocabulary to make electronic search process much easier.

### Conclusion

The fast growths of information and communication technologies and particularly internet and electronic resources have changed the traditional methods of research, storage, retrieval and communication of scholarly information. Now a day's internet has emerged as most powerful medium for storage and retrieval of information. In order to retrieve relevant information, users have to make use of different electronic and web resources. So far the systematic research has not been done in this area particularly in the use of on-line electronic resources among the college students.

It is clear from the study that the younger generation has accepted the electronic resources, but the volumes of frequent usage of e-resources among the users have been found to be optimum level. Many of the respondents are unaware and have not used On-line thesis/dissertations, abstracts/indexes, OPAC, On-line databases, which are very relevant for their study and research.

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