Use of Electronic Information Resources by the Science Students of First Grade Colleges in Mysuru Region: A Study

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Abstract

The present study was carried out in First Grade Colleges in the Mysuru region to examine the factors that affect the optimum utilisation of electronic information resources by the students. The study mainly focused on the use of different types of Electronic Information Resources by the science students, sources of awareness, Learn to use, problems faced, purpose of use, preferred search engines and search methods for effective retrieval of Electronic Information Resources. For this purpose, the authors prepared a well-structured questionnaire as a tool for data collection, and the collected questionnaire has been analysed and presented with useful percentage analysis and suitable tables for the presentation of data. The article concluded with summaries of the results, highlighting the major findings and suggestions.

Keywords
Electronic Information Resources, Retrieval Techniques, Search Strategies

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1. Introduction

The recent developments in Information Technology have changed the global scenario. Each and every aspect of human society has been affected by IT revolution and opened up new opportunities and challenges for all. The Internet has brought data communication and information exchange into a new level, providing the means to access a wide variety of databases and information repositories throughout the world. Anyone with a computer and a link to a network can access an astonishing array of information resources located throughout the world. The technology for transfer of information has advanced so rapidly that electronic publishing, electronic storage, processing and delivery of information, including text, images, audio and video, is now possible. Libraries, in particular, have benefited from these developments. The science students of the First Grade Colleges under the region of Mysuru are gradually adopting new technologies to satisfy their information needs while carrying out academic activities.

2. Review of Literature

Many similar studies related to the topic have been reviewed, and the literature review gives a broader outlook. Some of the important reviews are presented below**.**

Natarajan et al. (2010) surveyed faculty and research scholars at Annamalai University, India, finding low usage of e-resources despite their availability. Key barriers included lack of time, awareness, subject coverage, and slow download speeds. Kiran Kumar and Kumbar (2015) studied engineering institutions under Visvesvaraya Technological University in Karnataka, assessing factors affecting the utilization of electronic information resources. They discovered that while faculty members were generally aware of resources and library services, they required training in information search and retrieval in an online context. Mani and Thirumagal (2016) explored awareness, preferences, and issues surrounding e-resources among students in self-financing engineering college libraries in Tamil Nadu. Osinulu (2020) focused on the awareness and use of electronic information resources among students in the College of Health Sciences, Sagamu, Nigeria, revealing that most students were unaware of available e-resources and reported infrequent usage. Major constraints identified included inadequate

computing facilities, inconsistent power supply, and slow internet. Recommendations included improving infrastructure, leveraging social media for awareness, and fostering collaboration between librarians and faculty for specialised database training.

3. Objectives of the Study

The objectives behind conducting the present study are:

1. To identify various types of electronic information resources available for the science students of First Grade Colleges of the Mysuru region.
2. To know the level of awareness towards different types of Electronic information resources by the science students of First Grade Colleges of the Mysuru region.
3. To know the frequency of use, learn to use and the purpose of use of e-resources.
4. To identify the problems faced by the students while using electronic information resources.
5. To identify the preference for the internet and factors influencing the use of search engines.
6. To know the field-based searching techniques used by the students for accessing information on the internet.
7. To know the degree of Satisfaction obtained by the students on using e-resources.
8. To suggest ways and means for maximising the use of electronic information resources by the Science students in First Grade Colleges in the Mysuru region.

4. Methodology

The study's scope is restricted to the Use of Electronic Information Resources by the Students of Science in first-grade colleges in the Mysuru region. At present, the Mysuru region has a total of 47 First Grade colleges with science. All the 47 colleges offering science course are covered in this study. The survey method was adopted using a questionnaire as a tool for data collection. A structured questionnaire was designed and distributed among the science students studying in the First Grade Colleges in the Mysuru region. Out of 2896 questionnaires distributed among students, 2254 filled-in questionnaires were received back, amounting to 77.83%. In addition to the questionnaire method, the interview and observation methods were also used to collect the required information.

5. Data Analysis

The study uses statistical techniques for the analysis of data and presents it in the form of tables.

5.1. Gender Wise Distribution

Table 5.1 shows that out of the 2254 students, 895 (39.71%) are ‘Male’, and the remaining 1359 (60.29%) are ‘Female’.

Table 5.1: Gender Wise Distribution

Gender	Government (N=1348)	Private Aided (N=702)	Private Un-Aided (N=204)	Total (N=2254)
Male	503(37.31)	298(42.45)	94(46.08)	895(39.71)
Female	845(62.69)	404(57.55)	110(53.92)	1359(60.29)
Note: Figures in parentheses indicate percentage				

5.2. Preferred Version of Resources

The Table-5.2 depicts that 997 (44.23%) of students prefer ‘Print Resources’ of information resources with Mean 1.47442 and SD 0.65719, 510 (22.63%) of students prefer ‘Electronic Resources’ of information resources with Mean 1.63333 and SD 0.66632, 747 (33.14%) of students prefer ‘Both print and electronic version’ of information resources with Mean 1.42035 and SD 0.63374.

Table 5.2: Preferred Version of Resources

Prefer to use	Government (N=1348)	Private Aided (N=702)	Private Un-Aided (N=204)	Total (N=2254)	Mean	SD
Print Resources	615(45.62)	291(41.45)	91(44.61)	997(44.23)	1.47442	0.65719
Electronic resources	241(17.88)	215(30.63)	54(26.47)	510(22.63)	1.63333	0.66632
Both print and electronic resources	492(36.50)	196(27.92)	59(28.92)	747(33.14)	1.42035	0.63374
Note: Figures in parentheses indicate percentage						
$\chi 2$=47.898, df=4, P=0.00						

The $\chi 2$-test was conducted for 04 d.f. at the 5% level of significance shows that there is a significant relationship between preferred version of resources and types of colleges ($\chi 2$=47.898, p=0.00<0.05). It is clear that the preferred version of resources is dependent upon the types of colleges.

5.3. Awareness about Electronic Information Resources available at the library

It is clear from the Table-3 about 2053 (91.08%) of students 'Yes', i.e. they are aware of electronic information resources available at the library with Mean of 1.42377 and SD 0.59766 and 201 (08.92%) of students opine as 'No' i.e. they are not aware of electronic information resources available at the library with Mean 2.19403 and SD 0.80246.

Table 5.3: Awareness of Electronic Information Resources available at the Library

Aware about Electronic nformatio Resources	Government (N=1348)	Private Aided (N=702)	Private Jn-Aided (N=204)	Total N=2254	Mean	SD
Yes	1299 (96.36)	638 (90.88)	116 (56.86)	2053 (91.08)	1.42377	0.59766
No	49 (03.64)	64 (09.12)	88 (43.14)	201 (08.92)	2.19403	0.80246
Note: Figures in parentheses indicate percentage						
$\chi 2$=340.454, df=2, P=0.00						

The $\chi 2$-test was conducted for 02 d.f. The 5% level of significance shows that there is a significant relationship between awareness of electronic information resources available at the library and types of colleges ($\chi 2$=340.454, p=0.00<0.05). It is clear that awareness of electronic information resources available at the library is dependent upon types of colleges

5.4. Frequency of Use of E-Resources

The Table-5.4 shows that 917 (40.68%) of students use e-resources 'Fortnightly' Mean 1.54308 and SD 0.70173, followed by 628 (27.86%) of students use e-resources 'Weekly' Mean 1.40446 and SD 0.57726, 627 (27.82%) of students use e-resources 'Daily' Mean 1.50877 and SD 0.64975, 82 (03.64%) of students 'Never' use e-resources with Mean 1.47561 and SD 0.68478.

Table 5.4: Frequency of Use of E-Resources

Frequency of Use of E-Resources	Gover nment (N=1348)	Private Aided (N=702)	Private Un-Aided (N=204)	Total (N=2254)	Mean	SD
Daily	362 (26.85)	211 (30.06)	54 (26.47)	627 (27.82)	1.50 877	0.64 975
Weekly	403 (29.90)	196 (27.92)	29 (14.22)	628 (27.86)	1.40 446	0.57 726
Fortnightl y	531 (39.39)	274 (39.03)	112 (54.90)	917 (40.68)	1.54 308	0.70 173
Never	52 (03.86)	21 (02.99)	09 (04.41)	82 (03.64)	1.47 561	0.68 478
Note: Figures in parentheses indicate percentage						
$\chi 2$=29.968, df=6, P=0.00003986						

The $\chi 2$-test was conducted for 06 d.f. The 5% level of significance shows that there is a significant relationship between the frequency of use of e-resources and types of colleges ($\chi 2$=29.968, p=0.00003986<0.05). It is clear that the frequency of use of e-resources is dependent upon types of colleges

5.5. Access to Electronic information Resources Available in your College Library

Table 5.5 shows that 2060 (91.39%) of students 'Yes', i.e. they have access to electronic resources available in the college library with a Mean 1.45243 and SD 0.62019 and 194 (08.61%) of students opine as 'No' i.e. they do not access to electronic resources available in the college library with a Mean 1.91753 and SD 0.85156.

Table 5. 5: Access to Electronic Information Resources Available in your College Library

Access any electronic information resources available in your college library	Government (N=1348)	Private Aided (N=702)	Private Un-Aided (N=204)	Total (N=2254)	Mean	SD
Yes	1269 (94.14)	650 (92.59)	141 (69.12)	2060 (91.39)	1.45243	0.62019
No	79 (05.86)	52 (07.41)	63 (30.88)	194 (08.61)	1.91753	0.85156
Note: Figures in parentheses indicate percentage						
$\chi 2$=142.893, df=2, P=0.000						

The $\chi 2$-test was conducted for 02 d.f. The 5% level of significance shows that there is a significant relationship between access to electronic resources available in your college library and types of colleges ($\chi 2$=142.893, p=0.00<0.05). It is clear that access to electronic resources available in your college library is dependent upon the type of college.

5.6. Type of E-Resources Accessed

The Table-5.6 depicts that 1265 (56.12%) of students regularly access news chippings with Mean 1.52885 and SD 0.62440, followed by 1252 (55.55%) access e-books with Mean 1.50080 and SD 0.62624, 608 (26.97%) access e-journals with Mean 1.59704 and SD 0.66919, 203 (09.01%) access full text databases with Mean 1.85222 and SD 0.70034, 169 (07.50%) access bibliographical databases with Mean 1.78698 and SD 0.64511, 36 (01.60) of students access other types of e-resources like e-reports, e-dissertations, e-modules etc with Mean 1.75000 and SD 0.79495.

Table 5.6: Type of E-Resources Accessed

Type of e-resources	Government (N=1269)	Private Aided (N=650)	Private Un-Aided (N=141)	Total (N=2060)	Mean	SD
E-Journals	308(22.85)	237(33.76)	63(30.88)	608(26.97)	1.59704	0.66919
E-Books	714(52.97)	449(63.96)	89(43.63)	1252(55.55)	1.50080	0.62624
Bibliographic databases	57(04.23)	91(12.96)	21(10.29)	169(07.50)	1.78698	0.64511
Full-text databases	67(04.97)	99(14.10)	37(18.14)	203(09.01)	1.85222	0.70034
News clippings	685(50.82)	491(69.94)	89(43.63)	1265(56.12)	1.52885	0.62440
Others like e-reports, e-dissertations, e-modules	17(01.26)	11(01.57)	08(03.92)	36(01.60)	1.75000	0.79495
Note: Figures in parentheses indicate percentage and because of multiple choice options the percentage is exceeded to more than 100%						
$\chi 2$=91.701, df=10, P=0.00						

The $\chi 2$-test was conducted for 10 d.f. The 5% level of significance shows that there is a significant relationship between the type of e-resources accessed and the types of colleges ($\chi 2$=91.701, p=0.00<0.05). It is clear that type of e-resources accessed is dependent upon types of colleges

5.7. Aware of N-List services

The Table 5.7 highlights that about 2153 (95.52%) of students answered 'Yes', i.e. they are aware of N-List services, with a Mean of 1.45379 and a standard deviation of 0.63847, and 101 (04.48%) of students answered 'No', i.e. they are not aware of N-List services, with a Mean of 2.31683 and a standard deviation of 0.46524.

Table 5.7: Aware of N-List services

Aware of N-List services	Government (N=1348)	Private Aided (N=702)	Private Un-Aided (N=204)	Total (N=2254)	Mean	SD
Yes	1348 (100.00)	633 (90.17)	172 (84.31)	2153 (95.52)	1.45379	0.63847
No	0 (00.00)	69 (09.83)	32 (15.69)	101 (04.48)	2.31683	0.46524
Note: Figures in parentheses indicate percentage						
$\chi 2$=169.993, df=2, P=0.00						

The $\chi 2$-test was conducted for 02 d.f. The 5% level of significance shows that there is a significant relationship between awareness of N-List services and types of colleges ($\chi 2$=169.993, p=0.00<0.05). It is clear that aware of N-List services is dependent upon types of colleges.

5.8. Learn to use E information resources Services

The Table-5.8 that about 1468 (63.80%) of students learn to use e-resources by guidance from library staffs with Mean 1.52295 and SD 0.67167, followed by 985 (43.70%) attending library orientation program with Mean 1.30355 and SD 0.60475, 872 (38.69%) self-learning with Mean 1.59518 and SD 0.77822, 799 (34.56%) trial and error with Mean 1.74069 and SD 0.77973, 518 (22.98%) of students Guidance from the friends/ Teachers with Mean 1.83205 and SD 0.79135.

Table 5.8: Learn to use E-Resources Services

Learn to use E-resources Services	Government (N=1348)	Private Aided (N=702)	Private Un-Aided (N=204)	Total (N=2254)	Mean	SD
Trial and error	364(27.00)	253(36.04)	162(79.41)	779(34.56)	1.74069	0.77973
Self-learning	512(37.98)	201(28.63)	159(77.94)	872(38.69)	1.59518	0.77822
Guidance from the friends/ Teachers	213(15.80)	179(25.50)	126(61.76)	518(22.98)	1.83205	0.79135
Attending library orientation program	762(56.53)	147(20.94)	76(37.25)	985(43.70)	1.30355	0.60475
Guidance from the library staff	831(61.65)	462(65.81)	145(71.08)	1438(63.80)	1.52295	0.67167
Note: Figures in parentheses indicate percentage, and because of multiple choice options the percentage is exceeded to more than 100%						
$\chi 2$=311.478, df=8 P=0.00						

The $\chi 2$-test was conducted for 08 d.f. at the 5% level of significance shows that there is a significant relationship between learn to use e-resources services and types of colleges ($\chi 2$=311.478, p=0.00<0.05). It is clear that learn to use e-resources services is dependent upon the types of colleges.

5.9. Purpose of Use of Electronic Information Resources

It is identified form the Table-5.9 that the students have top priority 1430 (63.44%) for academic assignments with Mean 1.52797 and SD 0.67336, followed by 1374 (60.96%) to collect relevant information on the subject with Mean 1.53712 and SD 0.70226, 1342 (59.564%) to prepare for Competitive exams with Mean 1.51788 and SD 0.68683, 1306 (57.94%) for Preparation for seminars with Mean 1.53216 and SD 0.69407, 1195 (53.02%) for collecting general Information with Mean 1.61506 and SD 0.71149, 1151 (51.06%) of students use to read journal articles pertaining to our subjects with Mean 1.45004 and SD 0.65305

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Table 5.9: Purpose of Use of E-resources

Purpose	Government (N=1348)	Private Aided (N=702)	Private Un-Aided (N=204)	Total (N=2254)	Mean	SD
To read journal articles pertaining to our subjects	736(54.60)	312(44.44)	103(50.49)	1151(51.06)	1.45004	0.65305

For academic assignments	821(60.91)	463(65.95)	146(71.57)	1430(63.44)	1.52797	0.67336
To collect relevant information on the subject	804(59.64)	402(57.26)	168(82.35)	1374(60.96)	1.53712	0.70226
Preparation for seminars	763(56.60)	391(55.70)	152(74.51)	1306(57.94)	1.53216	0.69407
For collecting general Information	621(46.07)	413(58.83)	161(78.92)	1195(53.02)	1.61506	0.71149
To prepare for Competitive exams	796(59.05)	397(56.55)	149(73.04)	1342(59.54)	1.51788	0.68683
Note: Figures in parentheses indicate percentage and because of multiple choice options the percentage is exceeded to more than 100%						
$\chi 2$=42.008, df=10, P=0.00000747						

The $\chi 2$-test was conducted for 10 d.f. at the 5% level of significance shows that there is a significant relationship between the purpose of use of e-resources and types of colleges ($\chi 2$=42.008, p=0.00000747<0.05). It is clear that the purpose of use of e-resources is dependent upon types of colleges

5.10. Reasons for Using Electronic Information Resources

It is clear from the Table-5.10 that the students have largely benefited with 1809 (80.26%) easier access to information with Mean 1.54782 and SD 0.67985, followed by 1717 (76.18%) time saving with Mean 1.55970 and SD 0.68051, 1663 (73.78%) faster access to information with Mean 1.60433 and SD 0.68207, 1653 (73.34%) access to wider range of sources of information with Mean 1.50696 and SD 0.67859, 1554 (68.94%) of students provide reason to access e-resources because it provide access to current information with Mean 1.55598 and SD 0.67385.

Table 5.10: Reasons for Using Electronic Information Resources

Reason	Government (N=1348)	Private Aided (N=702)	Private Un-Aided (N=204)	Total (N=2254)	Mean	SD
Timesaving	942(69.88)	589(83.90)	186(91.18)	1717(76.18)	1.55970	0.68051
Easier access to information	1012(75.07)	603(85.90)	194(95.10)	1809(80.26)	1.54782	0.67985
Faster access to information	846(62.76)	629(89.60)	188(92.16)	1663(73.78)	1.60433	0.68207
Access to wider range of sources of information	989(73.37)	490(69.80)	174(85.29)	1653(73.34)	1.50696	0.67859
Access to current information	851(63.13)	542(77.21)	161(78.92)	1554(68.94)	1.55598	0.67385
Note: Figures in parentheses indicate percentage and because of multiple choice options the percentage is exceeded to more than 100%						
$\chi 2$=30.162, df=8, P=0.00019788						

The $\chi 2$-test was conducted for 08 d.f. at the 5% level of significance shows that there is a significant relationship between reasons for using electronic information resources and types of colleges ($\chi 2$=30.162, p=0.00019788<0.05). It is clear that reasons for using electronic information resources are dependent upon types of colleges.

5.11. Problems Faced While Using E-Information Resources.

The Table-5.11 depicts that 1452 (64.42%) of students face problem to access e-resources due to off campus access restrictions with Mean 1.49449 and SD 0.68381, followed by 1299 (57.63%) less bandwidth of internet with Mean 1.50423 and SD 0.67321, 1037 (46.01%) varied search pattern with Mean 1.67020 and SD 0.75888, 881 (39.09%) inadequate database subscription with Mean 1.68558 and SD 0.73652, 729 (32.34%) inability to get the desired information with Mean 1.75995 and SD 0.71337, 722 (32.03%) limited access to computer with Mean 1.64820 and SD 0.73557, 745 (33.05%) system hang up with Mean 1.62013 and SD 0.69466,

513 (22.76%) lack of awareness of required electronic resources with Mean 1.88304 and SD 0.77104, 453 (20.10%) mot sure which database to choose with Mean 1.90949 and SD 0.72983, 222 (09.85%) password requirements with Mean 2.00901 and SD 0.75888.

Table 5.11: Problems Faced While Using E-Information Resources

Problems/Barriers	Government (N=1348)	Private Aided (N=702)	Private Un-Aided (N=204)	Total (N=2254)	Mean	SD
Inability to get the desired information	294(21.81)	316(45.01)	119(58.33)	729(32.34)	1.75995	0.71337
Lack of awareness of required electronic resources	186(13.80)	201(28.63)	126(61.76)	513(22.76)	1.88304	0.77104
Inadequate database subscription	421(31.23)	316(45.01)	144(70.59)	881(39.09)	1.68558	0.73652
Not sure which database to choose	143(10.61)	208(29.63)	102(50.00)	453(20.10)	1.90949	0.72983
Limited access to computers	367(27.23)	242(34.47)	113(55.39)	722(32.03)	1.64820	0.73557
Password requirements	59(04.38)	102(14.53)	61(29.90)	222(09.85)	2.00901	0.73516
Varied search pattern	526(39.02)	327(46.58)	184(90.20)	1037(46.01)	1.67020	0.75888
System hangs up	375(27.82)	278(39.60)	92(45.10)	745(33.05)	1.62013	0.69466
Less bandwidth	776(57.57)	391(55.70)	132(64.71)	1299(57.63)	1.50423	0.67321
Off campus access restrictions	892(66.17)	402(57.26)	158(77.45)	1452(64.42)	1.49449	0.68381
Note: Figures in parentheses indicate percentage and because of multiple choice options the percentage is exceeded to more than 100%						
$\chi 2$=344.615, df=18, P=0.00						

The $\chi 2$-test conducted for 18 d.f. at the 5% level of significance shows that there is a significant relationship between problems faced while using e-information resources and types of colleges ($\chi 2$=344.615, p=0.00<0.05). It is clear that problems faced while using e-information resources is dependent upon types of colleges.

5.12. Preferred Search Engines.

The Table-5.12 shows that about 2008 (89.09%) of students prefer 'Google' search engine with Mean 1.49353 and SD 0.66197, followed by 1042 (46.23%) of students prefer 'Yahoo' with Mean 1.48752 and SD 0.65887, 860 (38.15%) of students prefer 'Youtube' with Mean 1.63953 and SD 0.67708, 615 (27.28%) of students prefer 'Bing' with Mean 1.55122 and SD 0.70323, 521 (23.11%) of students prefer 'ASK.com' with Mean 1.28023 and SD 0.53133, 151 (06.70%) of students prefer 'Yandex' with Mean 1.49007 and SD 0.60754, 134 (05.94%) of students prefer 'AOL' with Mean 1.22388 and SD 0.54144, 118 (05.24%) of students prefer 'Duckduckgo' with Mean 1.18644 and SD 0.48624, 93 (04.13%) of students prefer 'Baidu' with Mean 1.35484 and SD 0.69785, 34 (01.51%) of students prefer 'Naver' with Mean 1.50000 and SD 0.69663.

Table 5.12: Preferred Search Engines

Search Engines	Government (N=1348)	Private Aided (N=702)	Private Un-Aided (N=204)	Total (N=2254)	Mean	SD
AOL	112(08.31)	14(01.99)	08(03.92)	134(05.94)	1.22388	0.54144
ASK.com	396(29.38)	10414.81)	21(10.29)	521(23.11)	1.28023	0.53133

BAIDU	72(05.34)	09(01.28)	12(05.88)	93(04.13)	1.35484	0.69785
BING	352(26.11)	187(26.64)	76(37.25)	615(27.28)	1.55122	0.70323
DUCKDUCKGO	101(07.49)	12(01.71)	05(02.45)	118(05.24)	1.18644	0.48624
GOOGLE	1206(89.47)	613(87.32)	189(92.65)	2008(89.09)	1.49353	0.66197
NAVER	21(01.56)	09(01.28)	04(01.96)	34(01.51)	1.50000	0.69663
YANDEX	86(06.38)	56(07.98)	09(04.41)	151(06.70)	1.49007	0.60754
YAHOO	630(46.74)	316(45.01)	96(47.06)	1042(46.23)	1.48752	0.65887
YOUTUBE	408(30.27)	354(50.43)	98(48.04)	860(38.15)	1.63953	0.67708
Note: Figures in parentheses indicate percentage and because of multiple choice options the percentage is exceeded to more than 100%						
$\chi 2$=210.107, df=18, P=0.00						

The $\chi 2$-test was conducted for 04 d.f. The 5% level of significance shows that there is a significant relationship between the search method used to search for information on the internet and the types of colleges ($\chi 2$=96.582, p=0.00<0.05). It is clear that the search method used to search for information on the internet is dependent upon the types of colleges.

5.13. Factors Influencing the Use of Search Engines.

The Table-5.13 depicts that in case of easy to browse the Internet sources, majority of 799 (35.45%) of students are influenced to 'Moderate Extent', followed by the factor like user friendly features of search engines influence 734 (32.56%) of students to 'Some Extent', the Search Strategy of the search engine influenced 801 (35.54%) of students to 'Some Extent', the majority of 806 (35.76%) of students are influenced by the factors of popularity of search engine to a 'Great Extent', the factor influencing the use of search engine like recommendations of library staff/colleagues majority of 716 (31.77%) of students are influenced to 'Some Extent', the factor that are more relevant information can be retrieved via search engines influenced 895 (39.71%) of students to a 'Moderate Extent' and in case of a factor like advance search features help in achieving relevant resources/ output is influencing 763 (33.85%) of students to a 'Great Extent'.

Table 5.13: Factors Influencing the Use of Search Engines

Factors	(N=2254)			
	Great Extent	Moderate Extent	Some extent	Uncertain
Easy to browse the Internet sources	425(18.86)	799(35.45)	609(27.02)	421(18.68)
User friendly features	686(30.43)	625(27.73)	734(32.56)	209(09.27)
I know the search strategy of the search Engine	341(15.13)	438(19.43)	801(35.54)	674(29.90)
Popularity of Search engine	806(35.76)	615(27.28)	636(28.22)	197(08.74)
Recommendations by library staff/friends	597(26.49)	632(28.04)	716(31.77)	309(13.71)
More relevant information can be retrieved	631(27.99)	895(39.71)	463(20.54)	265(11.76)
Advanced search features help in achieving relevant resources/ output	763(33.85)	638(28.31)	701(31.10)	152(06.74)
Note: Figures in parentheses indicate percentage				
$\chi 2$=1200.13, df=18, P=0.00				

The $\chi 2$-test was conducted for 18 d.f. The 5% level of significance shows that there is a significant relationship between factors influencing the use of search engines and types of colleges ($\chi 2$=1200.13, p=0.00<0.05). It is clear that factors influencing the use of search engines are dependent upon the types of colleges.

5.14. Searching Techniques Used for Accessing Information on the Internet

The Table-5.14 shows that about 1780 (78.97%) of students prefer 'Keyword' search with

Mean 1.51966 and SD 0.65699, followed by 1670 (74.09%) of students prefer 'Title' search with Mean 1.51796 and SD 0.66068, 1304 (57.85%) of students prefer 'Author' search with Mean 1.55455 and SD 0.63399, 967 (42.90%) of students prefer 'Subject' search with Mean 1.58738 and SD 0.71933, 325 (14.425%) of students prefer 'Publisher' with Mean 1.44615 and SD 0.74896, 142 (06.30%) of students prefer 'Abstract' search for accessing information on the internet with Mean 1.49296 and SD 0.69956.

Table 5.14: Searching Techniques Used for Accessing Information on the Internet

Searching Techniques	Government (N=1348)	Private Aided (N=702)	Private Un-Aided (N=204)	Total (N=2254)	Mean	SD
Keyword	1017(75.45)	601(85.61)	162(79.41)	1780(78.97)	1.51966	0.65699
Author	682(50.59)	521(74.22)	101(49.51)	1304(57.85)	1.55445	0.63399
Title	961(71.29)	553(78.77)	156(76.47)	1670(74.09)	1.51796	0.66068
Subject	532(39.47)	302(43.02)	133(65.20)	967(42.90)	1.58738	0.71933
Publisher	231(17.14)	43(06.13)	51(25.00)	325(14.42)	1.44615	0.74896
Abstract	89(06.60)	36(05.13)	17(08.33)	142(06.30)	1.49296	0.69956
Note: Figures in parentheses indicate percentage and because of multiple choice options the percentage is exceeded to more than 100%						
$\chi 2$=112.203, df=10, P=0.00						

The $\chi 2$-test was conducted for 10 d.f. at the 5% level of significance shows that there is a significant relationship between field-based searching techniques used for accessing information on the internet and types of colleges ($\chi 2$=112.203, p=0.00<0.05). It is clear that field-based searching techniques used for accessing information on the internet are dependent upon the types of colleges.

5.15. Degree of Satisfaction on the Usage of EIR

The Table-5.15 depicts that 730 (32.39%) of students are 'Satisfied' with the usage of Electronic Information Resources with Mean 1.42740 and SD 0.66893, followed by 553 (24.53%) of students are 'Moderately Satisfied' with Mean 1.55515 and SD 0.68379, 542 (24.05%) of students are 'Extremely Satisfied' with Mean 1.50554 and SD 0.61872, 355 (15.75%) of students are 'Slightly Satisfied' with Mean 1.46197 and SD 0.56228 and 74 (03.28%) of students are 'Not at all satisfied' with the usage of Electronic Information Resources with Mean 1.71622 and SD 0.87796.

Table 5.15: Degree of Satisfaction with the Usage of EIR

Degree of Satisfaction	Government (N=1348)	Private Aided (N=702)	Private Un-Aided(N=204)	Total (N=2254)	Mean	SD
Extremely Satisfied	304(22.55)	202(28.77)	36(17.65)	542(24.05)	1.50554	0.61872
Satisfied	492(36.50)	164(23.36)	74(36.27)	730(32.39)	1.42740	0.66893
Moderately Satisfied	307(22.77)	185(26.35)	61(29.90)	553(24.53)	1.55515	0.68379
Slightly Satisfied	203(15.06)	140(19.94)	12(05.88)	355(15.75)	1.46197	0.56228
Not all Satisfied	42(03.12)	11(01.57)	21(10.29)	74(03.28)	1.71622	0.87796
Note: Figures in parentheses indicate percentage						
$\chi 2$=99.753, df=8, P=0.00						

The $\chi 2$-test was conducted for 08 d.f. The 5% level of significance shows that there is a significant relationship between the degree of satisfaction with the usage of electronic information resources and the types of colleges ($\chi 2$=99.753, p=0.00<0.05). It is clear that the degree of satisfaction with the usage of electronic information resources is dependent upon

the types of colleges.

6. Suggestions

Based on the above results, the following suggestions are made for further improvement in Use of electronic information resources by the students of science in First Grade Colleges in the Mysuru region.

- The students should be trained in using various ICT-enabled tools, techniques, and software related to it.
- he speed of the Internet should be increased to speed up the information search and retrieval process.
- The students should be trained in using advanced search options for the retrieval of relevant information.
- The students should further improve their information searching skills to make better use of largely available web information resources.
- The library and information centres should organize training, seminars and workshops for the users at regular interval of time to keep users in tune with latest Information and Communication Technology enabled technologies.
- Library budget to be increased for procurement of the latest Electronic Information Resources and services.
- The web designers/ publishers/ distributors should provide an online help menu in the search page for better utilisation of their information resources.

7. Conclusion

This study provided an insight into the use of electronic information resources by the students of science at First Grade Colleges in the Mysuru region. The ICT enables resources and services made available via the internet to have become an inseparable part of today's educational system. Due to tremendous development in the area of Information Technology, a large amount of educational resources are being produced, distributed and accessed in electronic format. The dependency on internet-based services is increasing every day, and users of First Grade Colleges in the Mysuru region are depending more on information resources available through the internet to meet their academic needs. The students should become familiar with latest search strategies and techniques for better utilization of available online educational resources. The library should organize seminars, workshops and orientation programmes for the users at regular interval of time to keep them up to date with latest tools and techniques.

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