

Use of Open Access and Licensed E-Books by the Researchers in Academic and Research Institutes in Karnataka

Vidyarani, M.P.

Research scholar
Dept. of Studies in Library and Information Science
University of Mysore, Mysore
E-mail:vidyamalavalli@gmail.com

Dr. C.P. Ramashesh

Research Supervisor
Former University Librarian
University of Mysore, Mysore
E-mail:cpramasesh@gmail.com

***Abstract** - The electronic books are among most extensively used electronic resources and its impact on academic community is much important. There are several managerial and technical prospects that affect usability of electronic books by research scholars in an academic institution. The purpose of this study is to investigate the use of open access and licensed electronic books by the research scholars in academic and research institutions in Karnataka. The population of the study consists of responses from 1110 research scholars. The survey method was adopted using questionnaire as a tool for data collections. It is clear from the study that large number of research scholars are aware and use electronic books for their academic and research purpose. The institutes should subscribe large number of e-books for target users and proper training should be given to maximise the use of e-books.*

Keywords: Electronic Book, Electronic Resources, E-Books, Digital Books, E-Reading.

1. Introduction

Over the last several years, electronic books have rapidly gained acceptance among university libraries and their users. The electronic book is beginning to have a significant role in both class room and distance learning as well as in research activity in the twenty-first century. Electronic book is an emerging technology which is likely to have a large impact in teaching and learning over the next two-to-three year time horizon (Johnson, Levine, Smith, & Stone, 2010) E-Books may be defined as the digital media equivalent of printed textbooks, read on computers or other digital devices (Rickman, Von Holzen, Klute, & Tobin, 2009). Although e-books may be the electronic version of a printed book, some can exist without any printed equivalent. E-books offer a range of benefits to both educators and students, including ease of accessibility and searching capabilities. The recent years various studies have been carried out which have demonstrated the importance, the increase in use and the progressive penetration e-books in the academic and scientific sectors. The reasons the progression are widely known immediacy of access, updating capacity, storage capacity, low costs, connectivity, space saving, portability access anywhere, among other advantage. The present study is carried out to know the use of open access and licensed e-books by the researchers in academic and research institutes in Karnataka.

2. Objectives of the Study

The main objectives of the study are:

1. To know the gender wise use of electronic books for academic and research needs.
2. To determine the types of electronic books being accessed by researchers.
3. To know the frequency of the use of e-books for academic and research needs.
4. To know the various purposes of using the full-text electronic books.
5. To study the extent of use of electronic books by the research scholar.
6. To know the various types of devices used for accessing full-text electronic books.

3. Scope, Limitations and Methodology

The scope of the study is restricted to research scholars of selected academic and research institutes in Karnataka. The questionnaire method was used for the present study to collect the necessary data, keeping in view the objectives of the study. A total of 1200 questionnaires were distributed among research scholars of academic and research institutes in Karnataka covered under the study and 1110 filled in questionnaires were received. The rate of response of 92.5%. In addition to questionnaire method, interview schedule and observation method were also used to collect required information as a supplement to the questionnaire method.

4. Analysis and Interpretation of Data

The data collected by different methods were analysed, interpreted and same has been presented in the form of tables below.

4.1. Gender Wise Distribution of Research Scholars

The gender wise distribution of the study has been shown in Table-1. The table-1 shows that out of 1110 research scholars. About 639 (57.6%) are male and 471(42.4%) are female using open access and licensed electronic books.

Table-1: Gender Wise Distribution

Gender	Gulbarga University	University of Mysore	Bangalore University	JNCAR	RRI	NAL	Astrophysics	IISC	Total
Male	78 (56.1%)	76 (53.9%)	81 (57.9%)	94 (67.1%)	76 (54.3%)	78 (55.7%)	77 (55.0%)	79 (60.8%)	639 (57.6%)
Female	61 (43.9%)	65 (46.1%)	59 (42.1%)	46 (32.9%)	64 (45.7%)	62 (44.3%)	63 (45.0%)	51 (39.2%)	471 (42.4%)
Total	139 (100%)	141 (100%)	140 (100%)	140 (100%)	140 (100%)	140 (100%)	140 (100%)	130 (100%)	1110 (100%)

The Table-1 also depicts that majority of research scholars, about 94(67.1%) of JNCAR are male using open access and licensed electronic books and 65(46.1%) of research scholars of University of Mysore are female using open access and licensed electronic books.

4.2. Use of Various Types of E-Books

The use of various types electronic books by research scholars has been shown in Table-2. The Table-2 shows that 856 (77.1%) of research scholars use text books, followed by 431(38.8%) use proceedings of seminars and conferences, about 388(35%) use technical books, and 260(23.4%) use reference sources.

Table-2: Use of Various Types of E-Books

Institution	Reference Sources	Text Books	Technical Books	Proceedings of Seminars and Conferences
Gulbarga University	24(17.3%)	108(77.7%)	14(10.1%)	39(28.1%)
University of Mysore	26(18.4%)	135(95.7%)	35(24.8%)	64(45.4%)
Bangalore University	33(23.6%)	112(80.0%)	83(59.3%)	45(32.1%)
JNCAR	87(62.1%)	64(45.7%)	37(26.4%)	82(58.6%)
RRI	9(6.4%)	96(68.6%)	88(62.9%)	67(47.9%)
NAL	26(18.6%)	119(85.0%)	14(10.0%)	48(34.3%)
Astrophics	20(14.3%)	109(77.9%)	83(59.3%)	48(34.3%)
IISC	35 (26.9%)	113(86.9%)	34(26.2%)	38(29.2%)
Total	260(23.4%)	856(77.1%)	388(35%)	431(38.8%)
Statistical Result	X²=153.692, P=.000	X²=124.497, P=.000	X²=212.312, P=.000	X²=47.324, P=.000

The Table-2 also depicts that 87(62.1%) of research scholars of JNCAR use reference sources, followed by 135 (95.7%) of research scholars of University of Mysore use text books, 88(62.9%) of research scholars of RRI use technical books, 82(58.6%) of research scholars of JNCAR use proceedings of seminars and conferences.

The X² test was conducted, there exists significant relationship between use of different types of electronic books by Research scholars and institutions. (X²=153.692, P=.000 significant for reference sources, followed by X²=124.497, P=.000 significant for text books, X²=212.312, P=.000 significant for technical books and X²=47.324, P=.000 significant for proceedings of seminars and conferences.)

4.3. Frequency of Use of E-Books

The frequency of use of electronic books by research scholars has been shown in Table-3. The Table-3 depicts that 600(54.1%) of research scholar frequently use open access and licensed e-books, followed by 239(21.5%) of research scholars use moderately, about 154(13.9%) of research scholars use occasionally and 117(10.5%) of research scholars use open access and licensed e-books very frequently.

Table-3: Frequency of Use of E-Books

Institution	Occasionally	Moderately	Frequently	Very frequently	Total
Gulbarga University	20(14.4%)	28(20.1%)	84(60.4%)	7(5.0%)	139(100%)
University of Mysore	23(16.3%)	32(22.7%)	75(53.2%)	11(7.8%)	141(100%)
Bangalore University	10(7.1%)	40(28.6%)	81(57.9%)	9(6.4%)	140(100%)
JNCAR	13(9.3%)	19(13.6%)	34(24.3%)	74(52.9%)	140(100%)
RRI	27(19.3%)	33(23.6%)	80(57.1%)	-	140(100%)
NAL	19(13.6%)	24(17.1%)	91(65.0%)	6(4.3%)	140(100%)
Astrophysics	29(20.7%)	35(25%)	72(51.4%)	4(2.9%)	140(100%)
IISc	13(10.0%)	28(21.5%)	83(63.8%)	6(4.6%)	130(100%)
Total	154(13.9%)	239(21.5%)	600(54.1%)	117(10.5%)	1110(100%)
Statistical Result	X²=333.716, p=.000				

The Table-3 also depicts that 27(19.3%) of research scholars of RRI use e-books occasionally, 40(28.6%) of research scholars of Bangalore University moderately use e-books, 91(65.0%) of research scholars of NAL use e-books frequently and 74(52.9%) of research scholars of JNCAR use e-books very frequently. The X² test was conducted, there exists significant relationship between frequency of use of electronic books by Research scholars and institutions. (X²=333.716, P=.000.).

4.4. Purpose of Use of E-Books

The purpose of use of electronic books by research scholars has been shown in Table-4. The Table-4 depicts that 487 (43.9%) of research scholars use to keep up to date for a moderate extent, followed by 415 (37.4%) of research scholars opine as little extent, 112 (10.1%) of research scholars opine as higher extent, 58 (5.2%) of research scholars opine as not at all use and 38 (3.4%) of research scholars use e-books to very higher extent to keep up to date. About 251 (39.3%) of male research scholars use e-books to keep up to date to moderate extent and 236 (50.1%) of female research scholars use e-books to keep up to date to moderate extent.

Table-4: Purpose of Use of E-Books

Gender		To a very higher extent	To a higher extent	To a moderate extent	To a little extent	Not at all	Total
To keep up to date	Male	32(5.0%)	86(13.5%)	251(39.3%)	229(35.8%)	41(6.4%)	639(100%)
	Female	6 (1.3%)	26(5.5%)	236 (50.1%)	186 (39.5%)	17(3.6%)	471 (100%)
	Total	38(3.4%)	112(10.1%)	487(43.9%)	415(37.4%)	58(5.2%)	1110(100)
Prepare for teaching	Male	-	1(0.2%)	24(3.8%)	204(31.9%)	410(64.2%)	639(100%)
	Female	1(0.2%)	4(0.8%)	7(1.5%)	158(33.5%)	301(63.9%)	471(100%)
	Total	1(0.1%)	5(0.5%)	31(2.8%)	362(32.6%)	711(64.1%)	1110(100)
To participate in seminars, conference, etc.	Male	1(0.2%)	41(6.4%)	188(29.4%)	372(58.2%)	37(5.8%)	639(100%)
	Female	-	21(4.5%)	143(30.4%)	283(60.1%)	24(5.1%)	471(100%)
	Total	1(0.1%)	62(5.6%)	331(29.8%)	655(59%)	61(5.5%)	1110(100)
To do research work	Male	585(91.5%)	54(8.5%)	-	-	-	639(100%)
	Female	444(94.3%)	27(5.7%)	-	-	-	471(100%)
	Total	1029(92.7%)	81(7.3%)	-	-	-	1110(100)
To submit project proposals and publish papers	Male	151(23.6%)	77 (12.1%)	216(33.8%)	187(29.3%)	8 (1.3%)	639(100%)
	Female	115(24.4%)	91(19.3%)	122(25.9%)	142(30.1%)	1(0.2%)	471(100%)
	Total	266(24%)	168(15.1%)	338(30.5%)	329 (29.6%)	9 (0.8%)	1110(100)

About 711(34.1%) of research scholars opine as they not at all use e-books for preparation for teaching, followed by 362(32.65) of research scholars opine as little extent, 31(2.8%) of research scholars opine as moderate extent, 5(0.5%) of research scholars opine as higher extent, 1(0.1%) of research scholars use e-books to very higher extent for preparing for teaching. About 410(64.2%) of male research scholars and 301(63.9%) of female research scholars not at all use e-books to preparation for teaching.

About 655(59%) of research scholars use e-books to participate in seminars, conference etc to a little extent, 311(29.8%) of research scholars opine as moderate extent, 62(5.6%) of research scholars opine as higher extent, 61(5.5%) of research scholars not at all use e-books to participate in seminars, conference etc and 1(0.1%) of research scholars use e-books to participate in seminars, conference etc to very high extent. About 372(58.2%) of male research scholars and 283(60.1%) of female research scholars use e-books to participate in seminars, conference etc to a little extent.

About 1029(92.7%) of research scholars use of e-books to very high extent for doing research work and 81(7.35%) of research scholars opine as a higher extent. About 585 (91.5%) of male research scholars and 444(94.3%) of female research scholars use of e-books to very high extent. About 338(30.5%) of research scholars use of e-books to moderate extent for submitting project proposals and publish papers, followed by 329(29.6%) of research scholars opine as they use to little extent, about 266(24%) of research scholars opine as very higher extent, 168(15.15) of research scholars opine as higher extent and 9(0.8%) of research scholars not at all use e-books for submitting project proposals and publish papers. About 216(33.8%) of male research scholars and 122(25.9%) of female research scholars use e-books to moderate extent for submitting project proposals and publish papers.

4.5.Extent of Satisfaction Towards Use of E-Books

The extent of satisfaction towards use of e-books by the research scholars has been shown in Table-5. The Table-5 depicts that 706 (63.6%) of research scholars are somewhat satisfied towards use of e-books, followed by 259 (23.3%) of research scholars opine as satisfied, 75 (6.8%) of research scholars opine as Un-Satisfied and 70 (6.3%) of research scholars opine are extremely satisfied towards use of e-books. The table-5 also depicts that all the institution covered under the study highlight that majority of research scholars are somewhat satisfied with use of e-books.

Table-5: Extent of Satisfaction Towards Use of E-Books

Institution	Un satisfied	Somewhat satisfied	Satisfied	Extremely Satisfied	Total
Gulbarga University	14(10.1%)	41(67.6%)	27(19.4%)	4(2.9%)	139(100.0%)
University of Mysore	10(7.1%)	98(69.5%)	27(19.1%)	6(4.3%)	141(100.0%)
Baglore University	8(5.7%)	78(55.7%)	40(28.6%)	14(10.0%)	140(100.0%)
JNCAR	7(5.0%)	112(80.0%)	17(12.1%)	4(2.9%)	140(100.0%)
RRI	-	72(51.4%)	54(38.6%)	14(10.0%)	140(100.0%)
NAL	16(11.4%)	92(65.7%)	24(17.1%)	8(5.7%)	140(100.0%)
Astrophysics	4(2.9%)	78(55.7%)	46(32.9%)	12(8.6%)	140(100.0%)
IISC	16(12.3%)	82(63.1%)	24(18.5%)	8(6.2%)	130 (100.0%)
Total	75(6.8%)	706(63.6%)	259(23.3%)	70(6.3%)	1110(100.0%)
$X^2 = 86.935, P \text{ value} = .000$					

4.6. Use of Various Devices for Accessing E-Books

The use of various devices for accessing e-books by the research scholars has been shown in Table-6. The Table-6 that 983(88.6%) of research scholars use Laptop, followed by 926(83.4%) of research scholars use Desktop, 431(38.8%) use Kindle, 342(30.8%) use Mobile and 173(15.6%) of research scholars use I Pad for accessing open access and licensed e-books. The Table-6 also depicts that majority of research scholars of all the institutions covered under the use laptops.

Table-6: Use of Various Devices for Accessing E-Books

Institution	Desktop	Laptop	Kindle	Mobile	I. Pad
Gulbarga University	122(87.8%)	128(92.1%)	25(18%)	27(19.4%)	5(3.6%)
University of Mysore	131(92.9%)	129(91.5%)	34(24.1%)	36(25.5%)	5(3.5%)
Bangalore University	106(75.7%)	115(82.1%)	74(52.9%)	55(39.3%)	35(25%)
JNCAR	132(94.3%)	136(97.1%)	45(32.1%)	16(11.4%)	8(5.7%)
RRI	103(73.6%)	115(82.1%)	110(78.6%)	81(57.9%)	68(48.6%)
NAL	115(82.1%)	129(92.1%)	19(13.6%)	38(27.1%)	2(1.4%)
Astrophysics	112(80.0%)	122(87.1%)	103(73.6%)	59(42.1%)	47(33.6%)
IISC	105(80.8%)	109(83.8%)	21(16.2%)	30(23.1%)	3(2.3%)
Total	926(83.4%)	983(88.6%)	431(38.8%)	342(30.8%)	173(15.6%)
Statistical Result	$X^2=40.873$, p=.000	$X^2=29.360$, p=.000	$X^2=282.499$, p=.000	$X^2=100.690$, p=.000	$X^2=239.473$, p=.000

The X^2 test was conducted, there exists significant relationship between use of devices for e-books and Institutions. ($X^2=40.873$, p=.000 significant for Desktop, followed by $X^2=29.360$, p=.000 significant for Laptop, $X^2=282.499$, p=.000 significant for Kindle, $X^2=100.690$, p=.000 significant for Mobile and $X^2=239.473$, p=.000 significant for I. Pad).

5. Recommendations and Suggestions

Based on the result the study following recommendations and suggestions are made for further improvements in utilisation of open access and licensed e-books by the research scholars in academic and research institutes in Karnataka.

- The research scholar should be trained in using advance search options for retrieval of relevant e-books.
- The research scholar should further improve their e-books searching skills to make better use of largely available.
- Publishers should provide user manual for better utilization of open access and licensed e-books
- University/ Institutions libraries should subscribe large number of e-books for users and do necessary activities to improvise utilisation e-books.
- University should organize seminar and workshops for research scholars at regular interval of time to keep them in in phase with emerging techniques in electronic publishing.

6. Conclusion

The rapid acquisition of electronic books has changed the character of Library catalogues, providing patrons with access to much more information. Electronic books are familiar to most of the academic institutions and universities. Slow Internet speed and getting less number of relevant documents are the prime problems to use the e-books. The subscription with limited user access to the databases is also noticed from the users. The e-books prospects are significant to the users. The e-book allows libraries to continue to acquire new content despite tighter budgets and limited physical space. In addition, publishers have made electronic books more attractive through big deal type offers that provide large collections of content at attractive prices. The research scholars of academic and research institutions are inculcating habits to maximise the use of e-books.

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