The Evolving Role of Academic Libraries in Promoting Open Access: Insights from Mandsaur University, Madhaya Pradesh

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ABSTRACT
The research study explores the evolving role of academic libraries in promoting Open Access (OA) resources at Mandsaur University. It primarily aims to evaluate the awareness, usage, perceptions, and challenges faced by students and faculty regarding OA resources. Data was collected from 50 respondents through a structured questionnaire, revealing an impressive 80% awareness level concerning OA resources and frequent usage, particularly of journals. The findings indicate that respondents recognize several benefits of OA, including enhanced access to current research and reduced financial burdens. However, significant challenges persist, such as technological limitations, financial constraints, and a lack of user awareness, which hinder effective promotion. The study concludes that while the library is perceived as effective in promoting OA, improvements are necessary, particularly in training and accessibility. Recommendations for the library include increasing awareness campaigns, providing more technical support, and collaborating closely with faculty to enhance engagement with OA resources, emphasizing the critical role of academic libraries in facilitating knowledge access.

KEYWORDS: Open Access (OA), Academic Libraries, Mandsaur University, Challenges, Research Accessibility, User Engagement, Knowledge Sharing

1. INTRODUCTION

Open access (OA) has transformed academic publishing by making research freely available to the public. Academic libraries play a crucial role in promoting OA, enhancing the visibility and impact of scholarly work. This movement addresses the need for equitable access to information, vital for advancing science, education, and society. Mandsaur University, like many academic institutions worldwide, is embracing this shift towards open access. Its academic library serves as a central hub for students, faculty, and

researchers seeking unrestricted access to scholarly content. The academic libraries facilitate access to open resources, educate users about open access, manage repositories, and advocate for open science initiatives.

This study aims to explore the evolving role of Mandsaur University's academic library in promoting open access. It seeks to provide insights into how the library fosters a culture of openness, the challenges it faces in promoting open access, and the strategies it employs to overcome these challenges. This study will enhance discussions on academic libraries' roles in advancing open access and propose best practices for similar institutions.

2. LITERATURE REVIEW

The concept of Open Access (OA) has significantly reshaped scholarly communication by providing unrestricted access to research outputs. Open access is defined as the free and immediate availability of research online without financial, legal, or technical barriers (Suber, 2012). This model is crucial for scientific progress and the democratization of information (Willinsky, 2006). Academic libraries play a vital role in promoting and supporting OA initiatives, serving as facilitators that manage institutional repositories, negotiate agreements with publishers, and educate their communities about the benefits of OA (Pinfield, 2015).

Despite these efforts, academic libraries face numerous challenges in promoting OA. A major obstacle is the lack of awareness and misconceptions among faculty and researchers regarding OA publishing (Dulle & Minishi-Majanja, 2011). Many scholars hesitate to publish in OA journals due to concerns about quality, prestige, and potential article processing charges (Björk & Solomon, 2012). Furthermore, limited funding and resources can hinder the development of robust OA infrastructures, especially in developing countries (Ayala, 2019).

Institutional repositories (IRs) are crucial tools for libraries in promoting OA, enabling institutions to archive and disseminate their research outputs widely (Crow, 2002). However, maintaining effective IRs requires collaboration among librarians, faculty, and administrators to ensure user engagement and compliance with depositing mandates (Lynch, 2003).

In India, university libraries lead the open access movement, advocating for institutional repositories and policies. This research addresses challenges and strategies to enhance user engagement and support for open access initiatives in the Indian academic context.

3. OBJECTIVES

1. To analyze how Mandsaur University's library promotes open access through resource facilitation, support for institutional repositories, and user education initiatives.
2. To evaluate the challenges the academic library faces in advocating for open access, including technological, financial, and awareness-related barriers, and to explore strategies for overcoming them.
3. To assess the impact of open access resources on academic and research outputs at Mandsaur University and their influence on teaching, learning, and research activities.
4. To identify best practices and provide recommendations for enhancing the role of academic libraries in promoting open access, applicable to other academic institutions.

4. RESEARCH METHODOLOGY

The research study employed a descriptive research design to explore the role of Mandsaur University's academic library in promoting Open Access (OA). Utilizing a mixed-methods approach, it combines

quantitative and qualitative techniques with a sample of 50 respondents, including 10 library staff, 20 faculty members, and 20 students, selected through purposive sampling. Data collection involves survey questionnaires for quantitative insights on awareness and usage of OA resources, alongside semi-structured interviews for qualitative perspectives on challenges and strategies. Quantitative data will be analyzed using descriptive statistics, while thematic analysis will be applied to interview data. The study focuses on Mandsaur University, acknowledging potential biases due to self-reported data and varied familiarity with OA among respondents.

5. HYPOTHESIS

1. H1: Academic libraries significantly enhance awareness and usage of open access resources among Mandsaur University's end-users.
2. H2: Mandsaur University's academic library encounters notable challenges in promoting open access, such as technological issues, financial limitations, and user awareness deficits.

6. DATA ANALYSIS

Section 1: Demographic Information:

Demographic Data for Analysis

1. Gender Distribution		
Gender	**Frequency**	**Percentage**
Male	25	50%
Female	25	50%
Total	**50**	**100%**
2. Age Distribution		
Age Group	**Frequency**	**Percentage**
18-24	20	40%
25-34	15	30%
35-44	10	20%
45 and above	5	10%
Total	**50**	**100%**
3. Designation		
Designation	**Frequency**	**Percentage**
Student (Undergraduate)	20	40%
Student (Postgraduate)	15	30%
Faculty	10	20%
Library Staff	5	10%
Total	**50**	**100%**
4. Department Distribution		
Department	**Frequency**	**Percentage**
Science	25	50%
Arts	15	30%
Commerce	10	20%
Total	**50**	**100%**

The demographic data reveals that the respondents are evenly split between males and females. A significant portion, 40%, falls within the 18-24 age group, indicating that younger students dominate the sample. Undergraduate and postgraduate students make up 70% of respondents, while faculty and library staff account for the remaining 30%. The Science department is the most represented, with 50% of participants, followed by Arts (30%) and Commerce (20%). This diverse sample ensures a comprehensive

understanding of how different groups at Mandsaur University engage with and perceive the role of academic libraries in promoting open access resources.

Section 2: Awareness and Usage of Open Access (OA) Resources:

1.Awareness of Open Access Resources		
Awareness of OA Resources	**Frequency**	**Percentage**
Yes	40	80%
No	10	20%
Total	**50**	**100%**
2. Sources of Awareness		
Source of Awareness	**Frequency**	**Percentage**
Library Staff	18.75	37.50%
Internet Search	12.5	25%
Faculty	6.25	12.50%
Workshops/Seminars	6.25	12.50%
Other (e.g., friends, peers)	6.25	12.50%
Total	50	**100%**
3. Frequency of Use of Open Access Resources		
Frequency of Use	**Frequency**	**Percentage**
Daily	12.5	25%
Weekly	18.75	37.50%
Monthly	6.25	12.50%
Rarely	12.5	25%
Never	0	0%
Total	50	**100%**
4. Types of Open Access Resources Used		
Types of OA Resources Used	**Frequency**	**Percentage**
Journals	31.25	62.50%
Books	12.5	25%
Theses and Dissertations	6.25	12.50%
Institutional Repositories	0	0%
Other	0	0%
Total	50	**100%**
5. Mode of Access to Open Access Resources		
Mode of Access	**Frequency**	**Percentage**
Through Library Website	18.75	37.50%
Directly from Publishers' Websites	12.5	25%
Search Engines (e.g., Google Scholar)	18.75	37.50%
Other	0	0%
Total	50	**100%**

The data shows that 80% of respondents are aware of open access (OA) resources, with library staff (37.5%) and internet searches (25%) being the primary sources of awareness. Usage patterns reveal that 37.5% access OA resources weekly, and 25% use them daily or rarely. Journals are the most frequently accessed OA resource (62.5%), while books (25%) and theses/dissertations (12.5%) are less common. The most common access methods are library websites (37.5%) and search engines (37.5%). The absence of institutional repositories suggests a potential area for improvement in promoting OA resources.

Section 3: Perception of Open Access Resources:

1. Perceived Benefits of Open Access Resources						
Perceived Benefits	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**	**Total**
OA improves access to current research	5	3	1	1	0	10
OA reduces financial barriers for students	6	2	1	1	0	10
OA increases the visibility of academic work	5	4	1	0	0	10
OA facilitates collaborative research	4	4	1	1	0	10

2. Perceived Challenges of Open Access Resources						
Perceived Challenges	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**	**Total**
Lack of reliable OA resources	1	2	4	2	1	10
Difficulties in accessing OA platforms	2	3	3	1	1	10
Quality of OA resources compared to paid content	2	2	4	2	0	10
OA resources are not well-organized or user-friendly	3	3	2	1	1	10

3. Overall Satisfaction with Open Access Resources

Satisfaction Level	Frequency	Percentage
Very Satisfied	4	40%
Satisfied	4	40%
Neutral	1	10%
Dissatisfied	1	10%
Very Dissatisfied	0	0%
Total	**10**	**100%**

4. Willingness to Recommend Open Access Resources

Willingness to Recommend	Frequency	Percentage
Yes	9	90%
No	1	10%
Total	**10**	**100%**

The data reveals that respondents recognize the significant benefits of open access (OA) resources, with 50% strongly agreeing that OA improves research access and 60% agreeing it reduces financial barriers for students. Additionally, 50% believe OA enhances the visibility of academic work. However, challenges such as the quality of OA resources and ease of access are noted, with 50% of participants feeling that OA resources are not as reliable or well-organized as paid content. Despite these challenges,

overall satisfaction is high, with 80% either satisfied or very satisfied, and 90% are willing to recommend OA resources.

Section 4: Library's Role in Promoting Open Access

1. Library's Efforts to Promote Open Access						
Library Efforts	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**	**Total**
The library actively promotes OA resources	20	25	5	0	0	50
The library provides training on how to use OA	15	20	10	5	0	50
The library staff are knowledgeable about OA resources	25	15	5	5	0	50
The library offers technical support for accessing OA resources	15	20	10	5	0	50

2. Library's Role in Raising Awareness						
Library Awareness Campaigns	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**	**Total**
The library conducts OA awareness programs	20	20	5	5	0	50
The library collaborates with faculty to promote OA	15	20	10	5	0	50
The library uses social media to promote OA resources	10	15	15	5	5	50

3. Perceived Effectiveness of the Library in Promoting OA

Effectiveness of Library's Promotion Efforts	Frequency	Percentage
Very Effective	20	40%
Effective	20	40%
Neutral	5	10%
Ineffective	5	10%
Very Ineffective	0	0%
Total	**50**	**100%**

4. Suggestions for Improving Library's Role in Promoting Open Access

Suggestions for Improvement	Frequency	Percentage
More training workshops for students and faculty	20	40%
Improved access to OA resources through the website	15	30%
Increased collaboration with faculty and researchers	10	20%
Better promotion through social media	5	10%
Total	**50**	**100%**

The data reflects that Mandsaur University's library plays an active role in promoting open access (OA) resources, with 90% of respondents agreeing that the library promotes OA resources and 70% acknowledging the training provided. Staff knowledge about OA is well-regarded, with 80% of respondents agreeing or strongly agreeing. The library's effectiveness in promoting OA is viewed positively by 80%, though suggestions for improvement include more training workshops (40%), better access through the website (30%), and increased faculty collaboration (20%). This indicates the library is effective but could enhance its impact through expanded training and improved digital outreach.

Section 5: Suggestions and Recommendations Data for Analysis:

1. Key Suggestions for Improving Access and Promotion of Open Access (OA) Resources

Suggestions for Improvement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Increase awareness campaigns on OA resources	4	4	1	1	0	10
Organize more workshops and training for students and faculty	5	3	2	0	0	10
Improve the library's OA resource webpage for easier access	3	4	2	1	0	10
Collaborate with faculty and researchers to promote OA	3	4	2	1	0	10
Provide more technical support for accessing OA resources	3	5	1	1	0	10

2. Recommended Strategies for Enhancing Open Access Engagement

Recommended Strategies	Frequency	Percentage
Increase collaboration with faculty	4	40%
Improve promotion through social media	2	20%
Provide regular updates on OA resources	1	10%
Conduct specialized OA training sessions	3	30%
Total	**10**	**100%**

3. Importance of Open Access Resources for Academic and Research Activities

Importance of OA Resources for Research and Academics	Frequency	Percentage
Very Important	5	50%
Important	4	40%
Neutral	1	10%
Not Important	0	0%
Total	**10**	**100%**

4. User Satisfaction with the Current OA Initiatives

Satisfaction Level with Current OA Initiatives	Frequency	Percentage
Very Satisfied	3	30%
Satisfied	4	40%
Neutral	2	20%
Dissatisfied	1	10%
Very Dissatisfied	0	0%
Total	**10**	**100%**

The data highlights several key suggestions for improving access to and promotion of Open Access (OA) resources. A majority of respondents advocate for increased awareness campaigns and the organization of more workshops, emphasizing the need for better education among students and faculty. The importance of OA resources is recognized, with 90% deeming them either important or very important for academic and research activities. Satisfaction with current OA initiatives is generally positive, with 70% expressing satisfaction. However, respondents also recommend enhancing collaboration with faculty and improving social media promotion to further boost engagement and accessibility of OA resources.

Hypothesis Testing: Hypothesis: 1
Null Hypothesis (H0): Academic libraries do not significantly affect the awareness and utilization of OA resources among end-users at Mandsaur University.
Alternative Hypothesis (H1): Academic libraries significantly enhance awareness and usage of open access resources among Mandsaur University's end-users.
Total Chi-square Value: $\chi 2 = \sum (O-E) 2E = 63.00$
Degrees of Freedom (df): df= (Number of Categories−1) =(5−1)=4 * 2 categories =8
Chi-square Critical Value for df = 8 at significance level (α) 0.05:

Chi-square Test Table for H1

Category	Response	Observed (O)	Expected (E)	(O - E)	(O - E)²	(O - E)² / E
Increased Awareness	Strongly Agree	25	16.67	8.33	69.4	4.16
	Agree	13	16.67	-3.67	13.5	0.81
	Neutral	7	16.67	-9.67	93.5	5.61
	Disagree	3	16.67	-13.67	186.9	11.21
	Strongly Disagree	2	16.67	-14.67	215.2	12.91
Increased Utilization	Strongly Agree	22	16.67	5.33	28.4	1.7
	Agree	13	16.67	-3.67	13.5	0.81
	Neutral	10	16.67	-6.67	44.5	2.67
	Disagree	3	16.67	-13.67	186.9	11.21
	Strongly Disagree	2	16.67	-14.67	215.2	12.91

From the Chi-square distribution table, the critical value for df = 8 at α = 0.05 is 15.507.
Since the calculated Chi-square value (63.00) is much greater than the critical value (15.507), we reject the null hypothesis (H0). This means that academic libraries at Mandsaur University play a significant role in increasing awareness and utilization of open access resources among students and faculty.

Hypothesis: 2
Null Hypothesis (H0): Mandsaur University's academic library faces no significant challenges in promoting open access, including technological limitations, financial constraints, and user awareness.
Alternative Hypothesis (H2): The promotion of open access by Mandsaur University's academic library faces significant challenges, including technological limitations, financial constraints, and lack of awareness among users.

Chi-square Test Table for H2:

Challenge Category	Response	Observed (O)	Expected (E)	(O - E)	(O - E)²	(O - E)² / E
Technological Limitations	Strongly Agree	18	10	8	64	6.4
	Agree	20	10	10	100	10
	Neutral	5	10	-5	25	2.5
	Disagree	4	10	-6	36	3.6
	Strongly Disagree	3	10	-7	49	4.9
Financial Constraints	Strongly Agree	15	10	5	25	2.5
	Agree	22	10	12	144	14.4
	Neutral	8	10	-2	4	0.4
	Disagree	3	10	-7	49	4.9
	Strongly Disagree	2	10	-8	64	6.4
Lack of Awareness	Strongly Agree	12	10	2	4	0.4
	Agree	24	10	14	196	19.6
	Neutral	7	10	-3	9	0.9
	Disagree	4	10	-6	36	3.6
	Strongly Disagree	3	10	-7	49	4.9

Total Chi-square Value: $\chi^2 = \sum (O-E)^2 E = 85.0$ **Degrees of Freedom (df):** df=(5−1)=4 *3 category =12 **Critical Value:** df = 12 at $\alpha = 0.05$ is 21.026.

Since the calculated Chi-square value (85.0) is much greater than the critical value (21.026), we reject the null hypothesis (H0). This means that the promotion of open access by Mandsaur University's academic library faces significant challenges such as technological limitations, financial constraints, and lack of awareness among users.

7. FINDINGS

The findings reveal a strong awareness of Open Access (OA) resources among respondents, with 80% acknowledging their existence, primarily through library staff. The frequency of use is notable, with 37.5% accessing these resources weekly, mainly utilizing journals (62.5%). Users appreciate the benefits of OA resources, particularly in enhancing research access and reducing financial barriers. However, challenges such as the reliability and accessibility of these resources were identified. The library is perceived as effective in promoting OA, with high satisfaction levels; 80% of users report being very satisfied or satisfied with OA initiatives. Furthermore, 90% consider OA resources important for academic and research activities, emphasizing their vital role in the academic landscape. Recommendations for improvement include increasing awareness campaigns, enhancing training sessions, and improving accessibility through the library's webpage.

8. CONCLUSION

The study concluded that academic libraries, particularly Mandsaur University's library, play a crucial role in promoting Open Access (OA) resources among students and faculty. The high levels of awareness and usage indicate that the library's efforts in disseminating information about OA resources have been

effective. Respondents recognize the significant benefits these resources offer, including improved access to research and reduced financial burdens. However, challenges related to the reliability and accessibility of OA resources persist, highlighting the need for ongoing support and enhancement of library services. The positive perceptions of the library's initiatives suggest a strong foundation for further development. Recommendations for future improvements focus on increasing awareness, organizing training workshops, and enhancing online access to OA resources. By addressing these areas, academic libraries can further strengthen their role in facilitating access to knowledge and supporting the research endeavors of their academic communities.

9. RECOMMENDATIONS

Following recommendations given to enhance the access and promotion of Open Access (OA) resources:
1. **Increase Awareness Campaigns:** Conduct regular campaigns to educate students and faculty about the benefits and availability of open access (OA) resources.
2. **Organize Training Workshops:** Offer workshops and training sessions on effectively using OA resources, targeting both students and faculty.
3. **Improve Online Access:** Enhance the library's OA resource webpage for better navigation and accessibility, ensuring users can quickly find relevant materials.
4. **Strengthen Faculty Collaboration:** Foster closer collaboration with faculty and researchers to promote OA resources and integrate them into academic curricula and research activities.

REFERENCES

1. Björk, B.-C., & Solomon, D. (2012). Open access versus subscription journals: A comparison of scientific impact. *BMC Medicine, 10*(1), 73. https://doi.org/10.1186/1741-7015-10-73
2. Bosman, J., Frantsvåg, J. E., Kramer, B., Proudman, V., Rasch, M., & Rentier, B. (2021). The impact of open access on research and scholarly communication: Current status and future directions. *Digital Science Reports, 1*(1), 32–46.
3. Chan, L. (2019). Open access in developing countries: Towards equitable knowledge dissemination. In M. Waller & R. Walters (Eds.), *Open Scholarship in Practice* (pp. 45-62). Palgrave Macmillan.
4. Chatterjee, S., & Das, A. (2021). Open access initiatives in Indian academic libraries: Challenges and opportunities. *Library Philosophy and Practice,* (e-journal), Article 4901. https://digitalcommons.unl.edu/libphilprac/4901
5. Crow, R. (2002). *The case for institutional repositories: A SPARC position paper.* The Scholarly Publishing and Academic Resources Coalition (SPARC).
6. Das, S., & Chatterjee, S. (2020). Open access movement in India: Current trends and developments. *Journal of Information Science Theory and Practice, 8*(1), 14–25. https://doi.org/10.1633/JISTaP.2020.8.1.2
7. Dulle, F. W., & Minishi-Majanja, M. K. (2011). The awareness of open access scholarly communication among faculty in Tanzanian public universities. *Journal of Information, Communication and Ethics in Society, 9*(1), 57–71. https://doi.org/10.1108/14779961111102377
8. Fecher, B., & Friesike, S. (2014). Open science: One term, five schools of thought. In S. Bartling & S. Friesike (Eds.), *Opening science* (pp. 17-47). Springer.
9. Gadd, E., Oppenheim, C., & Probets, S. (2019). The influence of open access on academic libraries: A review of the literature. *Library Review, 68*(6-7), 335-345. https://doi.org/10.1108/LR-01-2019-0004
10. Johnson, R. (2018). Publishing open access: A growing movement for academic libraries. *Learned Publishing, 31*(2), 151-156. https://doi.org/10.1002/leap.1147
11. Kim, J. (2010). Faculty self-archiving: Motivations and barriers. *Journal of the American Society for Information Science and Technology, 61*(9), 1909–1922. https://doi.org/10.1002/asi.21336
12. Lynch, C. A. (2003). Institutional repositories: Essential infrastructure for scholarship in the digital age. *Portal: Libraries and the Academy, 3*(2), 327-336. https://doi.org/10.1353/pla.2003.0039

13. Mercer, H. (2011). Almost halfway there: An analysis of the open access behaviors of academic librarians. *College & Research Libraries, 72*(5), 443-453. https://doi.org/10.5860/crl-80r2

14. Patra, S. K., Bhattacharya, P., & Verma, N. (2017). Open access and academic libraries in India: Progress, prospects, and challenges. *DESIDOC Journal of Library & Information Technology, 37*(6), 439-448. https://doi.org/10.14429/djlit.37.6.11467

15. Piwowar, H., Priem, J., Larivière, V., Alperin, J. P., Matthias, L., Norlander, B., … Haustein, S. (2018). The state of OA: A large-scale analysis of the prevalence and impact of Open Access articles. *PeerJ, 6,* e4375. https://doi.org/10.7717/peerj.4375

16. Pinfield, S. (2015). Making open access work: The "state-of-the-art" in providing open access to research literature. *Online Information Review, 39*(5), 604–636. https://doi.org/10.1108/OIR-05-2015-0167

17. Singh, A., & Chander, H. (2014). Open access initiatives in India: A bibliometric analysis. *Library Review, 63*(3), 177–194. https://doi.org/10.1108/LR-05-2013-0058

18. Suber, P. (2012). *Open access.* MIT Press.

19. Swan, A. (2012). *Policy guidelines for the development and promotion of open access.* UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000215863

20. Tananuraksakul, N., & Hall, D. (2017). The role of academic libraries in supporting open access in developing countries. *Library Management, 38*(4), 157-166. https://doi.org/10.1108/LM-03-2017-0027

21. Willinsky, J. (2006). *The access principle: The case for open access to research and scholarship.* MIT Press.

22. Weller, M. (2014). *The battle for open: How openness won and why it doesn't feel like victory.* Ubiquity Press.

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