

# **A Comparative Study on ICT Competencies among Undergraduate and Postgraduate Students of Maharani's Arts College for Women, Mysuru**

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## **ABSTRACT**

*The study aimed to examine the use of e-resources by UG and PG Students of Maharani's Arts College for Women, Mysuru. It revealed that students' access to the Internet was relatively high, mainly due to the adequate availability of mobiles with Internet facilities at the time of the study. The findings also showed that Internet usage was higher among the students of PG students compared to those in the UG students. Most students expressed a strong interest in using the Internet and its resources and were eager to improve their digital skills. The study therefore recommends increasing the number of computers with Internet access, improving connectivity speed, and organizing more orientation and training programmes on Internet use in the institutions.*

**KEYWORDS:** Undergraduate Students, Postgraduate Students, E-Resources, Internet and Digital Skills.

## **1. INTRODUCTION**

In today's world, the Internet has grown extremely and has become a rich source of information. Its influence on academic and research activities is important, as it strongly influences the learning environment in higher education. The higher education system is progressively shifting from a print-based culture to a digital culture, which affects not only learning, and research but the entire academic outline. College libraries are therefore increasingly dedicated to providing electronic information resources, as they are likely to offer good services to a large number of students and faculty members. In practical terms, this can now be done mainly through electronic resources. It is important to assess users' awareness of the existing electronic information resources, as these support their everyday academic and research activities.

## **2. ADVANTAGES OF E-RESOURCES**

### **2.1 Convenience and Accessibility**

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The accessibility of information through e-resources is unparalleled in terms of convenience. Unlike physical resources, electronic resources do not require a visit to the library and can be accessed from any location with an Internet connection, enabling more flexible study and research schedules.

### **2.2 Latest Information**

E-resources are regularly updated to ensure that users have access to the most current research and developments in their respective fields. This is particularly important in rapidly evolving areas such as environmental science, technology, and health, where outdated information can significantly affect the quality and outcomes of research.

### **2.3 Space-Saving**

Space is a common issue for libraries, as the physical materials housed inside may easily outstrip the allotted space. However, because electronic materials don't need physical storage, libraries may make more room for study rooms and collaborative workplaces.

### **2.4 Enhanced Search Ability**

The extensive search options that come with most e-resources make it much easier for consumers to locate the exact information they need. Because users can search for information using a variety of criteria, including keywords, authors, publication dates, and more, research becomes much more efficient.

### **2.5 Environmental Impact**

The need for printed good is reduced as more people turn to digital resources, which is good for the environment. Libraries may lessen their impact on the environment and promote sustainability by cutting back on paper use, which helps with conservation initiatives.

### **2.6 Supports Diverse Learning Styles**

More people can access knowledge because multimedia e-resources cater to different learning styles and interests. Those who learn best by sight or sound can greatly benefit from the many non-textual resources available today, such as video lectures, podcasts, and interactive simulations.

## **3. REVIEW LITERATURE**

Recent studies highlight the growing importance of electronic resources (e-resources) in academic libraries, underlining how digital tools are transforming information access and learning in higher education. Mahadeva and Krishnamurthy's comprehensive literature review found that e-resources significantly enhance teaching and learning by improving digital competence and providing quality academic content to students and faculty across India. Research conducted at first grade colleges affiliated with Davanagere University also underscores the increasing awareness and use of electronic information services among faculty, noting that literature on awareness, search strategies, and Internet use is expansive but still needs deeper focus. A critical study by Biswas and Kishore revealed that while users recognize the advantages of e-resources, there is a clear need for improved infrastructure, targeted orientation, and proactive outreach by library staff to boost effective utilization. Similar findings in literature show

that despite the availability of educational e-resources, users often underutilize them due to lack of interest and skills, pointing to a gap between resource provision and actual use. Other reviews in academic libraries indicate that e-resources have become indispensable for accessing up-to-date information and supporting research activities, while also reshaping collection development and service models in libraries. Specific studies in first grade institutions, such as those examining Internet usage among students in Bagalkot District, corroborate that digital literacy and relevance perception influence how students engage with online academic materials. Broader comparative studies on digital library use show that awareness, satisfaction, and ease of access are key determinants of e-resource adoption among university students. In addition, literature on awareness and utilization among research scholars highlights frequent use of e-resources for research purposes, while also identifying challenges related to search techniques and accessibility. Collectively, these studies suggest that while e-resources are increasingly vital for academic success, ongoing efforts in training, infrastructure enhancement, and user engagement remain crucial for maximizing their impact in first grade college libraries.

#### **4. RESEARCH METHODOLOGY**

##### **4.1 Research Design**

The study adopted a survey research design to efficiently collect quantitative data from the respondents.

##### **4.2 Population of the Study Sample**

The target population for this study comprised 100 UG and 100 PG students of Maharani's Arts College for Women, Mysuru. A sample of 200 students was selected using a simple random sampling technique, 140 filled in questionnaires were received back amounting 70%. Data were collected through a self-report questionnaire consisting of Likert-type questions, requiring responses on a five-point scale. To evaluate students' competencies, a five-level rating scale was used: Excellent, Very Good, Good, Fair, and No Skills. The questionnaire also assessed the frequency of students' use of ICT applications.

##### **4.3 METHOD OF DATA ANALYSIS**

The collected data were analysed statistically using frequencies and percentages. These descriptive statistical techniques were applied to interpret the data and address the research questions. The results are presented in the tables below.

**Table 1.** Category Wise Distribution of Questionnaire Among Students

	Frequency	Percent
PG Students	74	52.9%
UG Students	66	47.1%
Total	140	100%

Table 1 present the responses received from the respondents. A total of 100 questionnaires were distributed to PG students and including 100 to UG students. Among the PG students, 74 questionnaires (52.9%) were completed, returned, and found usable. From the UG students, 66 questionnaires (47.1.4%) were returned and considered usable for the purpose of this analysis.

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**Table 2.** Word, Excel, Power Point Skills among the PG Students and UG Students.

User Category	Excellent	Very Good	Good	Fair	No Skills	Total
PG Students (N=74)	31	21	9	8	5	74
UG Students (N=66)	26	18	11	6	5	66
Total	57(40.7%)	39(27.9%)	20(14.3%)	14(10.0%)	10(7.1%)	140(100%)

Table 2 show the level of MS Word, Excel, and PowerPoint skills among PG and UG students. Out of the total 140 students, 57 (40.7%) students reported excellent skills, 39 (27.9%) very good skills, 20 (14.3%) good skills, and 14 (10.0%) fair skills, while only 10 (7.1%) students indicated that they had no skills in MS Office applications. Among the PG students (74), 31 demonstrated excellent skills, 21 very good, 9 good, 8 fair, and 5 reported no skills. Similarly, among the UG students (66), 26 showed excellent skills, 18 very good, 11 good, 6 fair, and 5 had no skills. The findings indicate that the majority of students possess good to excellent proficiency in MS Office tools, suggesting a satisfactory level of ICT competence among both PG and UG students, although a small proportion still requires further training and skill development.

**Table 3.** Benefits of Use of ICT Applications

User Category	Save the Time	Easy to Use	24/7 access	Less expensive	Information available in various formats	Total
PG Students (N=74)	22	21	11	10	10	74
UG Students (N=66)	27	12	10	13	4	66
Total	49(35.00%)	33(23.57%)	21(15.00%)	23(16.43%)	14(10.00%)	140(100%)

Table 3 data shows the various benefits, "Save the Time" is the most significant factor, with 49 responses (35.00%). Both UG (27) and PG students (22) consider time-saving as the primary advantage, indicating that quick access to information is highly valued. The second most important benefit is "Easy to Use", which accounts for 33 responses (23.57%). PG students (21) reported higher preference compared to UG students (12), suggesting that postgraduate students may find e-resources more convenient and user-friendly due to greater exposure. The benefit "Less Expensive" received 23 responses (16.43%), where UG students (13) expressed more concern about cost compared to PG students (10). This indicates that affordability is relatively more important for undergraduate students. "24/7

Access” is another important factor, with 21 responses (15.00%), and both PG (11) and UG students (10) showing almost equal responses. This reflects that continuous accessibility is moderately valued by all students. Finally, “Information available in various formats” is the least preferred benefit, with only 14 responses (10.00%). PG students (10) show more interest in this feature than UG students (4), possibly due to their academic and research needs requiring diverse formats. Overall, the analysis indicates that time-saving and ease of use are the most influential benefits of e-resources, while features like availability in multiple formats are less emphasized. Additionally, slight differences exist between UG and PG students in terms of priorities, particularly regarding usability and cost.

**Table 4:** Frequency of Use of Computer/ Laptop/Mobile

User Category	Daily	Weekly	Fortnightly	Monthly	Occasionally	Total
PG Students (N=74)	46	20	6	1	1	74
UG Students (N=66)	39	17	8	1	1	66
Total	85(60.7%)	37(26.4%)	14(10%)	2(1.4%)	2(1.4%)	140(100%)

Table 4 shows a significant majority of users, 60.71% (85 students), access the service on a daily basis, indicating a high level of engagement and dependence. The weekly users account for 26.43% (37 students), forming the second largest group. A smaller proportion, 10% (14 students), use the service fortnightly, indicating moderate engagement. Very few users fall under monthly and occasional categories (1.43% each). In terms of user categories, PG students (52.86%) slightly outnumber UG students (47.14%), indicating marginally higher participation or reliance among postgraduate students. PG students also show slightly higher daily usage compared to UG students, reflecting possibly greater academic requirements.

**Table 5.** Purpose of Use Computer/ Laptop/Mobile

User Category	Personal Work	Preparing Notes	Preparing Assignments/ Seminars	Recreational Purpose	Research purpose	Total
PG Students (N=74)	19	17	11	23	4	74
UG Students (N=66)	16	15	10	25	0	66
Total	35(25%)	32(22.86%)	21(15%)	48(34.29%)	04(2.86%)	140(100%)

The table 5 shows that the highest usage is for **recreational purposes (34.29%)**, indicating that students primarily use the resource for entertainment or leisure activities. This is slightly higher than academic-related uses. **Personal work (25%)** and **preparing notes (22.86%)** The usage for **assignments and seminars (15%)** is moderate, a very small percentage, **2.86%**, is dedicated to **research purposes**, which shows minimal use for advanced or in-depth academic research, especially among UG students who reported zero usage in this category.

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### **CONCLUSION**

The study highlights that e-resources have become an essential part of the academic environment for both UG and PG students of Maharani's Arts College for Women, Mysuru. The high level of Internet access, primarily facilitated by mobile devices, reflects the growing need on digital platforms for academic and informational needs. The comparatively higher usage among PG students shows a greater engagement with e-resources for advanced learning and research purposes. The positive approach of students towards Internet usage and their willingness to improve digital capabilities is a promising sign for the effective integration of ICT in education. However, to maximize the benefits of e-resources, there is a need to strengthen institutional support through improved infrastructure, such as increased accessibility of computers and better Internet connectivity.

Furthermore, regular orientation and training programmes are essential to train students with advanced search skills and efficient use of digital resources. Overall, the study underlines the importance of continuous efforts by the institution to promote effective use of e-resources and to support the evolving academic needs of students in a digital learning environment.

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