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Distance Learners' Attitude and Use Behaviour of Electronic Information Resources: A study at Kuvempu University

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Abstract

The main focus of the study is to discover the use behaviour of electronic Information resources among students pursuing higher education through distance education mode at Kuvempu University, Shivamogga. The researcher has of data adopted survey method for collection. Questionnaires were served to the students during their contact classes of Kuvempu University. 1650 questionnaires were distributed and 1435 completely filled questionnaires were received obtaining a response rate of 87.0 %. The questionnaires were distributed among the respondents when they attended the contact classes conducted by the Kuvempu University. The findings of the study focused on the impact of ICT on implementing successful frameworks of introducing e-learning in the university educational system, creating awareness during the contact classes about the importance of Information and Communication Technologies for distance learning.

KeyWords: Electronic Information Resources, ICT, Distance Learners, Kuvempu University, Distance Education.

Introduction

Nowadays the application of ICT in knowledge generation and communication has brought the users and knowledge closer thus creating new options and opportunities in various spheres. Moreover the information gathered, stored, organized, retrieved and consumed are really productive and more user friendly. ICT as a most powerful and vibrant tool for communication, it is the biggest single source of information at the worldwide, where huge amounts of information are transmitted in fractions of second and facilitate individuals to access information rapidly and easily across the world . The present ICT and information explosion era has added a new dimension to information searching activities and created a

vast array of options for getting information in e-form including commonly-available electronic information sources(e-books, e-journals, etc.), CD-ROMs, databases, Web-OPACs, and the Internet.

Information Technology has brought many benefits in the field of education, especially distance education. These technologies facilitate the Distance Learners to access greater variety of learning resources; improved opportunities for individual learning; the possibilities of greater access of information; greater flexibility offered by the wide range of technologies; and there is a higher degree of interactivity as convergence occurs between individuals. Therefore research is needed to know the level or competency of ICT skills of distance learners, to identify the needs of existing distance learners. Keeping in view, this study is mainly focused Distance Learners' Attitude and Use Behaviour of Electronic Information Resources at Kuvempu University Library.

Review of Literature

Hamutumwa et.al.(2017)conducted a study to determine the predictors of electronic information resources use by distance learners at the University of Namibia (UNAM). The study addressed two research questions: What are the attitude and the behaviour of distance learners towards the usage of electronic information resources at the University of Namibia Library? What factors hinder the use of electronic information resources by distance learners? The study was underpinned by the Technology Acceptance Model (TAM). A quantitative approach and a survey design were used. The population consisted of distance learners. Simple random sampling was used to select the respondents. Survey questionnaire was used to collect data. The quantitative data collected was analysed using descriptive and inferential and content analysis respectively.

Hashmi, Rehman and Zeeshan (2014) jointly conducted a study to determine the information needs and seeking behaviour of distance learning university students of Pakistan. The study points out the different types of information sources available to the distance students, revealing that the main sources was on books and lecturers/tutors, the usage of electronic resources such as e-journals and databases .

Andrews and Tynan (2012) in their work have discussed that study students were satisfied overall with the general quality of their courses. They identified a number of factors impacting on the quality of the distance learner's experience with ICT for teaching and

learning. The study identified several factors which included the provision of learning materials; learning design; online interactions; integration of technology into teaching and learning; reliability of technology used for teaching and learning; and staff and student capacity in relation to the use of ICT for teaching and learning.

Oladokun (2012) conducted a study to identify the information needs and information seeking behaviour of and information sources used by the distance learners of four tertiary level institutions in meeting their information needs in their various locations of in Botswana. The findings of the study indicated acquisition of greater skill in the use of information and communication technologies e.g. the Internet. The results show that distance learners would not give high premium to the need for specialized information or even access to a help line in as much as they could have materials in subjects/courses of study and how to use the ICT.

The study conducted by Thompson (2007) to determine the information seeking behavior of distance education students. The study was conducted to learn more about the information seeking behavior and needs of distance students. The study highlights that distance education students are traditionally much older than the millennial generation. The students in this study were in favour of electronic resources and were overall highly confident in their search abilities. These two characteristics until now attributed to the millennial generation. The respondents opined that Google and the UNC libraries web page as equally important to their research, but acknowledged using Google much more frequently than the library page.

The objectives of the study

The main aim of this study is to examine the behaviour and attitude towards Electronic Information Resources by post graduate students of distance learning in Kuvempu University which would focus on how students search the information, the type of information needed. The information search pattern of the respondents may be different depending upon their personal attributes and environment.

The objectives of the study are;

- To identify the most often used electronic information sources by distance learning students,
- To identify the purpose of use of electronic information resources by distance learners

- To find out the main reason(s) behind the use of electronic information resources by the distance learning students,
- To identify factors limiting the use of electronic information resources by distance learners

Research Methodology

This study of the research used questionnaire-based survey method in order to achieve the above objectives. For this purpose a well-structured online questionnaire was designed to collect the data from the PG students well-structured questionnaire was designed and administered to collect the data from the PG distance students of Kuvempu University. The sample size of respondents was calculated based on Krejcie & Morgan formula (Krejcie & Morgan, 1970)

$$S = \frac{\chi^2 NP(1-P)}{d^2(N-1) + \chi^2 P(1-P)}$$

= 1650 sample size

By using Krejcie & Morgan formula of sample size with a margin of error 0.025 and with a confidence level of 95%, the total population of this study was 21743 and hence the sample size is 1650. About 1650 questionnaires were distributed and 1435 completely filled questionnaires were received obtaining a response rate of 87.0 %. The questionnaires were distributed among the respondents when they attended the contact classes conducted by the Kuvempu University. The collected data were classified, analyzed and tabulated by using statistical methods.

DATA ANALYSIS AND INTERPRETATION

The analysis of the data is a process in which the researcher proceeds from unknown to known facts to find out the solution to a conceived problem of study and by breaking it down into constituent components. The responses recorded were received from the Post Graduate (PG) students of Distance Education Programme from the Kuvempu University, the faculties of Social Sciences, Science and Technology, Commerce and Management. The data was collected from the distance learning students admitted to these three faculties and the data was analyzed discipline-wise and was presented in the form of tables, figures and charts

wherever applicable. For the purpose of statistical analysis of data the study was used the Statistical Package for Social Sciences (SPSS) Software.

Table: 1 Gender -Wise Distribution

The table 1 presents the data on the gender -wise distribution of the respondents.

Sl. No	Gender	Discipline			
		Social Sciences (N=806)	Science/ Technology (N=187)	Commerce/ Management (N=442)	Total (N=1435)
1	Male	329(40.8%)	77(41.1%)	185(41.9%)	591(41.2%)
2	Female	477(59.2%)	110(58.9%)	257(58.1%)	844(58.8%)
3	χ^2 - Value	$\chi^2 =.127, df=2, p=.939$			

The table 1 shows gender-wise distribution of distance learner's respondents of Kuvempu University. Out of 1435 respondents, 844 (58.8%) are female and 591 (41.2%) are male respondents. The results of the study revealed that both males and females were pursuing their higher education through distance education mode and the number of female respondents were more compared to male respondents in all the three faculties. To have a better view on analysis the χ^2 -test conducted for 2 d.f. at the 5% level of significance shows that there is no significant relationship between these groups of frequencies ($\chi^2=0.127$, $p=.939.>0.05$).

Table 2. Designation-Wise Distribution

The study has identified the variant user categories among the distance learners. The broad categories include students, employed individuals, unemployed or business type. The choices are also quite evident based on their domestication and family background. The data collected in these categories are presented in Table 2

Sl. No	User Category	Discipline			
		Social Sciences (N=806)	Science/ Technology (N=187)	Commerce/ Management (N=442)	Total (N=1435)
1	Student	62(7.6%)	20(10.7%)	48(11.0%)	130(9.1%)
2	Employed	503(63.1%)	145(77.1%)	332(75.1%)	980(68.2%)

3	Unemployed	131(16.2%)	9(5.1%)	12(2.7%)	152(10.6%)
4	Businessman	110(13.1%)	13(7.1%)	50(11.2%)	173(12.1%)
5	χ^2 - Value	$\chi^2=75.349$ df=2 p=.000			

The above table 2 exhibits the category-wise distribution of the respondents. The table depicts that, a large number of respondents 980 (68.2%) are employed, followed by 173(12.1%) who are businessmen and 130(9.1%) belonging to students category, as it is likely that more number of education aspirants intend to follow the regular or informal course through distance courses of study. The χ^2 -test is conducted for 2 d.f. at the 5% level of significance shows that there is a significant association between these groups of frequencies ($\chi^2=75.349$, $p=.000<0.05$).

Table: 3. Use of Computer devices for Information Gathering

The use of computers by people in all walks of life is increasing day by day. The respondents were asked to name the type of computer system they make use of and the responses are presented in the Table 3.

Sl. No	Devices	Discipline			Total (N=1435)
		Social Sciences (N=806)	Science/ Technology (N=187)	Commerce/ Management (N=442)	
1	Desktop	298(36.9%)	96(51.3%)	252(57.1%)	646(45.1%)
2	Laptop	130(16.1%)	83(44.1%)	189(42.7%)	402(28.1%)
3	Smart Phone	759(94.2%)	181(96.7%)	437(98.8%)	1377(95.9%)

Data in Table 3 shows that,1377(95.9%) of the respondents use the Smart Phone, followed by 646(45.1%) of the respondents use Desktop and 402(28.1%) make use of the Lap Top which is a minimal number. It is interesting to know that the Smart phone is being widely used, as it has maximum mobility and convenience.

Table 4. Time Spent on Internet

The data shows the time spent by the respondents on searching information through the Internet which is collected and presented in Table 4.

Sl.	Time Spent	Discipline
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No		Social Sciences (N=806)	Science/ Technology (N=187)	Commerce/ Management (N=442)	Total (N=1435)
1	Less than 1 hour	129(16.0%)	17(9.1%)	19(4.2%)	165(11.5%)
2	1-2 hours	321(39.9 %)	26(13.9%)	41(9.3%)	388(27.0%)
3	2-3 hours	193(23.9%)	86(46.0%)	204(46.1%)	483(33.6%)
4	3-4 hours	116(14.4%)	38(20.3%)	115(26.1%)	269(18.7%)
5	More than 5 hours Irregular	47(5.8%)	20(10.7%)	63(14.3%)	130(9.1%)
6	χ^2 - Value	$\chi^2 = 285.146, df=8, p=.000$			

The data shown in table 4 and figure 4 summarised the duration of time spent on the internet by the students of distance learning. Table indicates that 483(33.6%) of the respondents spent 2-3 hours using the Internet per day, followed by 388(27.0%) of the respondents spent 1-2 hours, 165(11.5%) of the respondents spent Less than 1 hour and only 90(6.4%) of the respondents spent More than 5 hours using the Internet.

The χ^2 -test showed for 8 d.f. at the 5% level of significance shows that there is significant difference between the time spent using the Internet by the respondents of various categories ($\chi^2=285.146, p=.000 > 0.05$). The faculty of Science and Technology distance learners spent more time in using the internet compared to other categories.

Table 5. Rating of purposes of use of Internet

It is interesting to study the purpose of the respondents in using the Electronic Information Resources and the responses are presented in Table 4.1.450.

Sl. No	Purpose	Rating Scale	Discipline			Total (N=1435)
			Social Sciences (N=806)	Science/ Technology (N=187)	Commerce/ Management (N=442)	
1	To prepare notes/ Assignments/ Seminar presentations	Very Often	85(10.5%)	23(12.2%)	61(13.8%)	169(11.8%)
		Often	575(71.3%)	133(71.1%)	315(71.2%)	1023(71.3%)
		Sometimes	69(8.6%)	15(8.1%)	33(7.4%)	117(8.2%)
		Rarely	48(6.1%)	10(5.3%)	20(4.5%)	78(5.4%)
		Never	29(3.5%)	6(3.2%)	13(3.0%)	48(3.3%)
2	Online learning (E-learning)	Very Often	27(3.4%)	57(30.5%)	122(27.6%)	206(14.3%)
		Often	428(53.1%)	123(65.8%)	290(65.6%)	841(58.6%)
		Sometimes	325(40.3%)	6(3.2%)	12(2.7%)	343(23.9%)

		Rarely	20(2.5%)	1(0.5%)	10(2.3%)	31(2.2%)
		Never	6(0.7%)	0(0.0%)	8(1.8%)	14(1.0%)
3	To keep abreast of latest development in the field	Very Often	69(8.6%)	9(4.9%)	41(9.3%)	119(8.3%)
		Often	255(31.8%)	166(88.7%)	352(79.6%)	773(53.9%)
		Sometimes	165(20.4%)	10(5.4%)	32(7.3%)	207(14.4%)
		Rarely	280(34.7%)	1(0.5%)	6(1.3%)	287(20.0%)
		Never	37(4.5%)	1(0.5%)	11(2.5%)	49(3.4%)
4	For professional development	Very Often	5(0.6%)	14(7.5%)	47(10.6%)	66(4.6%)
		Often	242(30.1%)	138(73.8%)	339(76.8%)	719(50.1%)
		Sometimes	420(52.1%)	27(14.5%)	32(7.2%)	479(33.4%)
		Rarely	100(12.4%)	8(4.2%)	24(5.4%)	132(9.2%)
		Never	39(4.9%)	0(0.0%)	0(0.0%)	39(2.7%)
5	To prepare for Competitive Exams	Very Often	20(2.4%)	12(6.5%)	30(6.9%)	886(61.7%)
		Often	37(4.5%)	29(15.5%)	69(15.6%)	135(9.4%)
		Sometimes	107(13.2%)	26(13.9%)	63(14.2%)	196(13.7%)
		Rarely	553(68.7%)	91(48.7%)	242(54.8%)	62(4.3%)
		Never	89(11.1%)	29(15.5%)	38(8.5%)	156(10.9%)

Table 5 reveals that, majority 1023(71.3%) of the students of distance education often use the e-resources to prepare notes/assignments/seminars for their study, followed, 841(58.6%) of them often use e-resources for the purpose of Online learning (E-learning), 773(53.9%) of them often use to keep abreast of latest development in the field, 719(50.1%) of them often use it for professional development. It is also described that 886(61.7%) respondents very often use the e-resources to prepare for Competitive Exams.

Table 6. Preferred E-Resources by the Respondents

The distance learners from different faculties such as Social Science, Science and Technology and Commerce and Management use different electronic information resources. The responses received from the learners of these faculties are given in the table 6. The types of e-resources accessed by the respondents vary distinctly, the e-books, e-dissertations, e-newspapers and e-dictionaries are used very much. Magazines, dictionaries, audio-visuals are excessively used and the others are used very moderately as observed in the data presented in Table 6.

Sl. No	E-Resources	Discipline				χ^2 - Value
		Social Sciences	Science/ Technology	Commerce/ Management	Total (N=1435)	

		(N=806)	(N=187)	(N=442)		
1	E-journals	238(29.5%)	109(58.2%)	253(57.2%)	600(41.8%)	$\chi^2 =114.093$ df=2,p=.000*
2	E-books	571(70.8%)	126(67.3%)	262(59.3%)	959(66.8%)	$\chi^2 =17.260$ df=2,p=.000*
3	Databases (Online/Off-line)	239(29.6%)	104(55.6%)	243(54.9%)	586(40.8%)	$\chi^2 =95.214$ df=2,p=.000*
4	E- Theses and dissertations	345(42.8%)	146(78.1%)	312(70.5%)	803(56.0%)	$\chi^2 =132.092$ df=2,p=.000*
5	Audio visual resources	421(52.2%)	145(77.5%)	347(78.5%)	913(63.6%)	$\chi^2 =103.134$ df=2,p=.000*
6	E-Dictionaries	499(61.9%)	147(78.6%)	324(73.3%)	970(67.6%)	$\chi^2 =28.822$ df=2,p=.000*
7	E-magazines	504(62.5%)	143(76.4%)	318(72.0%)	965(67.2%)	$\chi^2 =19.792$ df=2,p=.000*
8	CD-ROM Databases	310(38.4%)	105(56.1%)	248(56.1%)	663(46.2%)	$\chi^2 =44.326$ df=2,p=.000*
9	E- News papers	645(80.1%)	153(82.0%)	362(81.9%)	1160(80.8%)	$\chi^2 =.782$ df=2,p=.000*
10	E-Encyclopaedia	231(28.6%)	118(63.1%)	279(63.1%)	628(43.8%)	$\chi^2 =170.425$ df=2,p=.000*

Note: * p<0.05

The table 6 reveals the usage of different types of e-resources among the distance learners. The table describes that majority 1160 (80.8%) of the respondents were accessing E-Newspapers, whereas 970(67.6%) of the students access E-Dictionaries, 965(67.2%) of them use E-Magazines, 959(66.8%) of them use E-Books, 913(63.6%) of them locate information by Audio Visual resources and 586(40.8%) use Databases (Online/Off-line).The Chi-Square test has been employed to know the significant difference between the use of various types of Electronic Information Resources and the students of distance learning and it is found that there is a significant association between the use of various types of Electronic Information Resources and the students of distance learning.

Table 7. Awareness about features of E-Resources

There are many reasons why e- Resources are now very popular and are attracting the academics – the students and teachers. Especially for the distance learners the e-resources the

resources on the internet and the open access resources are a boon. The study intends to find out the well characterized features of the E-resources and their importance in study and learning. About seven good features of E-resources has been identified and they has collected the data on their account and presented the same in Table 7.

Sl. No	Features	Discipline				χ^2 - Value
		Social Sciences (N=806)	Science/ Technology (N=187)	Commerce/ Management (N=442)	Total (N=1435)	
1	Quick Retrieval of information (24x7)	746 (92.5%)	168 (89.8%)	398 (90.1%)	1312 (91.4%)	$\chi^2=2.989$ df=2,p=.224
2	Links to other resources	520 (64.6%)	137 (73.2%)	322 (72.8%)	979 (68.2%)	$\chi^2=11.665$ df=2,p=.003*
3	Availability in free of charge	465 (57.6%)	100 (53.4%)	237 (53.6%)	802 (55.9%)	$\chi^2=2.428$ df=2,p=.297
4	Full-text searching	481 (59.6%)	96 (51.3%)	228 (51.5%)	805 (56.1%)	$\chi^2=9.572$ df=2,p=.008*
5	Time saving	718 (89.0%)	173 (92.5%)	409 (92.3%)	1300 (90.6%)	$\chi^2=4.922$ df=2,p=.085
6	Up-to-date	712 (88.3%)	173 (92.5%)	390 (88.2%)	1275 (88.9%)	$\chi^2=2.916$ df=2,p=.233
7	Quick publishing of data, research results...	284 (35.2%)	143 (76.4%)	342 (77.3%)	769 (53.6%)	$\chi^2=249.078$ df=2,p=.000*

Note: * p<0.05

The table 7 illustrates the distance learners of Kuvempu University who were questioned about the features of electronic resources they considered to be the most important for the efficiency of their study. Analysing the respondents reply, it was found that most of the users prefer to use electronic resources for quick retrieval of information (24x7) i.e,1312(91.4%), followed by time saving i.e., 1300(90.6%), up-to-date i.e,1275(88.9%), links to other resources i.e,979 (68.2%) and availability in free of charge i.e,802(55.9%).

The Chi-Square test has been employed to know the significant difference between the features of use of Electronic Information Resources and the students and it is found that there is no significant association between the features of use of Electronic Information

Resources and the students($p>0.05$).The Chi-Square test also reveals that there is a significant association between the features of use of Electronic Information Resources and the students , for the fields Links to other resources($p=.003$), Full-text searching($p=.008$) and Quick publishing of data, research results...($p=.000$).

Table 8. Preferred Search options for Searching Information

There are several types of search methods available on Search Engines and therefore the users were asked which search operation they prefer to use. The data is presented in Table 8.

Sl. No	Search Options	Discipline				χ^2 - Value
		Social Sciences (N=806)	Science/ Technology (N=187)	Commerce/ Management (N=442)	Total (N=1435)	
1	Simple search	680 (84.3%)	161 (86.1%)	394 (89.1%)	1235 (86.0%)	$\chi^2 =5.422$ df=2,p=.066
2	Advanced search	157 (19.4%)	53 (28.4%)	135 (30.5%)	345 (24.0%)	$\chi^2 =21.313$ df=2,p=.000*
3	Boolean (AND, OR, NOT)	162 (20.1%)	60 (32.1%)	140 (31.6%)	362 (25.2%)	$\chi^2 =25.639$ df=2,p=.000*

Note: * $p<0.05$, insignificance comparisons are omitted

Table 8 shows the instances of searching online information resources. It is observed that majority 1235(86.0%) students would use simple search technique to search the needed information, whereas 362(25.2%) respondents use the Boolean searching technique and remaining 345(24.0%) respondents use the advanced search technique to search the needed information.

To test the significant association between the preferred search options for searching information and the students, the Chi Square test has been employed and it is found that there is a significant association between the preferred search options for searching information($p=000$).

Table 9. Problems faced while accessing E-Resources

The respondents were also asked to mention the difficulties faced by them while accessing and use of e-Resources as they have some virtual access. The study has identified some key problems and the users were asked to respond to them. The data collected in this context is presented in the Table 9.

Sl. No.	Problems	Discipline				χ^2 - Value
		Social Sciences (N=806)	Science/ Technology (N=187)	Commerce/ Management (N=442)	Total (N=1435)	
1	Lack of training to access and use the e-resources	585 (72.5%)	122 (65.2%)	291 (65.8%)	998 (69.5%)	$\chi^2 = 8.012$ df=2, p=.018*
2	Non-availability of e-resources on the subject area	420 (52.1%)	133 (72.1%)	322 (72.9%)	875 (61.0%)	$\chi^2 = 60.914$ df=2, p=.000*
3	Lack of system speed and network capacity	495 (61.4%)	107 (57.2%)	254 (57.4%)	856 (59.7%)	$\chi^2 = 2.377$ df=2, p=.305
4	Lack of access via hand held devices (mobile phone)	565 (70.1%)	107 (57.2%)	253 (57.2%)	925 (64.5%)	$\chi^2 = 25.526$ df=2, p=.000*
5	Lack of Time	644 (80.0%)	121 (64.7%)	283 (64.0%)	1048 (73.0%)	$\chi^2 = 44.087$ df=2, p=.000*
6	Irrelevant content on the internet	474 (58.8%)	132 (70.5%)	346 (78.2%)	952 (66.3%)	$\chi^2 = 50.206$ df=2, p=.000*

Note: * p<0.05

According to the filled in questionnaires, they found some problems that are faced by the users when they are using e-resources. Responses obtained from the distance learners on the issue of hindrance to their use of electronic resources are quite revealing. All the constraints were identified and put across and were confirmed in the analysis, as presented in

table 9. The main problem experienced by the users was lack of time with 1048(73.0%) who responded that the key factor was lack of training to access and use of electronic resources with 998(69.5%)response. Irrelevant content with 952(66.3%)comes next and there are other problems experienced by the students of distance learning such as lack of access via hand held devices (mobile phone) with 925(64.5%)response and non – availability of relevant information on the internet with 875(61.0%).

To test the significant association between the Constraints faced while using electronic resources and the Distance Lerner’s, the Chi Square test was employed and it was found that there was a significant association between the Constraints faced while accessing electronic resources and the Distance Lerner’s except for the field lack of system speed and network capacity(p=.305).

Table 10. Type of Website resources for access

To complement the data from Table 10 a query was put to the students to know the type of websites for resources accessed by them.

Sl. No	Website Resources	Discipline				χ^2 - Value
		Social Science (N=622)	Science/ Technology (N=143)	Commerce/ Management (N=336)	Total (N=1101)	
1	Dr. B.R. Ambedkar Open University	232 (28.7%)	45 (24.1%)	90 (20.3%)	367 (25.6%)	$\chi^2 =10.896$ df=2,p=.004
2	Netaji Subhas Open University	246 (30.5%)	60 (32.1%)	89 (20.13%)	395 (27.5%)	$\chi^2 =17.674$ df=2,p=.000
3	Indira Gandhi National Open University	577 (71.6%)	157 (83.9%)	348 (78.8%)	1082 (75.4%)	$\chi^2 =15.963$ df=2,p=.000
4	Karnataka State Open University	238 (29.5%)	86 (45.9%)	179 (40.5%)	503 (35.1%)	$\chi^2 =26.385$ df=2,p=.000
5	INFLIBNET E-PG Patashala website	308 (38.2%)	102 (54.6%)	296 (66.9%)	706 (49.1%)	$\chi^2 =96.896$ df=2,p=.000

The table 10 showed that the website of Indira Gandhi National Open University, New Delhi with 1082(75.4%) was the highest used Website by the students of distance education under study. The next is the INFLIBNET's e-PG-Patashala with 706(49.1%).

It is quite natural that the two are national level organizations which are supporting the distance education learners with good course material which the learners want to use. About 503(35.1%) of the students of distance education used Karnataka State Open University Website, 395(27.5%) used Tamil Nadu Open University Website resources and 395(27.5%) used Dr. B.R. Ambedkar Open University Website resources.

Findings of the study.

- Out of 1435 respondents, 844 (58.8%) are female and 591 (41.2%) are male respondents. The results of the study revealed that both males and females were pursuing their higher education through distance education mode and the number of female respondents were more compared to male respondents in all the three faculties.
- A large number of respondents 980 (68.2%) are employed, followed by 173(12.1%) who are businessmen and 130(9.1%) belonging to students category
- Vast majority 1377(95.9%) of the respondents use the Smart Phone, followed by 646(45.1%) of the respondents use Desktop and 402(28.1%) make use of the Lap Top which is a minimal number. It is interesting to know that the Smart phone is being widely used, as it has maximum mobility and convenience.
- About 483(33.6%)of the respondents spent 2-3 hours using the Internet per day, followed by 388(27.0%) of the respondents spent 1-2 hours, 165(11.5%) of the respondents spent Less than 1 hour and only 90(6.4%) of the respondents spent More than 5 hours using the Internet.
- Majority 1023(71.3%) of the students of distance education often use the e-resources to prepare notes/assignments/seminars for their study, followed, 841(58.6%) Online learning (E-learning), 773(53.9%)to keep abreast of latest development in the field, 719(50.1%) for professional development ,886(61.7%) respondents very often use the e-resources to prepare for Competitive

- Most of the users prefer to use electronic resources for quick retrieval of information (24x7) i.e., 1312(91.4%), followed by time saving i.e., 1300(90.6%), up-to-date i.e., 1275(88.9%), links to other resources i.e., 979 (68.2%) and availability in free of charge i.e., 802(55.9%).
- Majority 1160 (80.8%) of the respondents were accessing E- Newspapers, whereas 970(67.6%) of the students access E-Dictionaries, 965(67.2%) of them use E-Magazines, 959(66.8%) of them use E-Books, 913(63.6%) of them locate information by Audio Visual resources and 586(40.8%) use Databases (Online/Off-line)
- Majority 1235(86.0%) students would use simple search technique to search the needed information, whereas 362(25.2%) Boolean searching technique and remaining 345(24.0%) the advanced search technique to search the needed information
- Majority 1048(73.0%) of the users faced the main problem was lack of time, followed by 998(69.5%) lack of training to access and use of electronic resources, 952(66.3%) Irrelevant content, lack of access via hand held devices (mobile phone) with 925(64.5%) response and non – availability of relevant information on the internet with 875(61.0%).
- The website of Indira Gandhi National Open University, New Delhi with 1082(75.4%) was the highest used Website by the students of distance education under study. The next is the INFLIBNET's e-PG-Patashala with 706(49.1%).

Conclusion and Recommendations.

The study concludes that the information use is not physical concept which has got the tangibility, on the other hand it is psycho-cosmic and therefore it is intangible. In the purview of the above remark it can be stated that there would be perpetual and continued studies of users of information and it can be visualized as a form of “Spiral of Scientific Method” envisaged by Ranganathan, towards growth of knowledge. The findings of the study focused on the impact of ICT on implementing successful frameworks of introducing e-learning in the university educational system, creating awareness during the contact classes about the importance of Information and Communication Technologies for distance learning.

Hence, it is suggested that advanced training for users at different levels should be started. The contents of the training programs should be (a) Basic introduction to library services and facilities, (b) OPAC Search (c) Methods and tools for searching information resources, (d) Internet Use (e) Online and CD-ROM databases, (f) Using electronic journals, (g) Introducing reference books, (h) Introducing audio/video materials, and (i) Introducing appropriate indexes and abstracts. Users should be discouraged from merely browsing the shelves.

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