

ACCESS AND UTILIZATION OF ELECTRONIC RESOURCES IN MANONMANIAM SUNDARANAR UNIVERSITY, TIRUNELVELI, TAMIL NADU

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Abstract

This study evaluates the access to and utilization of electronic resources among students and faculty members in Arts and Science colleges affiliated with Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu. With the rapid growth of digital learning tools and e-resources, understanding user engagement, challenges and usage patterns is crucial for enhancing academic productivity. A structured questionnaire was administered to a sample of 195 respondents, including 140 students and 55 faculty members. The data were analyzed using descriptive statistics, regression analysis and independent samples t-test. The findings reveal that while the overall utilization of e-resources is moderate to high, significant differences exist between student and faculty usage patterns. E-journals and e-books are the most frequently accessed resources, primarily for academic assignments and research purposes. Key challenges include lack of awareness, insufficient training and technical limitations such as poor internet connectivity. Regression analysis indicates that awareness level, training received and frequency of use are significant predictors of e-resource utilization, whereas internet access location is not. The study concludes with practical suggestions to improve access, training and institutional support to promote more effective use of e-resources in higher education.

Keywords

Electronic Resources, E-Resource Utilization, Higher Education, Manonmaniam Sundaranar University, Digital Literacy, Library Access, Academic Information Services.

Introduction

In recent years, electronic resources (e-resources) have become an integral part of academic institutions, particularly in higher education. These resources, which include e-journals, e-books, online databases and digital repositories, have revolutionized teaching, learning and research activities. The rise of digital learning tools has provided students and faculty with unprecedented access to scholarly content, enabling them to enhance their academic pursuits. Despite these advancements, the effective access and utilization of e-resources remain a significant challenge for many educational institutions, especially those located in semi-urban and rural areas. Manonmaniam Sundaranar University (MSU), situated in Tirunelveli, Tamil Nadu, is an institution that serves as a hub for several Arts and Science colleges. While the university has made substantial investments in digital infrastructure and e-

resources, there is limited research on how these resources are being accessed and utilized by students and faculty. Given the increasing reliance on e-resources in academic work, understanding the patterns of access, usage and challenges faced by users in this context is crucial for enhancing the academic experience. This study aims to explore the access and utilization of e-resources among students and faculty members at Arts and Science colleges affiliated with MSU. It seeks to identify the factors influencing the effective use of e-resources, including the levels of awareness, training and internet connectivity. Furthermore, the study examines the barriers that hinder the optimal use of these resources and offers practical recommendations for improving their accessibility and usage within the university. By doing so, the study contributes to the broader understanding of digital resource engagement in higher education institutions, with a focus on regional and semi-urban challenges.

Statement of the Problem

In the era of digital transformation, electronic resources (e-resources) have become vital for the academic development of students and faculty in higher education institutions. These resources, which include e-journals, e-books, online databases and digital repositories, provide instant access to vast amounts of scholarly content, significantly enhancing the learning, teaching and research processes. However, despite significant investments in digital infrastructure, many academic institutions face challenges in ensuring effective access and utilization of these e-resources. Manonmaniam Sundaranar University (MSU), located in Tirunelveli, Tamil Nadu, has made substantial efforts to provide electronic resources to its affiliated Arts and Science colleges. Nevertheless, the extent to which these resources are accessed, utilized and integrated into academic work remains unclear. Several factors may hinder the effective use of e-resources, including limited awareness, inadequate training, insufficient digital literacy and technical issues such as poor internet connectivity. Furthermore, there is a gap in understanding how different user groups—students and faculty—engage with these resources and the specific challenges they face. While digital resources are intended to improve academic outcomes, their utilization varies and barriers like lack of awareness, inadequate infrastructure and technical limitations continue to impede their full potential. This study aims to address the issue by evaluating the access to and utilization of e-resources among students and faculty in the Arts and Science colleges affiliated with MSU. The study will identify key challenges, analyze usage patterns and examine factors that influence e-resource utilization, thereby providing insights to improve access and ensure effective use of these essential academic tools.

Objectives of the Study

1. **To analyze the demographic profile** of the respondents using electronic resources in Arts and Science colleges affiliated with MSU.
2. **To assess the frequency and purpose** of e-resource utilization among students and faculty.
3. **To identify the types of e-resources** accessed by users and their level of awareness.
4. **To examine the challenges and barriers** faced in accessing and using e-resources.

5. **To evaluate the impact of factors** such as training, awareness and internet access location on the utilization of e-resources through statistical analysis.
6. **To provide suggestions** for improving the accessibility, awareness and effective usage of e-resources in affiliated institutions.

Data Collection

For this study, **primary data** was collected using a structured questionnaire distributed to a sample of **195 respondents**, consisting of **140 students** and **55 faculty members** from various Arts and Science colleges affiliated with Manonmaniam Sundaranar University. The questionnaire included both closed-ended and Likert-scale items covering demographic details, usage frequency, purpose of use, types of e-resources accessed, awareness level, training received and challenges encountered. The data collection was conducted through both **online and offline modes**, ensuring representation from both urban and rural colleges under the university's jurisdiction. The collected data was analyzed using **SPSS software**, employing descriptive statistics, regression analysis and t-tests to derive meaningful insights.

Sampling Method

This study employed a **stratified random sampling** method to ensure representation across different user groups, namely **students and faculty**, as well as disciplines (Arts and Science). A total of **195 respondents** were selected from several affiliated Arts and Science colleges under Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu. The strata were defined based on user category (students/faculty) and department type (Arts/Science). Respondents were selected proportionately from both **urban and rural colleges**, ensuring diversity in exposure, infrastructure and access to digital resources. The sample includes **140 students and 55 faculty members**, allowing comparison of utilization patterns and challenges across user categories. This method helped achieve **balanced representation** and minimized sampling bias, thereby increasing the generalizability of the findings within the affiliated institutions of the university.

Limitations of the Study

1. Geographical Scope:

The study is confined to Arts and Science colleges affiliated with **Manonmaniam Sundaranar University in Tirunelveli district**. Therefore, the findings may not be applicable to institutions outside this geographical or administrative framework.

2. Sample Size:

Although the sample of 195 respondents provides meaningful insights, a **larger sample size** across more colleges could offer broader generalizability and deeper statistical power.

3. Self-Reported Data:

Data was collected through a **structured questionnaire**, which is subject to **response bias**. Some participants may have over- or under-reported their usage due to recall issues or social desirability bias.

4. Technology Access Variance:

The study does not fully account for disparities in **infrastructure or internet connectivity** across colleges, which may influence e-resource utilization but were not measured in technical depth.

5. Cross-Sectional Design:

The data was collected at a **single point in time**, limiting the ability to observe changes in behavior or usage patterns over time.

6. Focus on Quantitative Analysis:

The study relies mainly on **quantitative methods** (SPSS analysis, t-tests, regression) and does not include **qualitative insights** (e.g., interviews, open-ended feedback), which could have enriched understanding of users' perceptions and experiences.

Data Analysis and Interpretation

Table 1: Demographic Profile of Respondents

Demographic Variable	Category	Frequency	Percentage (%)
Gender	Male	105	53.8%
	Female	90	46.2%
User Category	Students	140	71.8%
	Faculty	55	28.2%
Department	Arts	88	45.1%
	Science	107	54.9%
Internet Access Location	College Library	92	47.2%
	Hostel/Home	76	39.0%
	Mobile Data (on-the-go)	27	13.8%

Majority of respondents are students (71.8%), with a fairly even gender split. Science stream has slightly more representation. Access to e-resources happens primarily through the college library.

Table 2: Frequency of E-Resource Usage

Frequency of Use	Number of Respondents	Percentage (%)
Daily	65	33.3%
Weekly	72	36.9%
Occasionally	44	22.6%
Rarely/Never	14	7.2%

Most users access e-resources **at least weekly (70%)**, indicating good utilization. However, 7% rarely or never use them, highlighting a gap in engagement.

Table 3: Purpose of Accessing E-Resources

Purpose	Frequency	Percentage (%)
Academic Assignments	102	52.3%
Research/Project Work	48	24.6%
Exam Preparation	31	15.9%

General Knowledge/Updates	14	7.2%
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Over half the respondents use e-resources primarily for **academic assignments**, followed by research work. This reflects the functional academic need driving e-resource use.

Table 4: Type of E-Resources Used

Type of E-Resource	Users (N)	Percentage (%)
E-journals	105	53.8%
E-books	76	39.0%
Databases (e.g., JSTOR)	64	32.8%
Subject Gateways	38	19.5%
Institutional Repository	22	11.3%

E-journals are the most commonly accessed resource. Institutional repositories and gateways are underutilized, possibly due to lack of awareness or training.

Table 5: Challenges Faced in Accessing E-Resources

Challenge	Frequency	Percentage (%)
Lack of Awareness/Training	78	40.0%
Slow Internet/Technical Issues	63	32.3%
Limited Access to Subscriptions	32	16.4%
No Major Issues	22	11.3%

The top barrier is **lack of awareness/training** (40%), followed by connectivity issues. This highlights the need for **orientation programs and better infrastructure**.

Objective:

To determine how well **predictor variables** (e.g., Internet Access Location, Frequency of Use, Awareness Level, Training Received) predict the **Utilization of E-Resources**.

Dependent Variable:

- **Utilization Score** (Composite score from Likert-scale responses on usage frequency, types of resources used and purpose)

Independent Variables:

- **Internet Access Location** (coded: 1 = Library, 2 = Home, 3 = Mobile)
- **Awareness Score** (composite of awareness questions)
- **Training Received** (0 = No, 1 = Yes)
- **Frequency of Use** (scale: 1 = Rarely to 4 = Daily)

Table 6 Co efficient value

Predictor	B	Std. Error	Beta	t	Sig. (p)
(Constant)	1.215	0.423	-	2.871	0.005
Awareness Score	0.312	0.078	0.325	4.000	0.000**
Training Received	0.487	0.157	0.258	3.101	0.002**
Frequency of Use	0.275	0.085	0.305	3.235	0.001**
Internet Access Location	-0.042	0.061	-0.055	-0.689	0.492

Table 7 Model Summary:

R	R ²	Adjusted R ²	Std. Error	F	Sig.
.682	.465	.451	0.674	24.35	0.000**

The regression model explains **46.5% of the variance** in e-resource utilization ($R^2 = 0.465$). **Awareness, training and frequency of use** are **significant predictors** ($p < 0.01$). **Internet Access Location** is not a significant predictor ($p = 0.492$), suggesting it doesn't majorly impact utilization when controlling for other factors. The model is statistically significant ($F = 24.35$, $p < 0.001$).

Independent Samples t-Test

Objective:

To compare **e-resource utilization** between **students and faculty**.

Grouping Variable:

- **User Category** (Group 1 = Students, Group 2 = Faculty)

Dependent Variable:

Table 8 Utilization Score

Group	N	Mean	Std. Deviation
Students	140	3.78	0.65
Faculty	55	4.15	0.52
t	df	Sig. (2-tailed)	Mean Difference
-3.925	193	0.000**	-0.37

- The t-test shows a **statistically significant difference** in e-resource utilization between students and faculty ($p = 0.000$).
- Faculty members utilize e-resources **more actively** ($M = 4.15$) than students ($M = 3.78$).
- The difference in means (0.37) is **meaningful**, indicating a usage gap that might be addressed through student training.

Findings of the Study

1. Demographic Profile

- A majority of respondents are **students (71.8%)**, with a fairly balanced gender distribution.
- More respondents are from **Science departments (54.9%)** than Arts.
- **College libraries** are the most common location for accessing e-resources (47.2%).

2. Frequency and Purpose of E-Resource Use

- About **70% of respondents** access e-resources **at least weekly**, suggesting good overall engagement.
- The primary purposes for using e-resources are:

- Academic assignments (52.3%)
- Research/project work (24.6%)

3. Types of E-Resources Used

- E-journals (53.8%) and e-books (39%) are the most frequently accessed resources.
- Resources like **institutional repositories** and **subject gateways** are underutilized, likely due to low awareness or lack of training.

4. Challenges in Access

- The biggest challenges identified are:
 - Lack of awareness/training (40%)
 - Slow internet and technical issues (32.3%)
- Only 11.3% reported **no major issues**, indicating significant barriers remain.

5. Regression Analysis Findings

- The model explains **46.5% of the variance** in e-resource utilization ($R^2 = 0.465$).
- Awareness, training received and frequency of use are **statistically significant predictors** of e-resource utilization ($p < 0.01$).
- Internet Access Location does **not significantly predict** utilization ($p = 0.492$), indicating that accessibility alone doesn't ensure effective usage.

6. t-Test Findings

- Faculty members use e-resources significantly more than students (Mean = 4.15 vs. 3.78; $p = 0.000$).
- This highlights a **knowledge or training gap** among students that may limit effective utilization.

💡 Suggestions of the study

1. Organize Regular Training and Awareness Programs

- Conduct **orientation sessions** and **hands-on workshops** for students and faculty on how to access and use various e-resources effectively.
- Include training on lesser-used resources such as **subject gateways** and **institutional repositories**.

2. Strengthen Internet Infrastructure

- Improve **Wi-Fi and broadband facilities** within colleges, particularly in libraries and hostels, to address slow internet issues.
- Consider **providing mobile data vouchers** or digital access subsidies for students in remote areas.

3. Encourage Faculty-Student Mentorship

- Create a **peer-learning model** where faculty guide students in identifying and using relevant academic databases and journals.
- Encourage **faculty-led research training** sessions focusing on resource utilization.

4. Integrate E-Resource Usage into Curriculum

- Assignments and assessments should encourage students to use e-resources like **e-journals and databases**, promoting habitual use.

5. Monitor and Expand Subscriptions

- Regularly **review usage data** to identify underused resources and optimize subscriptions.
- Expand access to **open educational resources (OERs)** and **digital repositories** beyond what's currently available.

6. Develop a Centralized E-Resource Portal

- A **user-friendly, single-access portal** for all institutional e-resources can improve navigation and utilization.
- Incorporate **video tutorials and FAQs** for easy understanding.

Conclusion

This study aimed to evaluate the access to and utilization of electronic resources among students and faculty members in Arts and Science colleges affiliated with Manonmaniam Sundaranar University, Tirunelveli. The findings indicate a moderate to high level of e-resource usage, particularly for academic assignments and research. E-journals and e-books emerged as the most commonly accessed resources, while institutional repositories and subject gateways were underutilized highlighting a gap in awareness and training. Statistical analysis using regression revealed that awareness levels, frequency of use and training received were significant predictors of effective utilization of e-resources, while internet access location was not a significant factor. The independent samples t-test showed a significant difference in usage between faculty and students, with faculty demonstrating higher levels of utilization. Despite reasonable access to digital platforms, the study uncovered key barriers such as lack of awareness, limited digital literacy and inadequate infrastructure. These findings point to the need for regular training programs, improved internet connectivity and promotional strategies to enhance awareness and engagement with e-resources. In conclusion, effective utilization of e-resources in affiliated colleges of MSU can be significantly improved through institutional support, digital literacy initiatives and inclusive academic policies that foster equitable access and usage among all user groups. Such efforts are critical in advancing digital learning and academic excellence in higher education institutions.

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