

Use of electronic resources by teachers and researchers of Dr. R. M. L. Awadh University Ayodhya and its added colleges: A Survey

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Abstract—The rapid advancement of information and communication technologies has transformed the landscape of higher education in India, with electronic resources (e-resources) becoming integral to teaching, learning, and research activities. Key themes explored include awareness levels, usage patterns, purposes of utilization, perceived benefits, challenges encountered, and factors influencing adoption. The digital divide remains a pressing concern. According to a 2023 report, only 45% of Indian households have internet access, disproportionately affecting rural academics. Moreover, gender and disciplinary differences influence usage: male faculty in STEM fields show higher adoption than females in humanities. This research paper addresses the current problem regarding e-resources and its awareness, providing a holistic view to inform policy and practices. The methodology involves a systematic analysis of over 72 surveys through questionnaire distribution. This paper underscores e-resources' potential to enhance research productivity and educational equity in Dr. R. M. L. University, Ayodhya and its added colleges, while identifying gaps for future research. From the study it has been found that learning methods like seminar, conferences and workshop having active role for the awareness and use of e-resources among the teacher and research scholar of Dr. R. M. L. Awadh University, Ayodhya, Uttar Pradesh, India,

Index Terms—INFLIBNET, e-resources; Library; Digital data.

I. INTRODUCTION

The proliferation of digital technologies has revolutionized access to information in higher education globally, and India is no exception. With over 1,000 universities and more than 40,000 colleges, the Indian higher education system serves

approximately 40 million students, making it one of the largest in the world. Electronic resources—encompassing e-books, e-journals, online databases, digital libraries, multimedia content, and open educational resources (OER)—have emerged as critical tools for teachers and researchers to navigate this vast ecosystem. These resources facilitate seamless access to scholarly materials, enabling efficient research, innovative teaching, and collaborative learning. The students acquire knowledge with unwavering commitment, regardless of the field of study. Our country offers comprehensive higher education in several sectors such as Medicine, Engineering, Electronics, and Humanities etc. The University Grants Commission (UGC) of India currently oversees and manages the higher education programme (Tripathi & Patel 2024).

The importance of e-resources in Indian universities cannot be overstated. Initiatives like the National Digital Library of India (NDLI), e-ShodhSindhu, UGC-INFONET, and INFLIBNET have democratized access to high-quality digital content, particularly in resource-constrained environments. During the COVID-19 pandemic, reliance on e-resources surged, as physical libraries closed and online platforms became the primary means for academic continuity. This shift highlighted both opportunities and disparities, with urban institutions benefiting more than rural ones due to better infrastructure (Tripathi & Kaushal, 2022).

II. REVIEW OF LITERATURE

2.1 Awareness and Usage Patterns

Awareness of e-resources is nearly universal among Indian university faculty and researchers, often exceeding 90%. A comparative study in Haryana universities reported 100% awareness, with science faculty using e-resources more frequently than social sciences (Ahmad, 2023). Similarly, at Banaras Hindu University (BHU), 100% of arts faculty noted online availability, though utilization varied (Sinha et al., 2020)

Usage patterns indicate daily or frequent access. In Punjab agricultural universities, 52-79% accessed databases daily, favoring platforms like Science Direct and PubMed. At IITs, faculty used e-ShodhSindhu daily for research, with 51-86% frequency. Demographic variables play a role: younger faculty (20-35 years) and males show higher usage, as seen in studies at Patna University and Uttar Pradesh institutions (Kathuria & Kaur 2024). Disciplinary differences are evident. Science and engineering faculty prefer e-journals and databases (e.g., Springer Link, 53-60% usage at GGSIPU), while social sciences rely on e-books and web resources (Suman et al., 2023). A review of literature from 2009-2024 notes increasing trends, with 92% awareness in Pune-affiliated colleges (Deol & Kaur, 2024)

2.2 Purposes of Utilization

E-resources serve multiple purposes, primarily research and teaching. At Madha Engineering College, 46% used them for teaching, 39% for academics, and 10% for seminars (Gaikwad, 2017). E-resources use in Coimbatore management colleges, 45% strongly agreed for teaching, 37% for research (Charles et al., 2022). Research productivity is enhanced: a Punjab study (though focused on Pakistan, with Indian parallels) linked e-resources to improved skills (mean 4.30) and output. At Delhi University, 60-75% used for updating knowledge and projects. Other purposes include career development (7-8%), communication (2-5%), and current affairs (11%) (Sharma 2019).

The study's purpose is to examine the ICT and e-resources abilities of teachers and research scholars at Dr. R. M. L. Awadh University Ayodhya. Teaching and learning process are becoming an inseparable and fundamental element of an information-based society due to the vastly expanding rates as well as the highest requirement for quick access to knowledge in today's life. Because of increased awareness among users, the availability of new resources, and the sophisticated use

of information technology, the teaching and learning conventional notion is fast evolving. The academic teachers and researchers are expected to take an active and vital part in the information and communication system process. Education and research in any field together information science have co-existed since before the country's independence. However, most colleges and institutions have not kept up with developments in this field.

During the 10th Five Year Plan, UGC promoted ICT at a modest level by offering UGC INFONET, e-journal consortia, e-content creation, digitization of doctorate theses, construction and maintenance of union catalogue, and shifting institutions towards e-education. This has transformed Indian research activity and increased demand for more user-centric information services. Because of the amazing rise of ICT in libraries, the skills required to execute this technological shift have become a major challenge. All of these concerns make it necessary to research the ICT skills required of information workers in this changing environment (Tripathi & Mishra, 2024).

As a result, the current research attempts to determine the ICT abilities of instructors working in the different area. Following a preliminary review of the associated literature, it was discovered that although most university are not fully equipped to integrate ICT-based applications in their services, their attitude towards ICT applications has shifted. A number of studies have been undertaken to assess the current state of ICT in Uttar Pradesh. However, just a few studies have been conducted to assess the current state of use ICT and e-resources in different universities. Furthermore, no thorough research has been conducted to date to examine the influence of ICT and e-resources on the Dr. R. M. Awadh university teachers and research scholars. Research of this kind might be beneficial for the following reasons:

- The research will aid in gaining a good understanding of the current state of the university with reference to ICT-based services.
- The research will assist policymakers and decision-makers in taking the required measures to alter the conventional function of the university library by using current technologies.
- Data on the current infrastructure facility available in the university library in terms of ICT will aid in the development of information services in the library to keep up with the contemporary digital/virtual library.

• Knowing the degree of knowledge and abilities held by teachers and research scholars will aid in taking appropriate steps to address the difficulties provided by new technologies.

The academic and research contributions of teachers and research scholars are crucial to the advancement and evolution of the teaching profession. The goal of the current study is to determine the academic and research contributions made by teachers and research scholars of Dr. R. M. L. Awadh University Ayodhya. Thus, "*An Investigation into the use of e-resources by the Teachers and Research Scholars of Dr. R. M. L. Awadh University Ayodhya and it's added colleges*" is the name given to this research project.

2.3 Objectives:

Finding the use of ICT and e-resources in academic and research development by teachers and research scholars of Dr. R. M. L. Awadh University Ayodhya is the study's main goal.

The purpose of this research is to assess the academic and research contributions of teachers and research scholars at Dr. R. M. L. Awadh University and its aided college libraries in Ayodhya, Uttar Pradesh, India. This contributes to the teaching and learning profession's continued growth and advancement university and its aided college for the development of nation in the coming years. The teachers and research scholars of different department of Dr. R. M. L. Awadh University and its associated institutions in Ayodhya are included in the study, including the central, departmental, and study centre. There are 20 Aided colleges and 7 government colleges, affiliated to Dr. R. M. L. Awadh University Ayodhya, Uttar Pradesh have been selected for the study. Methodological constraints exist as well. Even after multiple techniques of cross-checking, the data may include errors. There is a potential that respondents may provide ideal data rather than genuine data in a questionnaire survey. Non-response errors may also occur when gathering data. It is also difficult to assess the accuracy of information obtained via interviews. The present study used a quantitative technique to examine the academic and research contributions made by instructors and research scientists across a variety of parameters. Designation, gender, teaching experience, and institution type are among these criteria.

III. MATERIALS AND METHODOLOGY

The present study used a quantitative technique to examine the academic and research contributions made by instructors and research scientists across a variety of parameters. Designation, gender, teaching experience, and institution type are among these criteria.

3.1 Respondents Background:

The current study is not only focus on Library and Information Science subject but it also included all the subjects which are available in Dr. R. M. L. Awadh University and its aided colleges. Table 1 shows the respondents background and departments together with frequency distribution.

Table 1: Showing respondents background subject of research scholar/teachers

S. No.	Department	No. of Respondents
1.	Ancient history	6
2.	Botany	1
3.	Chemistry	1
4.	Commerce	1
5.	Economics	1
6.	Education	7
7.	English	2
8.	Geography	14
9.	Home science	2
10.	Library & Information Science	3
11.	Mechanical	1
12.	Physical Education	2
13.	Political Science	11
14.	Public Add	1
15.	Sanskrit	2
16.	Sociology	17
	Total	72

Table 1 and figure 1 shows that total 16 department and with their respondents no. are mentioned. The variation of department shows the active participation from other than library and information science respondents. The highest no. of respondents were belonged to sociology then geography with 17 and 14 respectively. The least no. (01) of respondents are from Botany, chemistry, commerce, economics, mechanical

and public add departments. The no. participants from library and information science was only 03(Figure 1).

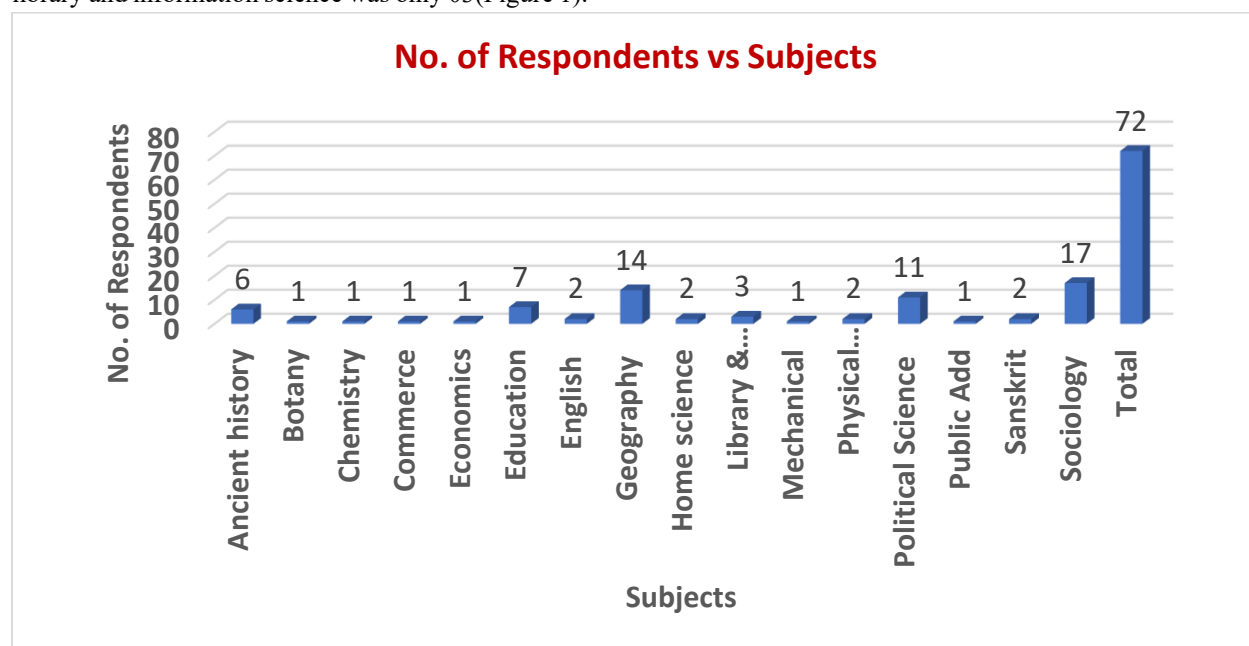


Figure 1: Department wise Participants distribution with background subject of research scholar/teachers

3.2 Distribution of Male and Female Respondents form Dr. R. M. L. Awadh University, Ayodhya, U. P.

Total respondents were 72 and among that 11 are female and 61 are male. The activity in survey participation male is more active compare to female. This may be due to difference in research scholar and teachers associated with the university.

Table 2: Distribution of Male and Female Respondents form Dr. R. M. L. Awadh University, Ayodhya, U. P.

S. No.	Qualification	Frequency Distribution
1	Male	61
2	Female	11
Total		72

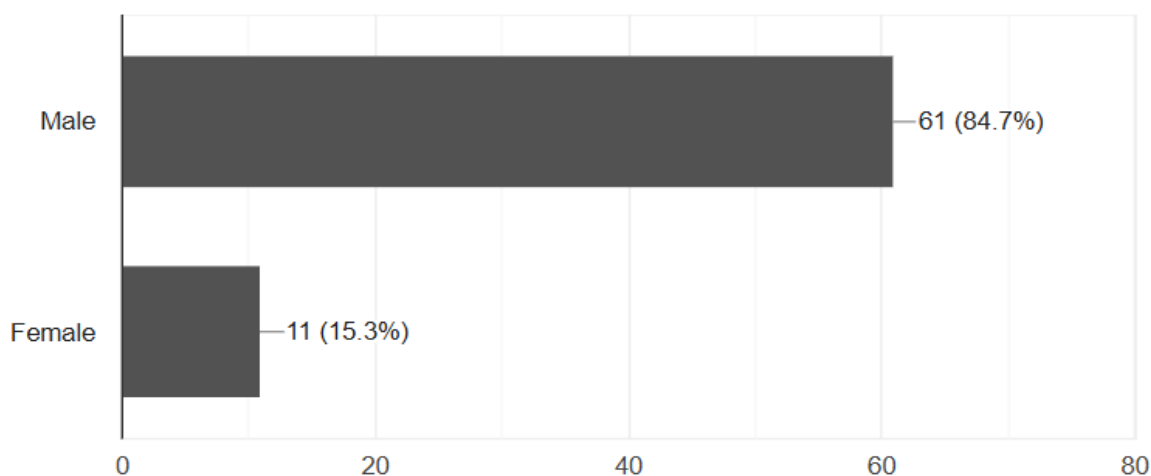


Figure 2: Distribution of Male and Female Respondents form Dr. R. M. L. Awadh University, Ayodhya, U. P.

3.3 Respondents Affiliation and their frequency distribution

Total 72 respondent affiliations are from Dr. R. M. L. Awadh University, Ayodhya and its aided colleges. Highest no. 64 belongs to Dr. R. M. L. Awadh University, Ayodhya and 8 belongs to its aided colleges (Table 3 & Figure 3).

Table 3: Affiliation of Respondents

S. No.	Qualification	Frequency Distribution
1	Dr. R. M. L. Awadh University Ayodhya	64
2	Government and Added College	8
Total		72

Respondents affiliation

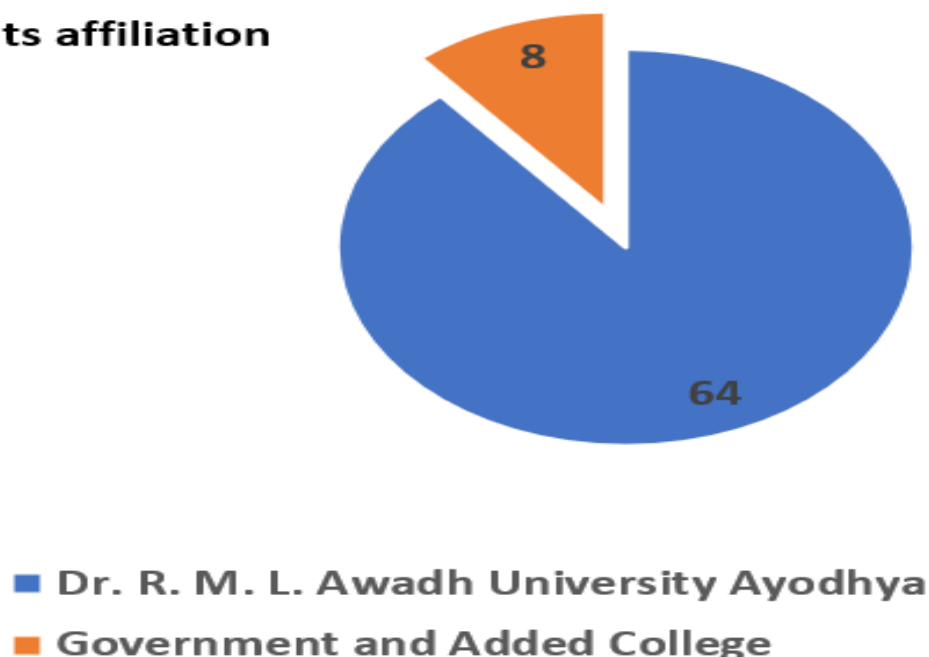


Figure 3: Showing respondents affiliation

Table 4: Showing respondents qualifications

S. No.	Qualification	Frequency Distribution
1	Ph.D.	27
2	Post-Graduate	45

3.4 Respondents Age distribution

Table 4 shows categorization of age range and respondents frequency. Highest no. of respondents are from 41-50 years of range and lowest from the range of below 25 years of age. 21 respondents are from age range 26-35 years and 10 belongs to 36-40 years of range.

Table 4: Respondents Age and its frequency

S. No.	Age (Years)	Respondents' Frequency
1.	26-35	21
2.	36-40	10
3.	41-50	32
4.	Below 25	3
5.	More than 50	6
Total		72

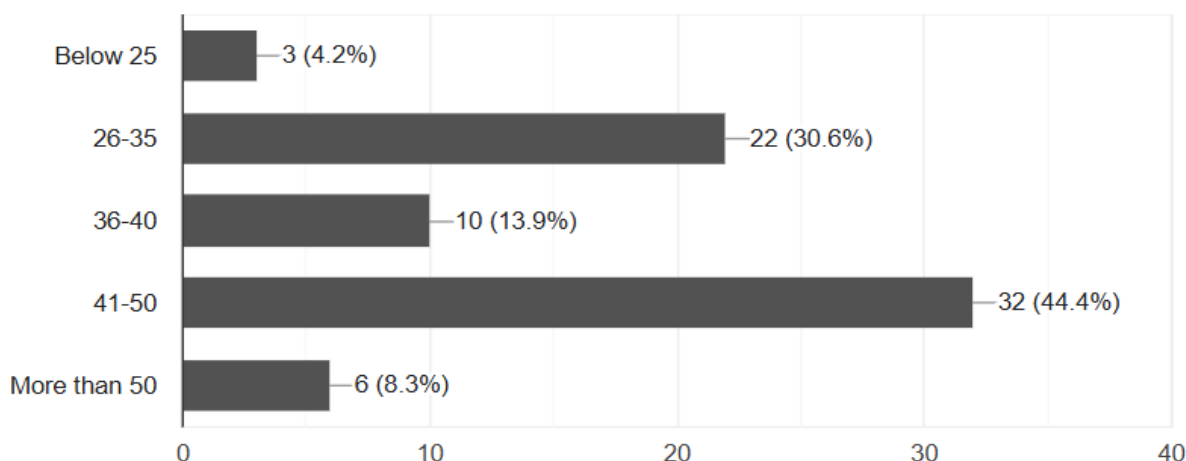


Figure 4: Respondents Age and its frequency with percentage

3.5 Respondents experience distribution

Table 5 shows distribution of respondent's experience in teaching and research and their frequency distribution. Fresher or without experience respondents are 15 in number and 26 are from the range of 2-5 year's experience.

Table 5: Respondents Experience in years

S. No.	Experiences Range	Respondents Frequency
1.	Not Applicable	15
2.	2--5	26
3.	6--10	10
4.	11--15	14
5.	More Than 15	7
	Total	72

Respondents with the experience range of 6-10 years are 10 in numbers and 11-15 years are 14 in numbers. Respondents with more than 15 years of experience are 7 only (Figure 5).

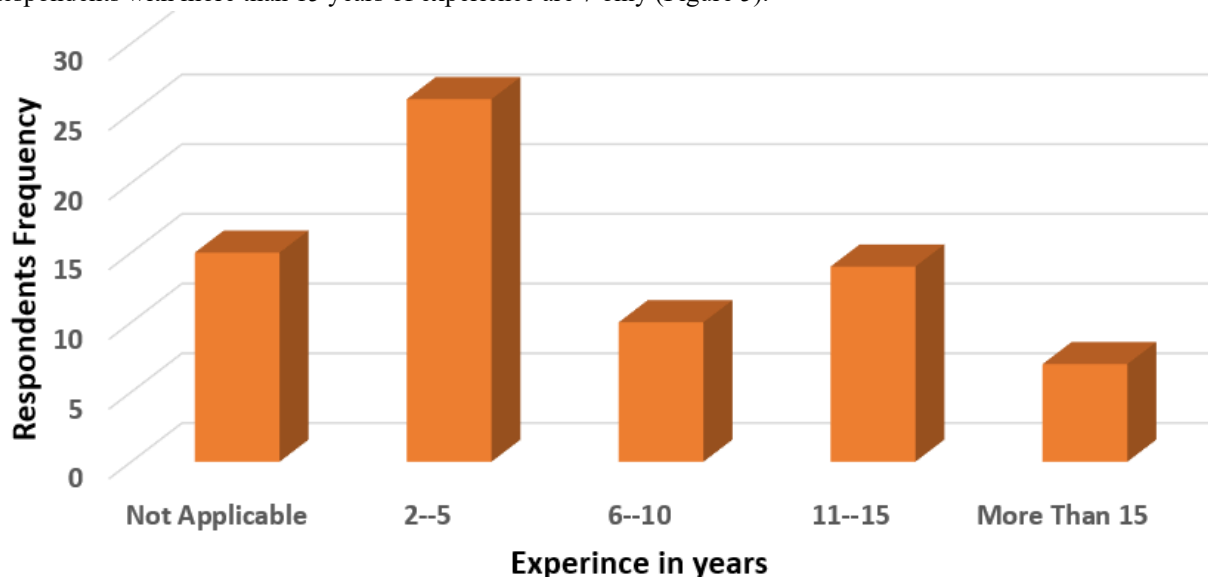


Figure 5: Respondents Experience in years and their frequency distribution

3.6 Respondent Designation and their frequency

Table 6 shows respondents' designation and frequency distribution. Assistant professor is 49 which is highest number out of total 72 respondents. Least no. of respondent 01 belongs to professor. Associate Professor are 7 and 15 are Ph.D. Scholars.

Table 6: Respondents designation and their distribution

S. No.	Designation	Respondents frequency	Percentage
1.	Assistant Professor	49	68.1 %
2.	Associate Professor	7	9.7%
3.	Ph.D. Scholar	15	19.4%
4.	Professor	1	7.2%
	Total	72	

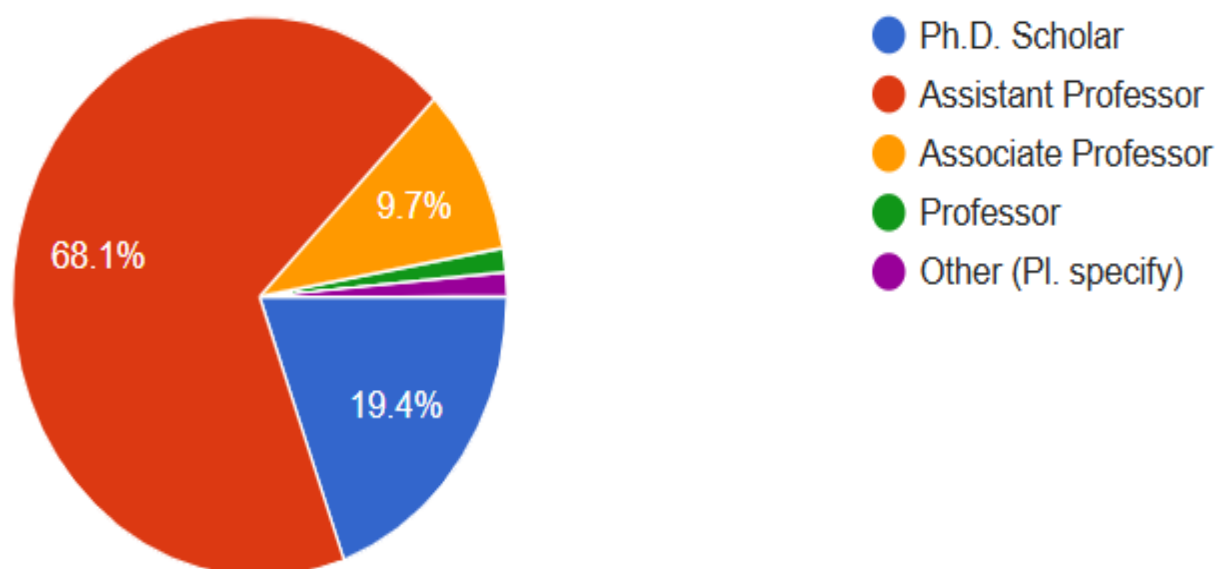


Figure 6: Respondent designation and their frequency in percentage

3.7 Respondent affiliation and their frequency

Table 7 shows no. of respondent and their affiliating organization with percentage. 54 respondents are from Dr. R. M. L. Awadh University Added Colleges, Ayodhya And 16 from Dr. R. M. L. Awadh University, Ayodhya main campus. One respondent belongs to both Ramabai Government Women PG College AkbarpurAmbedkarnagar and Rana Pratap PG college Sultanpur.

Table 7: Name of the respondents affiliating organization and frequency distribution

S. No.	Name of the respondents affiliating organization	Frequency Distribution	Percentage
1.	Dr. R. M. L. Awadh University Added Colleges, Ayodhya	54	75
2.	Dr. R. M. L. Awadh University, Ayodhya	16	22.22
3.	Ramabai Government Women PG College AkbarpurAmbedkarnagar	1	1.39
4.	Rana Pratap PG college Sultanpur	1	1.39
	Total	72	

3.8 Respondent knowledge and e-resources

The knowledge about e-resources has been adopted via personal communications between respondents (teachers or research scholars) i.e., 46 or 63.9%). The lowest method of spread of knowledge via E-Mail alerts from publisher is around 26 (36.1%). The second highest method to spread information about e-resources is by searching cited report/journal/conference is 36 (50%) and after this bibliographic data is use full around 35 (48.65 %) (Figure 8).

How do you come to know about e-resources? (You may tick more than one)

72 responses

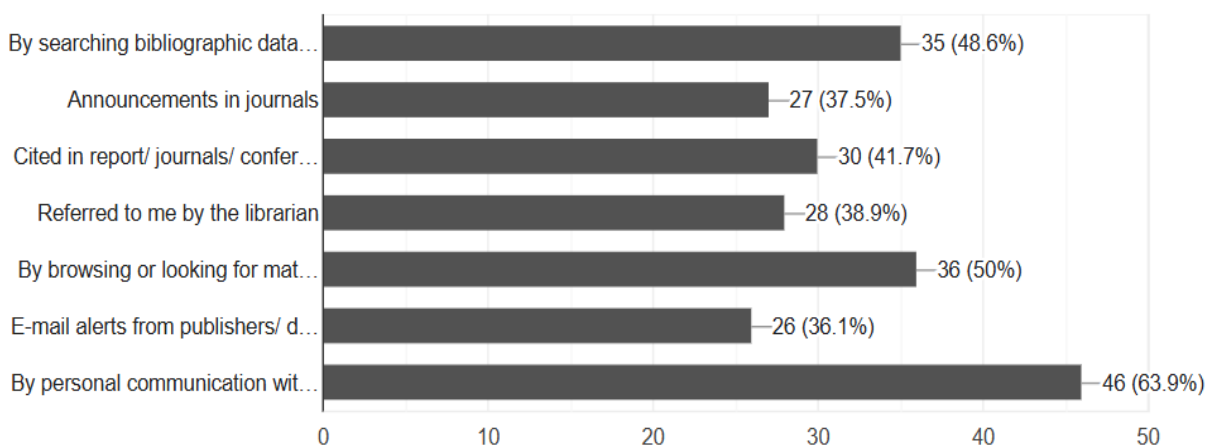


Figure 8: Showing respondent awareness about e-resources in numbers and percentage

3.9 Learning method for the use of e-resources

Figure 9 shows that the use of e-resources for current scenario is very important part for teaching and learning in academics. The highest number of i.e., 44 respondents (61.1%) out of 72 are learned via attending courses, training, workshop and seminar. The second highest is 43 respondents (59.7%) learned via trial and error or self-learning via net surfing. The least number i.e., 11 (15.3% respondents) out of total 72 via other methods. The guidance from other colleagues and library staff are also medium for learning method for the use of e-resources i.e., 33 respondents (45.8%) and 30 (41.7%) respectively. Guidance from computing staff / technician are also helpful during learning process for the use of e-resources is around 23 (31.9 % respondents (Figure 9).

How did you learn to use e-resources? (You may tick more than one)

72 responses

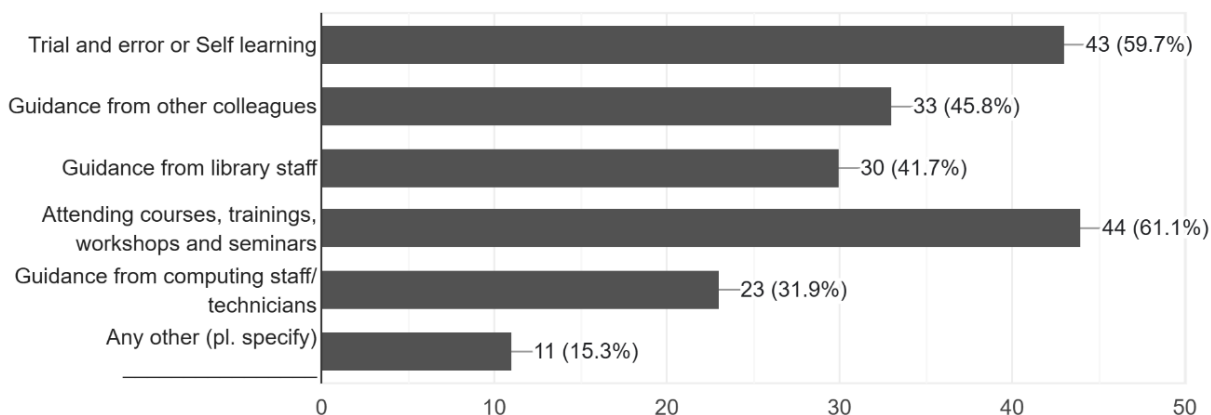


Figure 9: Learning method for the use of e-resources

3.10 Role of training program in e-resources learning

Figure 10 shows percentage of respondents attended training program for learning of use of e-resources in last five years is 53 (73.8%) respondents out of 72. And among 53 29 respondents are attended 2-3 times during the last five years of time frame.

Have you attended any e-resource training programmes in the last five years?

72 responses

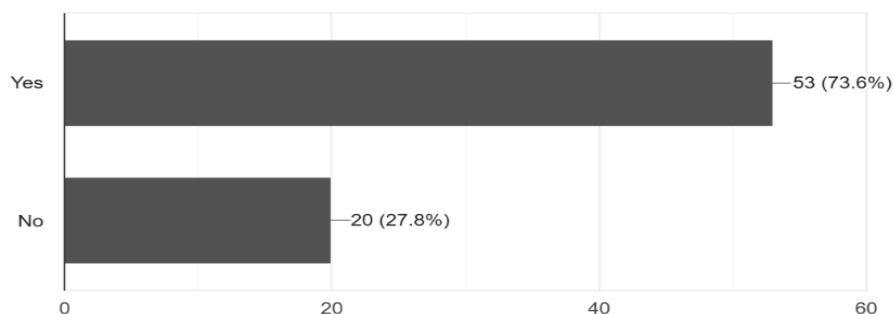


Figure 10: Training program attended by respondents in last five years

If 'Yes', then how many (last 5 years)

72 responses

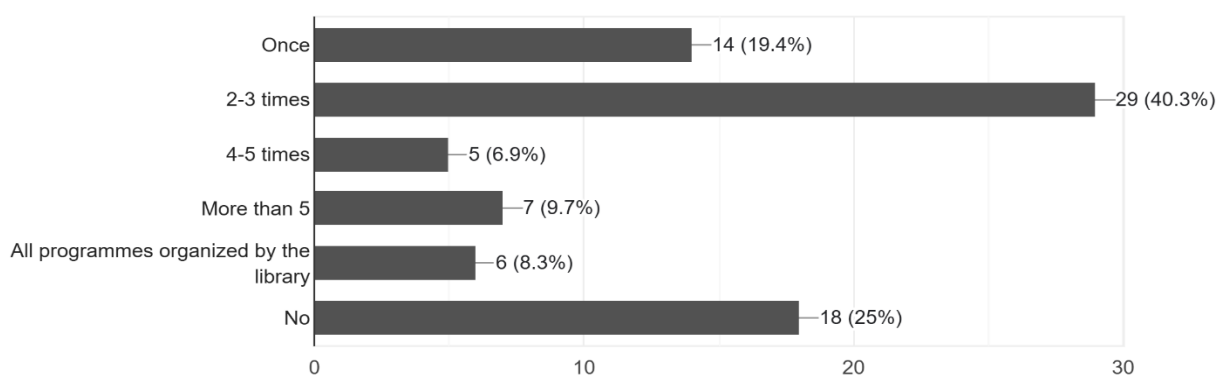


Figure 11: No. of times training programs attended by respondents during the last 5 years

How these training programs benefited you? (You may tick more than one)

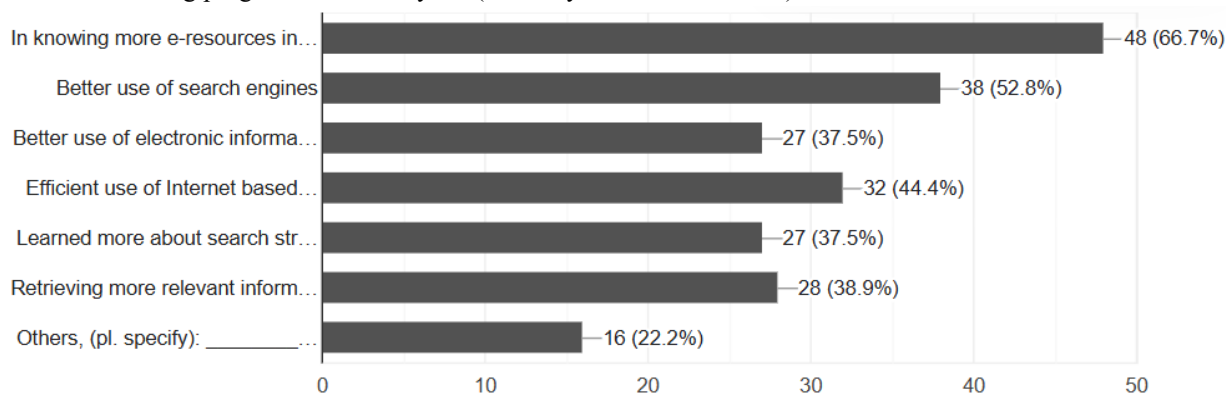


Figure 12: Training program and its benefits for learning of e-resources use

E-resources offer 24/7 access to vast academic content, eliminating geographical and temporal barriers. Teachers and scholars can retrieve information from anywhere, enhancing productivity and flexibility. Regular use of e-resources fosters digital literacy, critical thinking, and independent learning. Teachers and Research scholars of Dr. R. M. L. Awadh University and its aided colleges especially benefit from exposure to diverse methodologies and interdisciplinary perspectives. From the figure 10, 11, and 12 it has been clear that despite their benefits, some users face hurdles such as lack of training, limited digital infrastructure, and resistance to change. These issues can hinder optimal utilization of e-resources.

IV. CONCLUSION

The integration of e-resources into academic workflows has revolutionized teaching and research. For teachers, it enriches curriculum design and classroom engagement. For research scholars, it accelerates discovery and innovation. However, to fully realize these benefits, institutions must invest in digital infrastructure, training programs, and awareness campaigns. Bridging the digital divide and fostering a culture of continuous learning will ensure that e-resources serve as catalysts for academic excellence.

Conflict of interest: Authors declare there is no conflict of interest.

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