UTILITY OF E-RESOURCES AND SERVICES IN ENGINEERING COLLEGES OF BANGALORE CITY: A STUDY

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Abstract

Modern academic libraries are required to develop and manage appropriate electronic information resources and services for the benefit of teachers, researchers, students and other users. The engineering college libraries also primarily depend on modern information and communication technologies in order to manage the knowledge and facilitate expansion of knowledge among the users including the professionals. The LIS professionals play a vital role in the expansion of knowledge especially in the new virtual environment. The optimum use of electronic information resources and services depend upon the proficiency development of LIS professionals in modern engineering college libraries in Bangalore city which has housed a good number of engineering colleges.

Keywords: Modern academic, electronic information resources, modern engineering college

Introduction

Revolutionary changes and developments in the application of ICTs have made profound changes in each and every organization all over the world. The field of library and information science (LIS) is not an exception to this phenomenon. There is paradigm shift from print media to electronic media; from ownership of documents to access to information; intermediary to end-user model of services; and from location of specific libraries to digital/virtual/hybrid libraries. In today's rapid changing world, information needs of users are met through a plethora of sources. The electronic resources available in modern virtual library play a prominent role in facilitating access to multi-faceted information to the users in an easy and expeditious manner. The electronic information resources and services can be used by any user through online access via networks or authentication methods at anytime and anywhere. But, the users are required to gain absolute familiarity with the uses and gratifications of electronic resources for various purposes.

Methodology

The article presents method for Utility of E-resources and services in Engineering Colleges of Bangalore city: A study. This article proposes for various types and features of Modern virtual libraries, Information Communication Technology. Electronic information resources and services have made all the difference in modern society and translated the goal of virtual environment oriented communication into a reality.

Features of Electronic Information Resources

- Access to every document by anyone; from any where
- Retrieval of e-resources is quicker than print resources
- The users can be guided to the document by providing a link.
- Easy to search the text
- The collection available in electronic format can be of any media.
- Ownership not that important
- In electronic environment the interaction between user and librarian is frequent.

- No defined user group
- The software can help the users in retrieving the desired information; hardly
- Intermediate can help users

Objectives of the Study

With the use of electronic information resources and services in engineering college libraries in Bangalore city being the thrust area, the research proposes to:

- To survey the extent of electronic information resources in engineering colleges libraries in Bangalore city
- Understand the accessibility of the electronic information resources and services by the users.
- To identify the constraints in the use of electronic information resources and services in the libraries by the users.
- Analyze the frequency and purpose of use of electronic information resources and services by the users.
- Evaluate the Utility of electronic information resources and services delivered in the engineering colleges.

Hypothesis

H1: The utility of Electronic Information Resources and Services vary among users at engineering colleges of Bangalore city.

H2: Teachers, students and researchers differ significantly in their perception on access, frequency of use, purpose of use and utility of electronic information resources and services.

Utility of Electronic Information Resources and Services

The engineering college libraries demand an altogether different organizational structure, delivery system and goods and services. The policy makers are required to make suitable structural changes in order to cope with the changing virtual library management. The managers should also identify new

functional areas for effective management of customer relations in the present times. The organizational leaders should change the library staffing pattern in order to suit new virtual library environment. The libraries should also provide multi-disciplinary contents in consultation with the subject experts. The policy makers and organizers should also understand the specific needs of the users and deliver need-based goods and services.

The engineering college libraries can succeed well if they follow scientific approaches to content management. The engineering college libraries cannot flourish if dogmatism prevails among the professionals. There is an urgent need for professionals to develop their skills, leadership and capacity in order to reach out to the users and live up to their expectations in a competitive business environment. The following tables provide necessary details about the views of the users regarding the utility of electronic information resources and services in the engineering college libraries in Bangalore city.

Table-1

Percent of Responses for Utility of the Electronic Information Resources and Services

Sl.No	E –Resources		Responses				X^2 & P
			Most of the time	Sometimes	Once in a while	Never	
1	ASTM standards	F	211	152	89	28	X^2=156.083 P=.000
		%	44.0	31.7	18.5	5.8	
2	Capitaline	F	153	210	80	37	X^2==147.317 P=.000
		%	31.9	43.8	16.7	7.7	

3	CRIS INFAC Ind. Information	F	231	135	79	35	X^2=178.767 P=.000
		%	48.1	28.1	16.5	7.3	
4	EBSCO Business Source complete	F	240	180	40	20	X^2=286.667 P=.000
		%	50	37.5	8.3	4.2	
5	Elsevier's Science Direct	F	196	189	60	35	X^2=178.017 P=.000
		%	40.8	39.4	12.5	7.3	
6	Emerald Management Xtra	F	207	169	70	34	X^2=165.550 P=.000
		%	43.1	35.2	14.6	7.1	
7	Euromonitor-Passport	F	211	152	89	28	X^2=156.083 P=.000
		%	44	31.7	18.5	5.8	
8	IEC Standards	F	213	145	80	42	X^2=141.317 P=.000
		%	44.4	30.2	16.7	8.8	
9	IEEE/IEE Electronic Library Online (IEL)	F	230	151	63	36	X^2=194.717 P=.000
		%	47.9	31.5	13.1	7.5	
10	INSIGHT	F	197	188	62	33	X^2=179.050 P=.000
		%	41	39.2	12.9	6.9	
11	Optical Socity of America (Optics Infobase)	F	232	134	80	34	X^2=181.133 P=.000
		%	48.3	27.9	16.7	7.1	
12	Pro Quest Science (Formerly ASTP)	F	201	162	81	36	X^2=140.850 P=.000
		%	41.9	33.8	16.9	7.5	
13	Springer Link	F	199	207	60	14	X^2=238.717 P=.000
		%	41.5	43.1	12.5	2.9	
14	MathSciNet	F	189	196	65	30	X^2=180.517 P=.000
		%	39.4	40.8	13.5	6.3	
15	SciFinder	F	221	145	79	35	X^2=164.433 P=.000
		%	46	30.2	16.5	7.3	
16	Scopus Database	F	207	178	63	32	X^2=182.717 P=.000
		%	43.1	37.1	13.1	6.7	
17	Web of Science	F	189	207	54	30	X^2=206.550 P=.000
		%	39.4	43.1	11.3	6.3	

Table No.1 shows that, the Utility of electronic information resources were verified for various electronic information resources, following results were obtained. In the case of electronic resources ASTM standards, CRIS INFAC Ind. Information, EBSCO Business Source complete,

Elsevier's Science Direct, Emerald Management Xtra, Euromonitor-Passport, IEC Standards, IEEE/IEE Electronic Library Online (IEL), INSIGHT, Optical Socity of America (Optics Infobase), Pro Quest Science (Formerly ASTP), Springer Link, SciFinder, Scopus Database more than 40% of the respondents indicated that they access most of the time, where as in the case of Capitaline, Springer Link, MathSciNet,

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and Web of Science, more than 40% of the respondents indicated they access sometimes. Chi-sqaure tests revealed significant differences for frequencies of access of various resources in terms of categories-most of the time, sometimes, once in a while, and never where most of the responses were found for 'most of the time' and 'sometimes'

Table-2: Utility of Engineering Databases

Variables	Sub variable		Responses			Total	Test statistics
			Most Useful	Moderately Useful	Less Useful		
Gender	Male	F	208	64	-	272	x^2=2.766; p=.096
		%	76.47	23.53	-	100%	
	Female	F	172	36	-	208	
		%	82.69	17.31	-	100%	
Age	< 40yrs	F	200	60	-	260	x^2=5.598; p=.018
		%	76.92	23.08	-	100%	
	> 40yrs	F	188	32	-	220	
		%	85.45	14.55	-	100%	
Education	Graduates	F	184	36	-	220	x^2=4.920; p=.027
		%	83.64	16.36	-	100%	
	Post Graduates	F	196	64	-	260	
		%	75.38	24.62	-	100%	
Occupation	Teachers	F	100	20	-	120	x^2=2.357; p=.308
		%	83.33	16.67	-	100%	
	Researchers	F	92	28	-	120	
		%	76.67	23.33	-	100%	
	Students	F	184	56	-	240	
		%	76.67	23.33	-	100%	
Monthly Income	<Rs.25,000	F	160	48	-	208	x^2=1.120; p=.290
		%	76.92	23.08	-	100%	
	>Rs.25,000	F	220	52	-	272	
		%	80.88	19.12	-	100%	
Type of Colleges	Govt. Colleges	F	56	16	-	72	x^2= 0.337; p=.845
		%	77.78	22.22	-	100%	
	Aided Colleges	F	84	24	-	108	
		%	77.78	22.22	-	100%	
	Private Colleges	F	240	60	-	300	
		%	80.0	20.0	-	100%	
Total		F	380	100	-	480	x^2=163.33; p=.000
		%	79.17	20.83	-	100%	

Table No.2 displays that, the opinion of the respondents about the extent of usefulness of engineering databases among the beneficiaries in the study areas. Overall, a majority of the respondents (79.17%) regardless of gender, age, educational status, occupational status, economic status and type of engineering colleges have stated that engineering databases was most useful electronic resource and service to them. Chi-square test revealed a significant difference between 'most useful', 'moderately useful' and 'less useful' responses, where we find that 'more useful' responses were

significantly high (X^2=163.33; p=.000). Further, significant association was observed age and education with their responses. Age-wise analysis revealed those with above 40 years indicated more usefulness than respondents with less than 40 years (x^2 =5.598; p=.018) and education-wise analysis revealed that graduates indicated more usefulness than post graduates (x^2 =4.920; p=.027). However, rest of the demographic variables did not have significant association with their responses

**Table-3: Utility of Electronic Full text Materials**

Variables	Sub variable		Most Useful	Moderately Useful	Less Useful	Total	Test statistics
				Responses			
Gender	Male	F	-	192	80	272	x^2=6.516; p=.011
		%	-	70.59	29.41	100%	
	Female	F	-	168	40	208	
		%	-	80.77	19.23	100%	
Age	< 40yrs	F	-	184	76	260	x^2=5.415; p=.020
		%	-	70.77	29.23	100%	
	> 40yrs	F	-	176	44	220	
		%	-	80.0	20.0	100%	
Education	Graduates	F	-	168	52	220	x^2=0.403; p=.526
		%	-	76.36	23.64	100%	
	Post Graduates	F	-	192	68	260	
		%	-	73.85	26.15	100%	
Occupation	Teachers	F	-	92	28	120	x^2=1.364 ; p=.506
		%	-	76.67	23.33	100%	
	Researchers	F	-	84	36	120	
		%	-	70.0	30.0	100%	
	Students	F	-	176	64	240	
		%	-	73.33	26.67	100%	
Monthly Income	<Rs.25,000	F	-	152	56	208	x^2=0.724; p=.395
		%	-	73.08	26.92	100%	
	>Rs.25,000	F	-	208	64	272	
		%	-	76.47	23.53	100%	
Type of Colleges	Govt. Colleges	F	-	40	32	72	x^2=17.809; p=.000
		%	-	55.56	44.44	100%	
	Aided Colleges	F	-	88	20	108	
		%	-	81.48	18.52	100%	
	Private Colleges	F	-	232	68	300	
		%	-	77.33	22.67	100%	
Total		F	-	360	120	480	x^2=120.00: P=.000
		%	-	75.0	25.0	100%	

Table No.3 indicates that, the opinion of the respondents about the extent of usefulness of electronic full text material among the beneficiaries in the study areas. Overall, a majority of the respondents (75.0%) regardless of gender, age, educational status, occupational status, economic status and type of engineering colleges have stated that electronic full text material was most useful electronic resource and service to them. Chi-square test revealed a significant difference between 'most useful', 'moderately useful' and 'less useful' responses, where we find that 'moderately useful' responses were significantly high (X^2=120.00; p=.000). None of the respondents indicated 'more useful'. Further, significant associations were observed between gender, age, college type with responses. It was found that female respondents indicated higher levels of usefulness than male respondents (X^2=65.16; p=.011) Age analysis revealed that respondents in the older age groups expressed more usefulness (x^2 =5.410; p=.020). It was also observed that among colleges, respondents from aided colleges expressed more usefulness (x^2 =17.809: P=.000). However, rest of the demographic variables did not have significant association with their responses

Figure-3.1
Percent responses for the statement 'use of electronic full text material' by respondents with different educational, income and college levels.
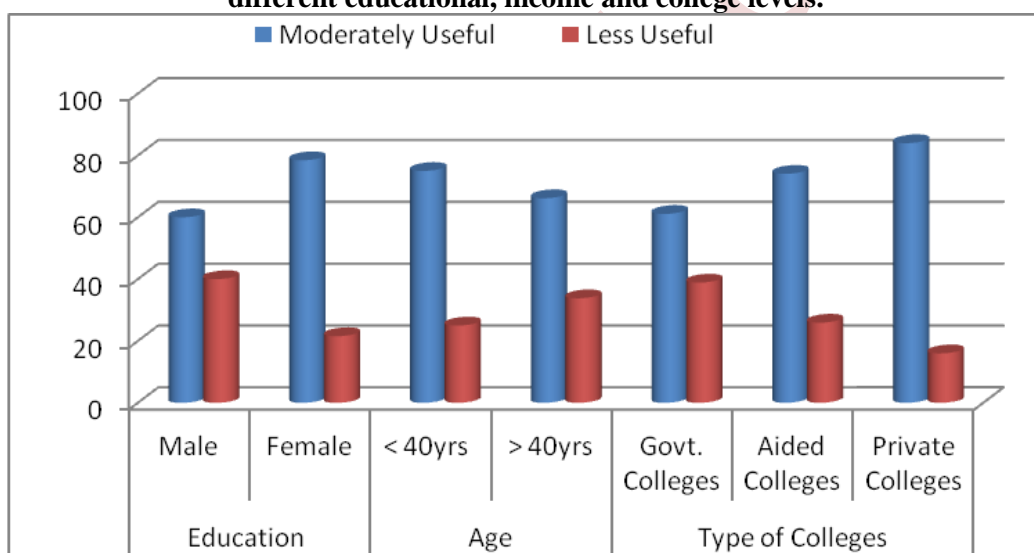
Suggestions

Based on the findings of the study of the findings of the study with special reference to the use of electronic information resources and services in the engineering college libraries of Bangalore city the following suggestions are made:
It is the responsibility of the management to formulate ICT policy with special reference to the management of ICTs in the engineering colleges concerned.

The management of engineering college should also constitute an expert committee in order to facilitate systematic development of infrastructural facilities and scientific delivery of electronic information services to different users in the new millennium.

The policy makers may also consider recruiting specialists in various aspects of electronic information management in order to effectively fulfill the needs of the users who matter most in the age of customer relationship management. The management of electronic information resources and services is a planned, deliberate, systematic and scientific activity for the enhancement of the status of libraries.

The modern engineering colleges should create adequate opportunities for upgrading ICT skills of LIS professionals. These libraries should enable the LIS professionals to acquire knowledge, skills and expertise in the management of ICT resources and services since the services are absolutely centered on new technologies and innovative approaches.

Conclusion

There are certain major constraints of management of electronic information resources and services in the engineering colleges under study. These institutions have to go a long way in facilitating meaningful infrastructure development, human resources development, ICT skill development, personality development, leadership development, technological advancement, application of new technologies, delivery of need based services and scientific evaluation of electronic information management in the new era. The future agenda must deal with the relationship between engineering college libraries and customer relationship management. The various stakeholders of electronic information resources management should also work in close collaboration in order to design ethically sound, professionally viable and socially accountable electronic information resources management and delivery of need based services in the study area.

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