

Electronic Resources for Teaching and Research: Usage Patterns, Preferences and Barriers among University Academics**Dr. S. Mahalakshmi**

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Abstract

Electronic resources support teaching, research, scholarly communication and continuing professional development in higher education. This article examines the resources used for academic activities, user preferences and barriers to access among faculty members and research scholars in three universities in Tamil Nadu. The analysis is derived from a survey of 736 valid respondents from Anna University, University of Madras and Agricultural University. The study adopted a descriptive design and simple random sampling. The original analysis used percentage, weighted average, ANOVA, chi-square, standard deviation and correlation techniques. E-journals obtained the highest overall weighted average (64.97) for teaching and research activities, followed by e-mail (60.88), e-books (60.66), online reference works (54.61) and online databases (54.15). PDF was the preferred access format for 43% of respondents. Conference/seminar activity was reported as a major purpose of e-resource use, while research and teaching were also important. In relation to barriers, 29.9% of respondents reported limited access to computer terminals as the major overall problem. Lack of IT knowledge was particularly reported by respondents from University of Madras, while limited computer-terminal access was prominent in Anna and Agricultural Universities. The findings indicate that effective e-resource use depends on both collection quality and access conditions. The study recommends increasing terminal availability, improving connectivity, strengthening user education and expanding relevant scholarly subscriptions.

Keywords: Electronic resources; E-journals; Teaching; Research; Barriers; University libraries.**Introduction**

The source thesis treats e-resources as electronic information resources accessed through computing networks and identifies their importance for teaching and research. It also examines library facilities, formats, purposes and barriers as separate dimensions of use. The growth of digital scholarship has made the effective use of electronic information an important component of university teaching, learning and research. Academic libraries increasingly provide access to electronic journals, books, databases, reference sources and web-based services. Understanding how users interact with these resources is therefore necessary for effective library planning.

Background of the Study

The doctoral study on which this article is based examined the perception and usage of electronic resources in three different university environments in Tamil Nadu. It considered computer literacy, research productivity, experience of e-resource use, library facilities, purpose and barriers, search strategy and user satisfaction. The original thesis used a questionnaire survey of faculty members and research scholars and organized the investigation around these dimensions.

Statement of the Problem

The availability of e-resources does not automatically guarantee effective academic use. Users may encounter limitations related to access terminals, IT knowledge, connectivity, formats and awareness. This article examines the pattern of resources used for academic work and the barriers affecting access.

Objectives of the Study

1. To identify the e-resources considered important for teaching and research.
2. To examine users' preferred formats for accessing electronic information.
3. To identify major purposes for using e-resources.
4. To determine the principal barriers encountered while accessing e-resources.
5. To suggest measures for improving access and utilization.

Methodology**Research design**

A descriptive research design was adopted in the original study.

Population

The population comprised faculty members and research scholars of Anna University, University of Madras and Agricultural University in Tamil Nadu.

Sample

A total of 894 questionnaires were distributed and 736 usable questionnaires were returned, giving an 82.32% response rate. The final respondents comprised faculty members and research scholars from the three surveyed universities.

Sampling technique

Simple random sampling was adopted. The researcher obtained lists of faculty members and research scholars from the concerned departments and selected respondents using the sampling procedure described in the thesis.

Data collection

Primary data were collected through a structured questionnaire covering demographic characteristics, computer literacy, research productivity, experience and frequency of e-resource use,

library facilities, purpose and barriers, search strategies and user satisfaction. The questionnaire was reviewed by experienced researchers and experts, and a pilot survey involving 20 faculty members and 10 research scholars was conducted before final data collection.

Statistical techniques

The original study used percentage analysis, mean, standard deviation, one-way ANOVA, chi-square, weighted-average methods and rank correlation. The specific techniques reported in each article are used descriptively in accordance with the original thesis.

Results and Discussion

Weighted-average analysis in the original thesis provides a clear picture of the relative importance assigned to different electronic resources for teaching and research.

Indicator	Result
E-journals	Weighted average 64.97; highest among the listed resources.
E-mail	Weighted average 60.88.
E-books	Weighted average 60.66.
Online reference works	Weighted average 54.61.
Online databases	Weighted average 54.15.
Preferred format	43% preferred PDF.
Major access barrier	29.9% reported limited access to computer terminals overall.

The results should be interpreted within the scope of the original survey. They describe the perceptions and practices of the 736 respondents and should not be generalized beyond comparable populations without further research. The pattern across the three universities indicates that electronic resources had become an important component of academic information use, while access, digital skills, service support and institutional differences continued to influence the user experience.

Major Findings

1. E-journals were the most highly rated resource for teaching and research activities.
2. E-mail and e-books also received relatively high weighted-average values.
3. PDF was the most preferred access format.
4. Conference/seminar activities represented an important purpose of e-resource use.
5. Limited access to computer terminals was the most prominent overall barrier reported.

Conclusion

The findings show that academic users value electronic resources strongly, particularly e-journals, but infrastructure and access barriers can limit their effective use. Resource acquisition should therefore be combined with adequate terminals, connectivity, user education and technical

support. A service-oriented approach can improve the academic value obtained from electronic collections.

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