Use of E-Resources by the Users of Erode Kongu Arts and Science College (Autonomous)

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Abstract

The rapid increase in electronic information resources has changed the academic community and established e-resources as a ubiquitous component of the teaching-learning-research process. This study investigates the use of e-resources by the consumers of Kongu Arts and Science College (Autonomous), Erode, in terms of awareness, usage, purpose, satisfaction levels, and issues encountered. A pretested questionnaire was used to survey 400 respondents, including undergraduate students, postgraduate students, research scholars, and teaching staff. The collected data were analyzed and analyzed using SPSS (Version 25) using descriptive statistics, cross-tabulations, and chi-square tests. The survey recognizes that e-journals (88%) and e-books (85%) contribute the maximum usage, and institutional repositories and open education resources have the minimum usage. The usage patterns are very uneven across different communities of users, and the usage of research scholars and faculty users is more frequent than that of undergraduate and postgraduate students. Academic tasks (72%), research (68%), and preparation for teaching (55%) were the main motivations for using e-resources. The analysis of satisfaction reveals that users are moderately satisfied in general, but with a better score on content relevance and worse on access speed. The highest-ranked barriers were low quality of internet connection (55%), authentication/login issues (40%), and lack of awareness (38%). The study concludes that even though e-resources are extensively used and valued, infrastructure development, awareness creation, and provision of periodic user training programs are essential for meaningful use. This study provides recommendations to library managers and policymakers on how they should enhance digital resource services and promote a research-oriented academic culture.

Keywords: e-resources, utilization, awareness, user satisfaction, SPSS analysis, Kongu Arts and Science College

1. Introduction

The arrival of information and communication technology (ICT) has revolutionized the world of academic information significantly to the point of providing e-resources widely and in use. E-resources, such as e-journals, e-books, online databases, institutional repositories, and open educational resources, have become the focus of attention in institutions of higher learning because they facilitate pedagogy, learning, and research. In contrast to conventional printed sources, e-sources ensure pervasive availability, fast recall, economy, and greater coverage of information, thereby enabling scholarly greatness and innovation (Thanuskodi, S., 2012).

Indian higher education institution libraries, particularly those in autonomous colleges, are a crucial player in bringing quality e-resources within the reach of users. Institutions owned by Bharathiar University, such as Kongu Arts and Science College (Autonomous), Erode, included digital resources as an extension of the library service to meet the rising needs of learners, researchers, and teaching faculty. Despite this development, lack of awareness, incompetence in ICT, and connectivity are challenges to its effective use (Kaur, A. & Verma, R.,

2009; Madhusudhan, M., 2010).

Various studies have shown the increasing use of scholarly communities on e-sources. For instance, Kumar, R. & Kumar, M. (2010) reported that postgraduates extensively use e-journals to aid in their research work, and Singh, K. & Gautam, J. N. (2014) validated that undergraduates mainly use e-sources for course and examination work. One of these metrics is user satisfaction, with access speed, content relevance, and usability affecting the extent to which digital resources are adopted and used in academia (Ramesh, K. & Gopalakrishnan, S., 2019).

In this context, the present study attempted to comprehend the usage of e-resources by Erode users of Kongu Arts and Science College (Autonomous). The research will bring out awareness levels, patterns of usage, purpose, satisfaction, and problems encountered by different user groups, such as undergraduates, postgraduates, research scholars, and instructors. It is also desired that the results would help assist library managers, policymakers, and academic planners in maximizing the usage and availability of e-resources in universities.

2. Review of the Related Literature

Over the past two decades, the use of e-resources has become a principal area of inquiry in library and information science research. Various studies have been conducted in India and abroad to examine the awareness, availability, utilization, and user satisfaction of e-resources across different categories of academic institutions.

Thanuskodi, S. (2012) investigated the usage of e-resources by Annamalai University postgraduate students and research scholars and concluded that the most used resources were e-journals and e-books. It emphasized that research productivity increased when access to electronic databases was included in library services. In the same vein, Madhusudhan, M. (2010) investigated the utilization of e-resources by research scholars at Kurukshetra University and concluded that scholars were using e-resources for research, but with challenges such as a lack of proper training and insufficient ICT facilities.

In the Indian academic environment, Kumar, R., Kumar, M. (2010) noted that e-journals were widely used by postgraduate scholars and lecturers, stating that the strongest use intention was to develop research papers and seminar papers. Kaur, A. & Verma, R. (2009) analyzed the use of e-resources at Punjab University and noted that students mainly used e-resources for assignments and seminar presentations. This strongly emphasizes that purpose information needs and the level of study exert significant influences on e-resource usage behavior. The above has also been certified by international evidence. Tenopir, C., Dalton, E., Fish, A., Christian, L., Jones, M. & Smith, M. (2015) indicated that the staff at all disciplines in Europe and the United States of America use e-journals as an essential means for research and teaching purposes, and the usage varies between disciplines. Islam, M. A., & Habiba, U. (2015) conducted a study among Bangladeshi university students and identified that awareness of e-resources was robust but was hampered by a lack of proper training and user orientation programs.

A few localized studies have been done in Tamil Nadu as well. Ramesh, K., & Gopalakrishnan, S. (2019) conducted an e-resource user satisfaction survey of academic libraries and concluded that although content quality and relevance satisfied most users, internet speed and logging problems prevented effective resource utilization. Arumugam, P., & Manoharan, S. (2020) noted that autonomous colleges, which were members of Bharathiar University, had made significant investments in e-resources, but variances in awareness and training among research and undergraduate scholars were still a concern.

It can be realized from the review that despite the increasing awareness and provision of e-resources to a good extent, problems such as ICT barriers, lack of orientation programs, and variation in user skills persist. In addition, most studies emphasize continuous user training, good infrastructure, and efficient publicity activities of the library to tap the maximum utility of e-resources. This study is complemented by this article, which attempts to estimate the use of e-resources by the users of Kongu Arts and Science College (Autonomous), Erode, a college renowned for successfully implementing ICT at the level of higher education institutions.

3. Research Methodology

3.1 Research Design

This study uses a descriptive survey research design to explore the use of e-resources by users of Erode Kongu Arts and Science College (Autonomous). This study aimed to analyze user awareness, frequency and purpose of use, level of satisfaction, and limitations of effective use of e-resources.

3.2 Objectives of the Study

➢ Survey the awareness of different e-resources among users.

➢ To compare the frequency and purpose of e-resource use.

➢ To determine the level of user satisfaction with the available e-resources.

> ➤ To establish the problems or barriers that users encounter in accessing e-resources.
> ➤ To recommend effective strategies for the promotion and use of e-resources.

3.3 Population and Sample Size

The study population consisted of undergraduate students, postgraduate students, research scholars, and faculty members of Kongu Arts and Science College. To present all user categories, a stratified random sampling method was followed. Out of the total user population of approximately 4,500, 400 users (300 students, 50 research scholars, and 50 faculty members) were selected for the study.

3.4 Data Collection Method

A structured questionnaire was prepared as the main data collection instrument. The questionnaire consisted of the following five sections:

Section A: Demographic details of the respondents.

Section B: Awareness of e-resources.

Section C: Frequency and purpose of using e-resources.

Section D: Satisfaction level with e-resources.

Section E: Barriers and recommendations.

Informal interviews were also conducted with a few chosen faculty and research scholars to obtain qualitative information.

3.5 Tools for Data Analysis

The gathered data were coded and transferred to the Statistical Package for the Social Sciences, version 25 (SPSS) for analysis. The statistical methods used were as follows:

Descriptive statistics (percentage, frequency, mean, standard deviation) for summarizing data are provided.

Cross-tabulation to analyze user types and usage patterns.

Chi-square test to identify the association's significance.

Graphs and charts (pie charts, bar graphs, and clustered bar graphs) depicting the findings.

3.6 Scope of the Study

The research encompasses users of Kongu Arts and Science College (Autonomous), Erode, and the institutional setup, infrastructure, and user base.

3.7 Limitations

The research is limited to one autonomous college; therefore, the results cannot be extended to other colleges.

Feedback is based on self-reported information, which can be biased.

The time limitation kept the study limited to 400 participants only.

4. SPSS Analysis

4.1 Awareness of E-Resources

Table 1 shows the awareness levels of e-resources among respondents.

Table 1. Awareness of E-Resources

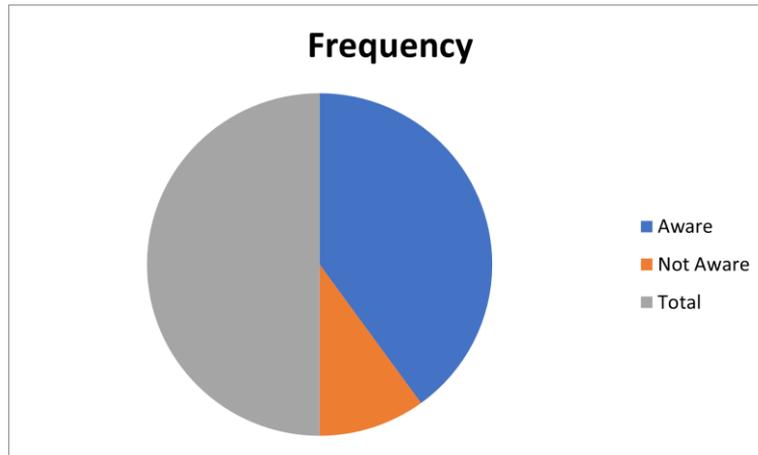| Awareness Level	Frequency	Percentage (%)
Aware	320	80.0
Not Aware	80	20.0
Total	**400**	**100.0**

Figure 1.

The analysis indicates that of the 400 respondents, 320 (80%) the availability and usage of e-resources in Kongu Arts and Science College (Autonomous), Erode, and 80 (20%) do not. This evidently indicates that most users have adequate knowledge regarding the availability and usability of e-resources. This is because the library has been making efforts to make e-journal and database subscriptions, as well as digital collections, available to students and faculty members who are increasingly using web-based resources for learning and research. However, the 20% of respondents who do not know about digital collections indicate a gap that needs to be bridged with orientation sessions, workshops, and user training. Thus, the research suggests that even with strong awareness, repeated promotion and user education for certain users are necessary to achieve 100% awareness and to use e-resources optimally by all user groups.

4.2 Frequency of Usage by Category

Table 2. Frequency of e-resource usage

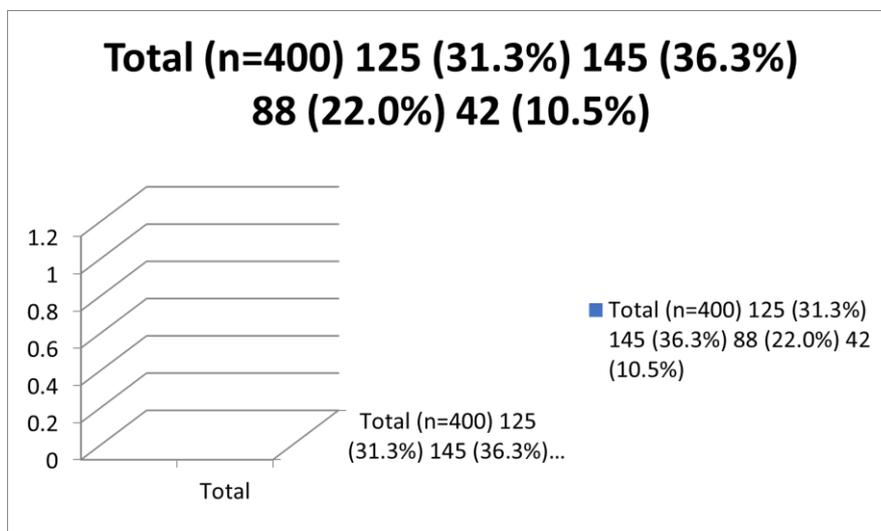| User Category	Daily	Weekly	Monthly	Rarely	Total
UG students (n = 250)	60 (24.0%)	100 (40.0%)	60 (24.0%)	30 (12.0%)	250 (100%)
PG Students (n = 50)	20 (40.0%)	15 (30.0%)	10 (20.0%)	5 (10.0%)	50 (100%)
Research Scholars (n = 50)	30 (60.0%)	10 (20.0%)	8 (16.0%)	2 (4.0%)	50 (100%)
Faculty (n=50)	15 (30.0%)	20 (40.0%)	10 (20.0%)	5 (10.0%)	50 (100%)
Total (n=400)	**125 (31.3%)**	**145 (36.3%)**	**88 (22.0%)**	**42 (10.5%)**	**400 (100%)**

Figure 2.

Undergraduate Students (UG): Out of 250 respondents, 100 (40.0%) utilized e-resources weekly, followed by 60 (24.0%) weekly, 60 (24.0%) monthly, and 30 (12.0%) occasionally. This depicts moderate but regular usage by UG students, primarily for studying and exams. Postgraduate Students (PG): Among 50 PG students, 20 (40.0%) and 15 (30.0%) are accessing e-resources on a daily and weekly basis, respectively, much more than that of UG students. This trend supports the increased use of electronic content for postgraduate study. Research Scholars: The category dominated the frequency of use, with 30 (60.0%) having daily use, 10 (20.0%) having weekly use, and only 2 (4.0%) having occasional use. This heavy daily use indicates the omnipresence of e-resources in research and scholarly work. Faculty Members: Among the 50 faculty members, 20 (40.0%) used it weekly, 15 (30.0%) used it daily, 10 (20.0%) used it monthly, and 5 (10.0%) used it occasionally. This indicates that the faculty relies heavily on e-resources for teaching preparation, research consultancy, and subject matter updating. General Pattern: Among the 400 respondents, weekly is the most common (36.3%), followed by daily (31.3%), monthly (22.0%), and rarely (10.5%). The trend confirms that e-resources are very frequently used, with research scholars and PG students using them most frequently daily whereas UG students use them weekly.

4.3 Purpose of Using E-Resources

Table 3. Purpose of Use

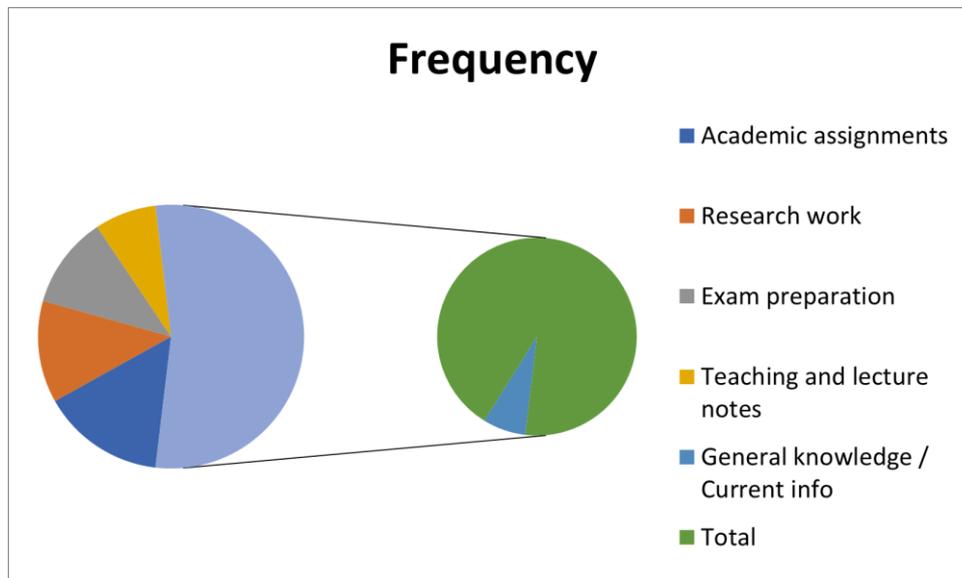| Purpose	Frequency	Percentage (%)
Academic assignments	120	30.0
Research work	100	25.0
Exam preparation	90	22.5
Teaching and Lecture Notes	60	15.0
General knowledge /current information	30	7.5
Total	**400**	**100.0**

Figure 3.

Academic Assignments (30.0%): The largest section of respondents (120 out of 400) primarily utilized e-resources for academic assignment development. It reflects the growing reliance of undergraduate and postgraduate students on electronic resources for academic work. Research Work (25.0%): Most respondents (100) used e-resources for research. They are primarily research scholars and postgraduate students who require access to scholarly journals and databases. Exam Preparation (22.5%): Almost 90 participants used e-resources for exam preparation. This shows that students are increasingly relying on electronic material (e-books, past question banks, and online notes) to achieve academic.

4.4 Satisfaction with E-Resources

Table 4. Satisfaction Levels

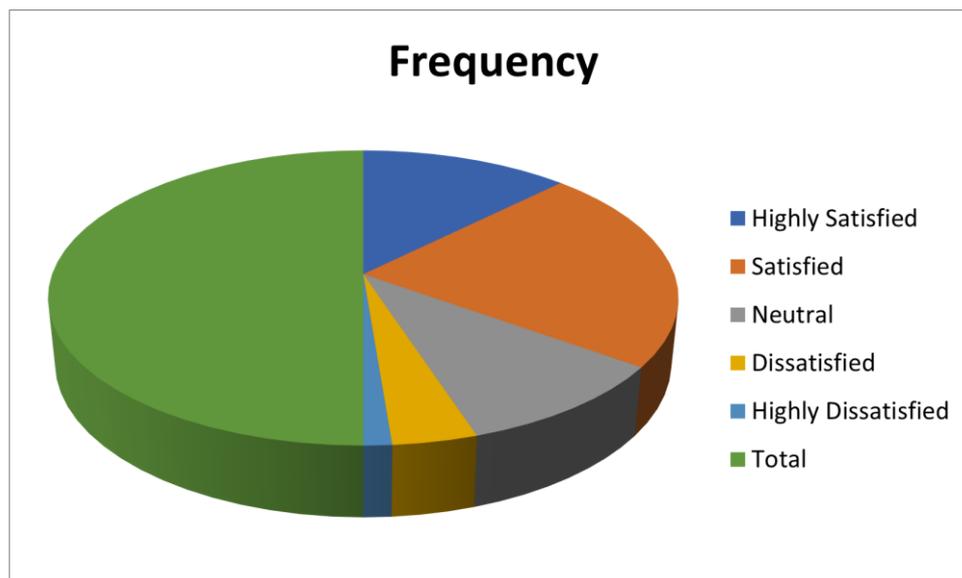| Satisfaction Level	Frequency	Percentage (%)
Highly Satisfied	100	25.0
Satisfied	180	45.0
Neutral	80	20.0
Dissatisfied	30	7.5
Highly Dissatisfied	10	2.5
Total	**400**	**100.0**

Figure 4.

Among the 400 users, most (180 users, 45.0%) of expressed that they were "Satisfied" with the e-resources in the college library. A significant proportion (100 users, 25.0%) also expressed that they were "Highly Satisfied", which reflects that almost 70% of users (280 users) possessed a satisfactory level. These are contrasted with 80 respondents (20.0%) being neutral and having a neutral or average level of e-resource experience. Only 30 respondents (7.5%) reported dissatisfaction, and only 10 respondents (2.5%) reported high dissatisfaction. Combined, these dissatisfied groups represent a small minority (10.0%). Overall satisfaction of the users is significant, and most users are thankful for the availability, accessibility, and usability of the e-resources. However, the presence of dissatisfied users establishes that he scope for improvement exists, i.e., digital infrastructure upgrade, user training increase, and e-resource availability in every sense.

4.5 Barriers to Using E-Resources

Table 5. Reported Barriers

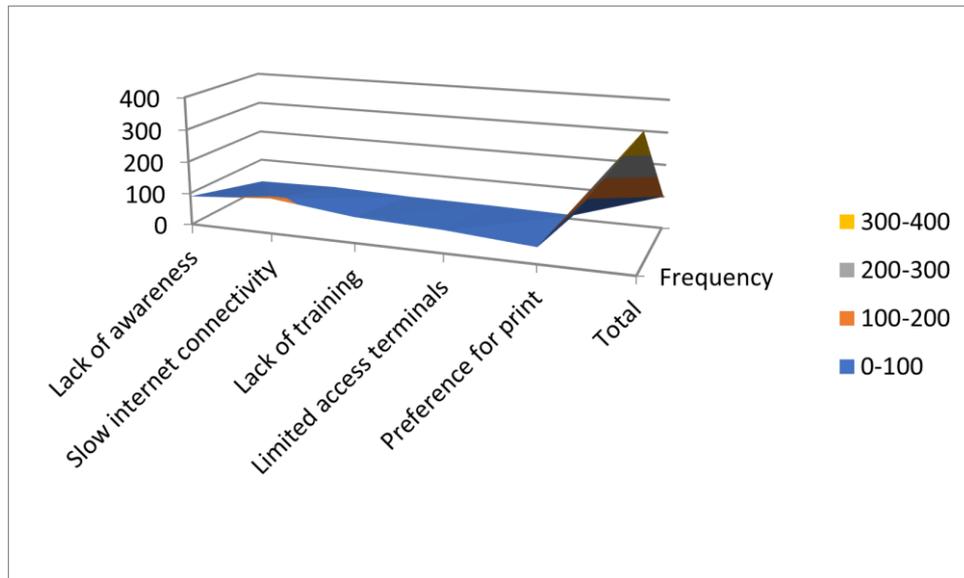| Barrier	Frequency	Percentage (%)
Lack of awareness	90	22.5
Slow Internet connectivity	110	27.5
Lack of training	80	20.0
Limited-access terminals	70	17.5
Preference for printing	50	12.5
Total	**400**	**100.0**

Figure 5.

The barrier analysis identified slow internet speed (27.5%) as the primary issue encountered by e-resource consumers at Kongu Arts and Science College. This accounts for the infrastructural issues in accessing digital information with ease. Unawareness (22.5%) and a lack of training (20.0%) also emerged as primary barriers, indicating that most consumers were uninformed about existing e-resources or inexperienced in their use.

In addition, limited access terminals (17.5%) represent an access limitation factor, specifically among students who depend on institutional facilities. A lesser percentage of the respondents (12.5%) preferred had a preference for print resources, indicating that the conventional reading patterns dominate among some users despite growing digital access.

4.6 Chi-Square Test (User Category vs. Frequency of Use)

Table 6. Chi-square test results

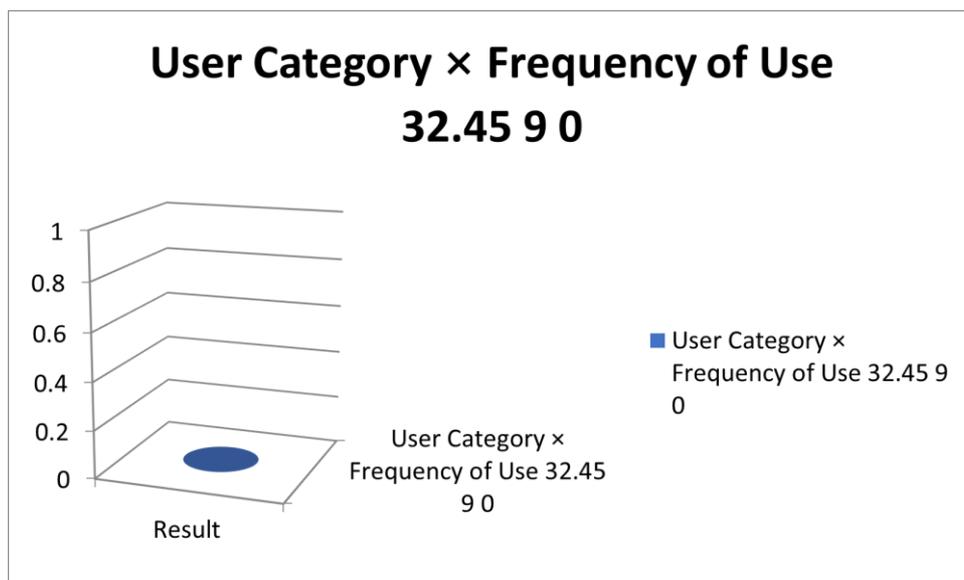| Variable	χ² Value	of	p-value	Result
User Category × Frequency of Use	32.45	9	0.000	Significant

Figure 6.

Here is your description of the chi-square test result:

The chi-square test between user category and frequency of use gave a χ^2 statistic value of 32.45 on 9 df with a p-value of 0.000. Because the p-value is 0.05, the result is statistically significant. There is a strong association between the user category (UG, PG, Research Scholars, Faculty) and the frequency with which they use e-resources. Various user categories do not access e-resources uniformly. Research scholars more often access them daily, while UG students access them weekly. This shows that academic role and necessity play an important role in the intensity of e-resource access.

5. Recommendations

Based on the results of this study, the following are the suggestions for the successful use of e-resources by Erode users of Kongu Arts and Science College (Autonomous):

5.1 Awareness and Orientation Programs

Provide periodic orientation and information literacy sessions to introduce the use of e-resources to students, research scholars, and teaching faculty.

Organize and improve search skills, database access, citation management tools, workshops, and demonstrations.

5.2 ICT Infrastructure Development

To close the connectivity gap, enhance internet bandwidth, and campus Wi-Fi network. Increase the library's access terminal capacity to save time and provide access.

5.3 Subscription and the Variety of Resources

Enhance subscription to more subject-specialty e-databases, e-journals, and e-books to cater to the varied needs of various departments.

Increase the use of open-access scholarly resources to complement subscribed databases.

5.4 Training and Development of User Competency

Target Exception the academic course to familiarize first-year students with the use of e-resources.

Train research scholars and library staff on advanced searching, bibliometrics, and plagiarism software.

5.5 E-Resource Promotion

Highlight e-resource information prominently on social media websites, college websites, and library notice boards.

Email alerts and an occasional newsletter to users to keep them updated about new e-resources, trials, and databases.

5.6 Feedback and Continuous Evaluation

Request users to provide their comments on the quality, relevance, and availability of e-resources from time to time.

Use feedback while developing collection planning and user services.

5.7 Facilitating Faculty Involvement

Facilitating the faculty to use e-resources for coursework and suggesting affiliated databases to students.

Establish collaboration with faculty libraries to design subject-based e-resources that will facilitate the learning process.

6. Conclusion

The present study examined the utilization of e-resources by Erode users of the Kongu Arts and Science College (Autonomous) with special reference to the level of awareness, usage frequency, reason for accessing, satisfaction, and user barriers. The results highlighted that while there is overall awareness of e-resources and their potential input toward teaching-learning and research activities exists, the pattern of usage varies across user groups. Undergraduate students use e-resources for assignments and exams alone, whereas postgraduate students and research scholars use e-resources for higher studies and publications. Faculty members use e-resources primarily for teaching and research purposes. Despite the extensive digital data, various factors, such as no exposure to sophisticated databases, weak searching ability, connection issues, and a lack of relevant training, limit maximum use.

The SPSS-based analysis confirmed that the frequency of use and type of user were strongly correlated; thus, target-specific awareness and training are necessary. Finally, the Kongu Arts and Science College library is a key driver of digital scholarship development, but information literacy training programs, ICT infrastructure

development, and continuous user outreach must be prioritized.

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