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EVALUATION OF e-RESOURCES AND e-SERVICES IN ANNA UNIVERSITY, COIMBATORE: A STUDY

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Abstract

This study aims to ascertain how Undergraduate, Postgraduate, and research scholars at Anna University in Coimbatore feel about evaluating e-resources and e-services. Accessibility and utilization of e-resources and e-services in user interfaces are the subjects of the study. We distributed to 100 users but 88 respondents of UG, PG students and Research scholars from different departments such as CSE, EEE, Mechanical and MBA then the data collected through survey method and questionnaire format. Statistical analysis tools, such as Chi-square and percentage analysis, were used. The results demonstrate that researchers and students prefer open access e-resources platforms like Cambridge University Press and DOAJ, as well as the library's e-services, which are online journal services and usage of IEEE & DELNET, user were satisfied through the guidance of library staff and enough e-resources available for you their study materials in library.

Keywords: *Electronic Services, Electronic Resources, Resources and Services*

1. Introduction

The electronic resources now include a librSary's online catalog of CD-ROMs, online journals, e-journals, databases, newspapers, reference materials, open access journals, and e-books. Ashraf, 2004. The majority of the sources are now accessible in electronic format. The "invisible web" includes e-resources. Information sources are now accessible in electronic format because of technological advancement. E-formats, including electronic books, electronic journals, and electronic databases, are now accessible information sources. Libraries throughout the world now provide higher-quality services thanks to e-resources. It offers many knowledge-based services, such as reference services, resource sharing, online journal services, online

databases, CD-ROM databases, internet browsing, and e-services, which are provided by the library for its users.

E-Resources and E-Services

A library's digital resources and online services that facilitate research, education, and information access are referred to as electronic resources and e-services. E-books, online journals, databases, and multimedia are examples of electronic materials that can be accessed via digital devices. Digital tools and services, including online catalogs, interlibrary loans, research guides, and virtual reference assistance, are referred to as e-services. Miller (2008) revealed that these outcomes began first in 1908 to demonstrate how "library services make a difference to its constituents; how it compares to similar institution; and its contribution to recreation, teaching, learning, and research".

2. Literature Review

To examine the previous studies of e-resources and e-services in scholars and students in academic libraries. **Iqbal et.al. (2022)¹** describe the use of e-resources in the e-libraries of Punjab by using the Unified Theory of Acceptance and Use of Technology model. In the study, they used a quantitative survey method through 20 e-libraries in Punjab, where the population was, but there were six randomly selected e-libraries for their studies. The total number of participants is 250, and a self-developed questionnaire with 26 items and a checklist having 8 items is used for data collection. The participants were suggested to increase the number of these e-libraries and the shortage of computers and off-library access.

Subaveerapandiayan et.al. (2021)² examine the study about the e-resources management and management issues of India Library professional perspectives. For this study, data was collected from various academic institutes and university libraries in India. A majority of the libraries subscribed to e-journals and e-books, and the total respondents were 71.8% of the males. There were 30.1% of LIS professionals who worked in private universities. The analysis to improve vendor management, publisher management, and troubleshooting management is required for libraries aspiring to digital transformation.

Devi R and Deshava (2020)³ analyze the study that investigates how users of the North Karnataka Ayurvedic Medical College libraries use e-resources. There were 1101 responders in all, including faculty members and UG and PG students from 23 North Karnataka Ayurvedic Medical colleges. The users' awareness of the library's e-resources and their recommendation that they require training in order to use them more frequently. **Nnadozie Co et.al. (2017)⁴** The study examines the accessibility and availability of online information services and e-resources offered by the National Root Crop Research Institute (NRCRI) AND Michael Okpara Universtiy of Agriculture, Umudike (MOUAU). Statements in this structured questionnaire were weighted using a modified 4-point Likert scale. There were 87 people in the population overall, and 33 people made up the actual sample for the descriptive survey approach used in this study. Increased internet bandwidth and the creation of useful ICT policies for Nigerian libraries are the study's conclusions.

Asogwa BE et al. (2015)⁵ the study intends to ascertain the quality and purpose of online services offered by Nigerian academic libraries. A questionnaire was used to gather data from the sample population, which consisted of 210 employees and students who accessed electronic resources at Nigerian university libraries in 2012-2013. The majority of users in Nigerian universities get online services through sporadic, subpar power supplies and inadequate telecommunications infrastructures, according to the report. Initially, the WebQual model was used to assess the electronic performance quality of academic libraries.

3. Objectives

The study aims to investigate the use of electronic resources and electronic services among 100 students and researchers at Anna University in Coimbatore. The study aims to meet the following objectives:

- Analyze user preferences for various e-services.
- To determine the purpose of using e-resources
- To find out the frequency of library e-resources such as open access resources platform
- Identify the satisfaction level of e-resources in students and research scholars.

4. Methodology

This study was carried out using a descriptive survey method. The study adopted the “ Questionnaire on Evaluation of Electronic Resources and Electronic Services in Academic Libraries” as a research instrument. The data collected from 88 respondents was examined to meet the study’s stated objectives. To analyze data, use statistical tools such as percentage and Chi-square test. For this purpose, a software package (SPSS), Statistical Package for Social Science, has been used for the analysis of data. The study population comprises undergraduate students, postgraduate students, and research scholars at Anna University, Coimbatore.

4.1 Primary Sources

Primary data for this research are collected from various departments of undergraduate and postgraduate students and research scholars in Anna University.

4.2 Secondary Sources

The secondary information data for this research are collected from e-resources and e-services such as e-journals, e-books, e-databases, library statistics, and websites.

4.3 Percentage Analysize

Percentage analysis is a ratio used to compare multiple series of data. Percentage is used to express relationship, then the percentage reduces everything to a single foundation, enabling sensible comparisons.

$$\text{Percentage} = \frac{\text{No of respondents in each core}}{\text{Total no of respondents}} \times 100$$

5. Data Analysis and Interpretation

Table- 1 Gender and Course-wise user categories

Gender	Course-wise user categories			Total
	UG student	PG student	Research scholar	
Male	39	7	5	51
Female	24	7	6	37
Total	63	14	11	88

Chi-Square Test

	Value	df	Asymp. Sig. (2-sided)
Pearson Ch-Square	1.472 ^a	2	.479
Likelihood Ratio	1.460	2	.482
Linear-by-Linear Association	1.400	1	.237
N of Valid Cases	88		

Table 1 shows that the majority of UG students are male, while PG and Research scholar categories show a more balanced female-skewed distribution. The Chi-Square tests indicate that gender does not significantly affect the course categories. There is no significant association between gender and course type (UG, PG student, and Research Scholar) in this dataset, as all p-values (0.479) are greater than the 0.05 threshold.

Table-2: Purpose of using e-resources

Gender	Purpose of Use of e-Resources					Total
	Research & thesis writing	Academic coursework & assignment	Writing & publishing research papers	Preparing for Competitive and GATE	General knowledge and self-learning	
Male	2	24	8	3	14	51
Female	6	11	2	4	14	37
Total	8	35	10	7	28	88

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.561 ^a	4	.073
Likelihood Ratio	8.801	4	.066
Linear-by-Linear Association	.344	1	.557
N of Valid Cases	88		

Table 2 shows how males and females are distributed across these five different purposes. The majority of male user were using e-resources for their Academic coursework and assignment purposes. The Chi-Square test results (p-value of 0.073) is greater than 0.05, meaning we fail to reject the null hypothesis. It indicates that there is no statistically significant relationship between gender and purpose of use of e-resources.

Table-3 Frequently use of Open access Platform

Course-wise user categories	Open Access Platforms							Total
	American Chemical Society	Cambridge University Press	DOAJ	IAS	NTLTD	OAISTER	other	
UG student	9	34	4	5	4	0	7	63
PG student	4	3	3	1	1	0	2	14
Research Scholar	2	0	5	0	2	1	1	11
Total	15	37	12	6	7	1	10	88

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	30.483 ^a	12	.002
Likelihood Ratio	29.992	12	.003
Linear-by Linear Association	1.640	1	.200
N of Valid cases	88		

Table 3 shows that the majority of UG, PG, and Research scholars were accessing the American Chemical Society (15), DOAJ (12), and Cambridge University Press (37) of open access platforms. The Chi-Square results suggest the course-wise user categories and open access platforms are significantly associated, as the p-values for the Pearson Chi-Square and Likelihood Ratio tests are both below the 0.05 threshold. It indicates that the choice of open access platform is not independent of the course level.

Table-4 Usage of various Types of e-services

Gender	Types of e-Services					Total
	Online Journal Service	CD-ROM database service	Online database service	Donation book collection	Usage of IEEE& DELNET	
Male	12	9	7	9	14	51
Female	18	4	1	2	12	37
Total	30	13	8	11	26	88

Chi-Square Test

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10.264 ^a	4	.036
Likelihood Ratio	10.979	4	.027
Linear-by-Linear Association	1.577	1	.209
N of Valid Cases	88		

Table 4 shows the distribution of males and females using each of the five electronic services. The majority of users were using the Online journal service (30) and usage of IEEE & DELNET (26). The Chi-square and Likelihood Ratio tests reveal a statistically significant association between gender and electronic service utilization ($p\text{-value} < 0.05$).

Table-5 User Satisfaction of e-Resources.

Attributes	Satisfied	Neutral	Dissatisfied
How would you rate the quality of e-resources provided by the library	53 (60%)	33 (38%)	2 (2%)
If there are enough e-resources available for your study or research	20 (23%)	61 (69%)	7 (8%)
Have you experienced any technical difficulties while accessing e-resources	28 (32%)	50 (57%)	10 (11%)
If you received any guidance or training on how to use e-resources	30 (34%)	50 (57%)	8 (9%)

Table 5 shows the satisfaction level of e-resources around UG, PG, and Research Scholar. The majority of users were satisfied with the quality of electronic resources provided by the library 53 (60%) and satisfied with guidance or training about the usage of electronic resources 30 (34%).

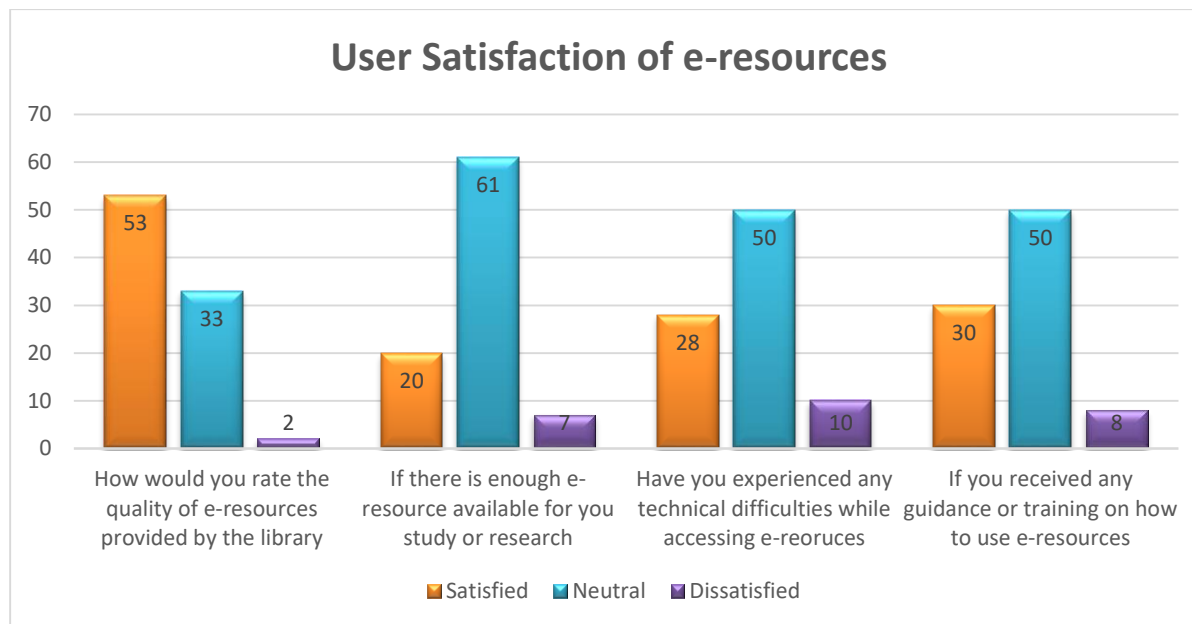


Figure 1. User Satisfaction of e-Resources

Table-6 Challenge to access e-Resources

Challenges of e-resources	Agree	Neutral	Disagree
Difficulty in finding relevant open-access resources	68 (77%)	20 (23%)	-
Limited Off-campus access to subscribed e-resources	20 (23%)	64 (73%)	4 (4%)
Restrictions on full-text access despite being open-access	26 (30%)	47 (53%)	15 (17%)
Language barriers (resources not available in preferred language)	33 (38%)	48 (55%)	7 (7%)
Poor quality or lack of peer review in some open-access materials	24 (27%)	58 (66%)	6 (7%)

The table indicates challenges in accessing relevant Open-access resources, with 77% agreeing on difficulties. Off-campus access is mostly neutral, with 72% not concerned. Language barriers affect 38%, and 27% find issues with the quality or poor review of open-access materials. These insights highlight areas for improvement.

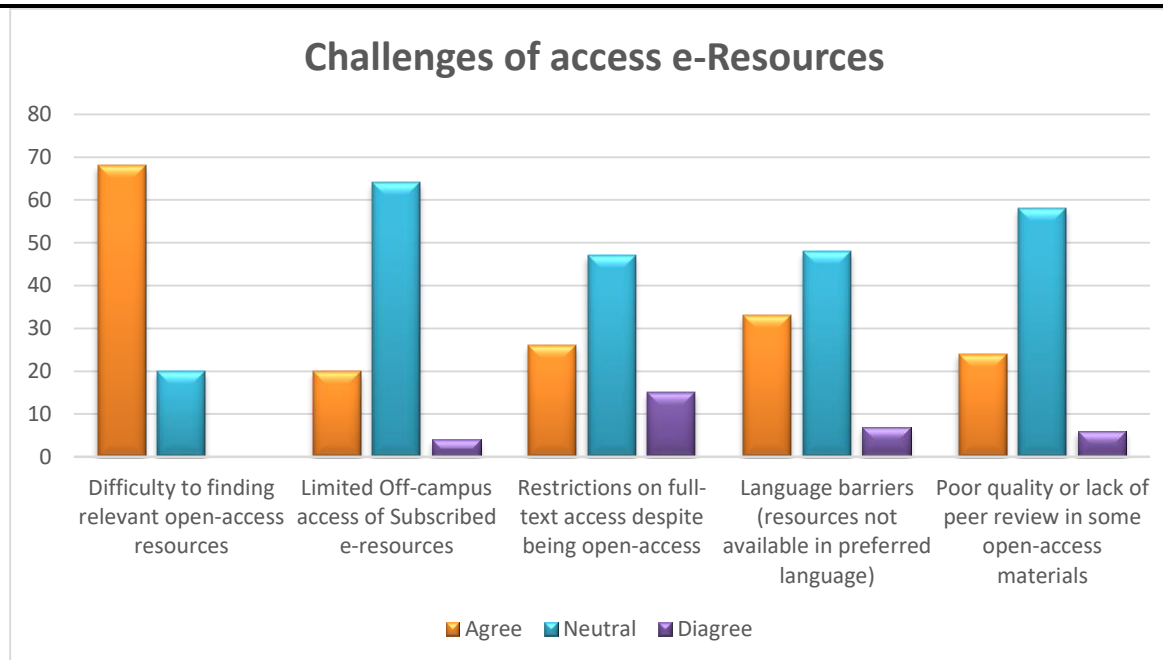


Figure 2: Challenges of accessing e-resources

Findings

- There is no significant association between gender and course type (UG, PG student, and Research Scholar) as the p-value is 0.479, suggesting gender does not influence course selection.
- The majority of users were accessing open-access platforms, such as the American Chemical Society and DOAJ. It indicates a significant association ($p = 0.002$) between course category and platform selected.
- Gender plays a role in the usage of specific e-services, such as IEE & DLNET and online journal services, with the Chi-Square test showing a significant association ($p = 0.036$).
- The most common challenge is finding relevant open-access resources (77%), suggesting areas for improvement in access and resource quality. The users were satisfied with the quality of e-resources provided by the library (60%).

Conclusion

The study reveals that undergraduate, postgraduate, and research scholars of Anna University- Central Library primarily reply that the users were using e-resources for Academic coursework & assignments. The Open-access platforms, such as Cambridge University Press, then the majority of users were using Online journal services. The user community was satisfied with the quality of e-resources provided by the library, but then the user faced difficulty in finding relevant open-access resources. This suggests a well-rounded approach to information gathering among users, to provide awareness programme through student community then implement different method to increase access.

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