

Influence of Information and Communication Technology on Library users in Academic Institutions: A Comparative Study

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Abstract

Background/Objectives: As ICT has influenced academic institutions in a wider range, this study aims to explore and compare the respondents' level of influence of ICT in utilizing library services. **Methods/Statistical Analysis:** A quantitative research method was adopted for this study. The respondents of the study were the students of two different technical institutions. A well structured questionnaire was utilized as a research tool and administered to 250 randomly selected users. Later it was analysed using SPSS software. **Findings:** The result showed that the respondents of both the institutions were adequately influenced by ICT in library services. It also revealed that the University users were slightly high influenced than engineering college users. The influence of ICT among the users were tested using the following factors such as their level of expertise in using ICT tools, utilization of digital library and their attitude towards ICT tools and view on transformation of library services through ICT. **Applications/Improvements:** The difference in influence of ICT could overcome by conducting orientation programmes to the users of Engineering college to achieve more awareness about library resources.

Keywords: Academic Institutions, Digital Library, Information and Communication Technology, Influence of ICT, Library Users

1. Introduction

In this technological era, ICT has now become an essential tool in libraries and also one of the key issue causing changes in the field of library and information science. It has played an important role in apportioning the new educational system by transforming the traditional method to electronic method¹. Nowadays, the major aspect of the library is to provide ICT related infrastructure, information resources and sharing them. Internet and World Wide Web technologies have significantly influenced the quality of academic institutions².

Today, Library service providers show an obvious interest towards ICT implementation and utilization to give

better services to their users. Effective application of ICT in libraries helps in performing their operations and services most efficiently. In this context it was claimed³ that every library should be well equipped in terms of resources and organized properly to provide effective library services to the users. ¹Found that only e-journals, databases and CDs/DVDs with books were accessible in all academic libraries. So library professionals can create more awareness on e-resources among the users for better use.

1.1 Influence of ICT in Academic Libraries

Most of the academic institutions provide various library services such as Web OPAC, Digital Library, Online Database Services, Institutional Repositories, and Reprography facility etc. to the users. ICT also enhanced

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the usage of library resources and services. The important factor is that the users are required to update their skills by means of attending workshops and user orientation programme.

An important feature of any research is to review the analysis of previous researches related to this study. The following are the previous studies made by the researchers on this aspect. ⁴claims that the students and faculty members of government law colleges in Tamil Nadu are using the available e-resources satisfactorily. ⁵stated that due to several economic challenges, Yemen cannot afford to enable new technologies and e-learning to be used widely in public universities. Some of these challenges included problems with access to computers and Internet, power supply, poor skills; low literacy etc. On the other hand ⁶investigates the impact of the ICT services on the users of S.U. Patel Library, and identifies that most of the respondents face problems because they do not get a proper services to use the electronic resources. The study pointed out that greater part of the users working in this university has shown positive preference toward application of ICT based services. ⁷states that the sharing and opening of library data which has been a low priority in libraries have significance for the activation of the knowledge ecosystem. ⁸In their studies found that university libraries' level of adoption of ICT for operations and services is improving. They also argued that public sector libraries are behind in adoption of ICT for complete library operations than private sector libraries. In addition they stated that Current ICT adoption situation of Pakistani university libraries is quite better than ten years ago. ⁹Investigated that a majority of users (faculty members and research scholars) of Shobhit University used a variety of ICT products and services mainly internet services for their academic purposes and research work, as it is helpful in finding information quickly and also helps the users to access, manage, integrate, evaluate, create and communicate information easily. ¹⁰Carried out a survey to examine the position of ICT applications in academic libraries in Warangal district and brought a low level of ICT applications. Partial library automation, Lack of hardware, insufficient funds, and lack of cooperation from higher authorities, deficiency of websites and few training opportunities for academic librarians were the major drawback. Suggestions and recommendations were given to improve the situation. ¹²It is true that the infrastructure and administrative support are limitations for the libraries and it has been

observed that the libraries of U.P. need to build a good ICT infrastructure. ¹³Revealed that university libraries have acquired ICT infrastructure and digital resources, and are offering ICT-based services to a greater extent in Northern part of India inspite of less library professionals

2. Objectives

- To identify the frequency of use of library.
- To know the level of expertise of respondents in using the ICT tools.
- To measure the benefits of using ICT tools.
- To analyze the influence of ICT on users.
- To explore the users' view on transformation of library due to ICT.

3. Methodology

The quantitative research methodology was used for the study. This study was conducted at Sathyabama University, Chennai and SSN Engineering College, Chennai, Tamil Nadu. A well structured questionnaire was administered to 250 randomly selected users of both the institutions. The responses were received from 234 respondents. Out of which 222 filled questionnaires were found fit for analysis and 12 of them were considered unusable. The overall response rate is 89%. Information collected were analysed using SPSS package.

4. Scope and Limitations

The study is confined to one of the top most Private Technical Universities (Sathyabama University) and Engineering colleges (SSN Engineering College) in Chennai, Tamil Nadu. The study comprises of undergraduate students, postgraduate students and the faculty members. These initial findings are from a small pilot study. In future, this study can be carried out in a wider range by including district or state technical institutions.

5. Analysis and Interpretation of Data

The facts collected from the users of above mentioned Institutional libraries are analyzed and given below:

From the Table 1, it is observed that out of the total

222 respondents, 110 respondents were from SSN Engineering College, out of which 53% were male and 47% were female and 112 respondents were from Sathyabama University, out of which 57 % were male and 43% were female. It clearly indicates that majority of respondents from engineering college as well as university are male.

Table 1. Gender-wise Distribution of Respondents by Institution

S.No.	Gender	SSN ENGINEERING COLLEGE		SATHYABAMA UNIVERSITY	
		Number of Respondents	Percentage	Number of Respondents	Percentage
1	Male	58	53%	64	57%
2	Female	52	47%	48	43%
Total		110	100%	112	100%

Table 2 indicates that out of the total 222 respondents, 110 respondents were from SSN Engineering College, out of which 64% were UG students, 20% were PG students and 16% were faculty members and 112 respondents were from Sathyabama University, out of which 61% were UG students, 21% were PG students and 18% were faculty members.

Table 2. Position-wise Distribution of Respondents by Institution

S. No.	Position	SSN ENGINEERING COLLEGE		SATHYABAMA UNIVERSITY	
		Number of Respondents	Percentage	Number of Respondents	Percentage
1	UG Students	70	64%	68	61%
2	PG Students	22	20%	24	21%
3	Faculty	18	16%	20	18%
Total		110	100%	112	100%

The frequency of visits to the library by the users is usually influenced by the reasons like Books collection, digitization, and maintenance of library resources. From table 3 and Chart-1, it is found that 88% of engineering college users and 93% of University users visit library at least once in a week. More number of respondents 38% utilize library on daily basis and a very few respondents (9%) utilize occasionally. It also shows that a minimum number of respondents (1%) utilize fortnightly.

Table 3. Digital Library Utilization of Respondents by Institution

S.No.	UTILIZATION	SSN ENGINEERING COLLEGE		SATHYABAMA UNIVERSITY	
		No. of respondents	Percentage	No. of respondents	Percentage
1	Daily	42	38%	42	38%
2	Twice a week	26	24%	36	32%
3	Weekly	22	20%	26	23%
4	Fortnightly	2	0%	2	2%
5	Monthly	0	2%	4	4%
6	Occasionally	18	16%	2	2%
Total		110	100%	112	100%

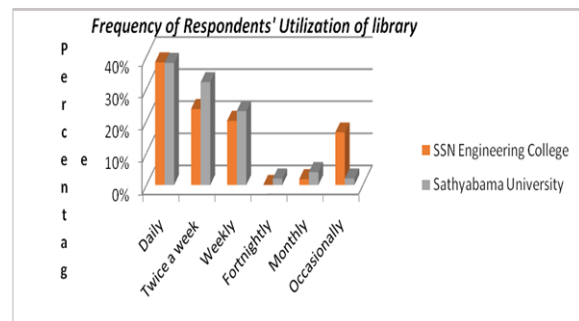


Chart 1. Digital Library Utilization of Respondents by Institution.

ICT tools usage is more important than providing ICT facility in academic institution. It is observed from table 4 and Chart-2 that respondents of the both the institutions were proficient in using ICT tools, however respondents of university were found slightly better than Engineering College. 85% of Engineering college users and 91% of University users' expertise in using ICT tools opted good.

Table 4. Respondents Level of Expertise in using ICT Tools

S.No.	UTILIZATION	SSN ENGINEERING COLLEGE		SATHYABAMA UNIVERSITY	
		No. of respondents	Percentage	No. of respondents	Percentage
1	Excellent	10	9%	18	16%
2	Very Good	42	38%	48	43%
3	Good	42	38%	36	32%
4	Fair	16	15%	10	9%
5	Poor	0	0%	0	0%
Total		110	100%	112	100%

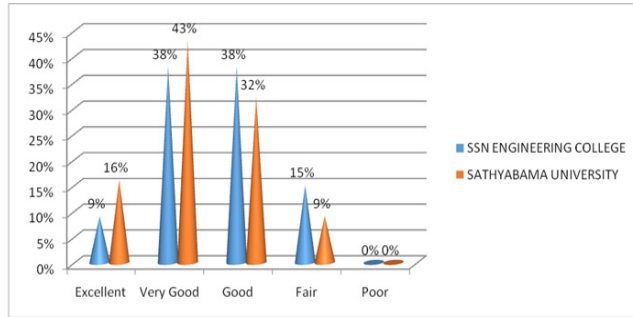


Chart 2. Respondents Level of Expertise in using ICT Tools.

5.1 Attitude Towards ICT in Library Services

An attempt was made to estimate the positive and negative attitudes of the respondents on various statements related to ICT. The table 5 represents that majority of

the respondents are highly inspired by ICT and have a positive attitude towards it. It was measured that 85.4% respondents of Engg. College and 86.4% respondents of University agree that ICT tools are more useful in library services. On the other hand we found that as a negative aspect few respondents have stated that it has reduced the habit of reading and increased the approach of seeking readymade materials.

It is evident from the table-5,

- 100% agree ICT influences Easier and wider access to electronic resources from Engineering college as well as University.
- 93% of engineering college users and 92% of university users agree ICT influences to improve the quality of library services.

Table 5. Distribution of Respondents' attitude towards ICT tools by Institution

S.No	Influence of ICT	SSN ENGG. COLLEGE					SATHYABAMA UNIVERSITY				
		SA %	A %	U %	D %	SD %	SA %	A %	U %	D %	SD %
1	Easier and wider access to electronic resources	40	70	0	0	0	56	56	0	0	0
2	Improved the quality of library services	40	62	8	0	0	48	54	10	0	0
3	Enabled direct access to the services and resources	42	58	20	0	0	44	60	8	0	0
4	Access to new range of services not possible before	32	60	18	0	0	34	62	16	0	0
5	Locating material through on-line catalogue	34	50	24	2	0	44	48	20	0	0
6	More flexible and comprehensive retrieval of information	42	54	14	0	0	52	54	6	0	0
7	Up-to-date information for academic growth	44	48	16	2	0	50	52	10	0	0
8	Enormously saves time and effort	46	54	10	0	0	62	48	2	0	0
9	Libraries have emerged user friendly	54	44	12	0	0	56	46	10	0	0
10	Learning will not be effective without ICT	30	36	34	10	0	44	44	6	10	0
11	Reduced habits of reading	20	34	32	18	6	42	42	2	18	6
12	Reduced originality in writing	18	31	29	16	5	38	38	2	16	5
13	Increased habit of finding ready-made material	24	36	26	20	4	34	48	8	20	1
14	Reduced verbal face to face communication	38	40	16	14	2	36	42	18	14	2
15	Reduced quality of research work	35	36	15	13	2	32	38	16	13	2
		26	38	24	16	6	40	52	4	12	4
		24	35	22	15	5	36	46	4	11	4
		16	28	22	28	16	26	34	0	32	20
		15	25	20	25	15	23	30	0	29	18

SA- Strongly Agree, A-Agree, U-Uncertain-, D-Disagree, SD- Strongly Disagree

- 91% of engineering college users and 93% of university users agree ICT influences Enabled direct access to the services and resources
- 84% of engineering college users and 86% of university users agree ICT influences Access to new range of services not possible before.
- 76% of engineering college users and 82% of university users agree ICT influences Locating material through on-line catalogue

5.2 Benefits of Using ICT in Library Services

This study further attempted to know which benefit the respondents had ranked higher and data collected on this is tabulated in table 6. Among the list of benefits, “Time saving” was ranked first by the respondents of Engineering College and “Faster access to information” was ranked first by the respondents of University.

Easier access to information, faster access to information, access to wide range of information and access to current information in engineering college 2nd, 3rd, 4th and 5th rank respectively. Easier access to information, time saving, access to current information and access to wide range of information in university 2nd, 3rd, 4th and 5th rank respectively.

Table 7 and Chart-3, illustrates the respondent’s opinion about transformation of library services by the

implementation of ICT. It could be noted that majority of respondents (72%) welcome ICT, 28% of respondents felt excited and it also indicated that none of them were frustrated by this change.

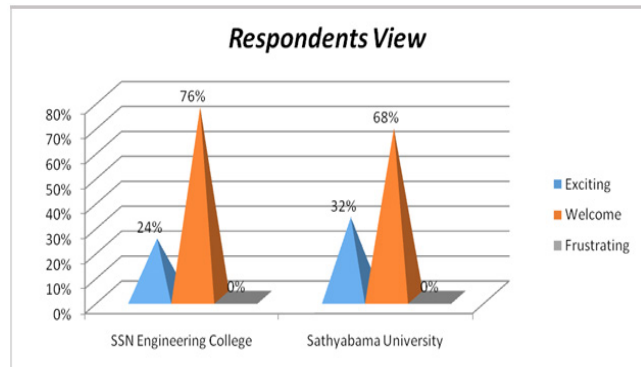


Chart 3. Respondents View towards Transformation of Library Services through ICT.

6. Suggestions and Conclusion

A well developed ICT infrastructure contributes a great level in satisfying the current users of library more effectively. ICT has empowered the learners in gaining knowledge and provided an opportunity to develop creativity, communication skills and higher order

Table 6. Distribution of Respondents view on benefit of using ICT by Institution

Benefits	SSN ENGINEERING COLLEGE							SATHYABAMA UNIVERSITY						
	SA	A	U	D	SD	Mean	Rank	SA	A	U	D	SD	Mean	Rank
1 Time saving	52 47%	50 45%	8 7%	0 0%	0 0%	13.750	1	56 50%	54 48%	2 2%	0 0%	0 0%	9.1097	3
2 Easier access to information	48 44%	54 49%	8 7%	0 0%	0 0%	13.736	2	56 50%	52 46%	4 4%	0 0%	0 0%	11.334	2
3 Faster access to information	64 58%	38 35%	8 7%	0 0%	0 0%	13.447	3	68 61%	36 41%	8 7%	0 0%	0 0%	13.477	1
4 Access to wider range of Information	52 47%	52 47%	6 5%	0 0%	0 0%	12.657	4	64 57%	46 41%	2 2%	0 0%	0 0%	9.0287	5
5 Access to current information	54 49%	54 49%	2 2%	0 0%	0 0%	9	5	62 55%	48 43%	2 2%	0 0%	0 0%	9.0613	4

thinking. Majority of the students and Faculty members were found to utilize the library on daily basis and were expertise. The study concludes that ICT influence on the respondents of both the institutions were adequate.

Engineering College was found to be slightly less influenced by ICT than University users. However the difference could be overcome by conducting orientation programmes to the users of Engineering College to achieve more awareness about library resources, by adding more high-configuration computers to make the utilization more quickly and effectively, and by increasing the speed of internet.

All Engineering College as well as University users agree ICT influences Easier and wider access to electronic resources (Ref. Table-5). Time saving is the first rank among the engineering college users and faster access of information in University users influences ICT usage (Ref. Table-6). 88 % of overall respondents excited towards Transformation of Library Services by ICT (Ref. Table-7).

Table 7. Respondents View towards Transformation of Library Services by ICT

S.No.	OPINION	SSN ENGINEERING COLLEGE		SATHYABAMA UNIVERSITY	
		No. of respondents	Percentage	No. of respondents	Percentage
1	Exciting	26	24%	36	32%
2	Welcome	84	76%	76	68%
3	Frustrating	0	0%	0	0%

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