Exploring Open Access Resources: Users Perspectives from University of Delhi

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The revolutionary nature of ICT has revolutionized other fields, including information science and libraries. ICT has become the most effective medium for academic communication in the 21st century. Open access publishing has also undergone a revolution because to ICT features. The goal of this study is to better understand how the University of Delhi academic community views the idea of resources with open access. 43.1% of academic communities are completely aware of open access materials, according to the study's findings. Additionally, the report shows that 59.3% of respondents use open access resources when conducting research work. Because research is an on-going activity, libraries must regularly provide program and activity for the academic research community to improve the quality of their research output. The primary aim of this research is to examine the viewpoint of the academic community on the utilization of open access materials. And understand why and how you are utilizing an open-access resource.

Keywords: *Open access, Information communication technology, Open access resource awareness, University of Delhi, E-resource*

1   INTRODUCTION

The academic community now has the ability to read, create, and critique academic publications within certain restrictions, as well as publish their work

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in the public domain, thanks to technological advancements and the creation of the internet. An open access resource refers to any digital or physical material that is made freely available to the public without the need for subscription fees or other access restrictions. This can include scholarly articles, research papers, datasets, educational materials, books, software, and more. The primary goal of open access is to democratize access to knowledge and promote the sharing and dissemination of information without financial or legal barriers. Open access websites regularly post these works with principles such allowing users to read, download, copy, share, print, search, or link to the entire texts of these works.

Research that is made more widely visible and accessible through open access may receive more citations and have a bigger social impact. This research study examines how researchers, postgraduate students, and undergraduates at University of Delhi, one of the best universities in India, use and comprehend Open Access Resources (OARs). This study looks at the opinions of various academic community groups in an effort to clarify the function of OARs in assisting with research, teaching, and learning. The finding of this research there was a notable variation in the levels of awareness and accessibility of OARs among different groups. Regarding user knowledge of When comparing gold to green and hybrid open access resources, gold resources were often less well-known and used.

2   OBJECTIVES OF THE STUDY

- To know assess the awareness levels of UG, PG students, and research scholars with the content availability and accessibility features of open Access resources. (OARs)
- To investigate the UG, PG and scholarly community's perspective on using open Access resources.
- To know assess the awareness levels of UG, PG students, and research scholars with the open access tools, search engines, and databases.
- To figure out the issue the academic community is having with using open access resources.

3   SCOPE AND LIMITATION OF THE STUDY

This study will investigate how these students and scholars perceive open access resources (OARs) and how frequently they utilize them for academic purposes. And it will explore the frequency and nature of usage, including the types of materials accessed, preferred repositories, and reasons for accessing OARs. The case study is limitation to the only undergraduate (UG) students,

postgraduate (PG) students, and researchers at University of Delhi's Department of Library and Information Science.

4   RESEARCH METHODOLOGY

The research methodology which has been followed for this study is survey methods. The questionnaires were distributed by google form among 193 undergraduate students, postgraduate students and researchers at University of Delhi's Department of Library and Information Science. And total 167 received complete filled google form from students. The collected data has been analysed by google form chart and MS-Excel. MLA 9th reference style format has been used for all references and citations during the study.

5   REVIEW OF LITERATURE

Hussain, N.; Shahzad, K. & Awan, S. I. Several authors may still be hesitant to submit their work to OARs journals, frequently due to procedure confusion, a lack of knowledge about available alternatives, or an acceptable fear of having their work published in a predatory publication. In spite of these reservations, legal open publishing is here to stay, and there is no shortage of knowledge on the advantages and procedure.

Mangai, G., & Ganesan, P. conducted a study on Access and Awareness of open access resource. This study concluded that the maximum number of students, teachers view books and the internet as open access materials, the maximum number of teacher educators view online resources, particularly HEC-Journals, as such. While student teachers mostly utilize books as open-access resources to accomplish prescribed work, teacher educators use the internet to prepare their classes, research, and reflections. The survey also found that encyclopaedias, CDs, DVDs, conference proceedings, and e-books written by teacher educators are examples of open-access materials that are rarely used. Newspapers, television shows, and CDs/DVDs are among the open access items that student instructor's use less frequently.

Nazim, M. & Ali, A. have found that a significant amount of people is aware of resources with OARs among LIS postgraduate students in DDE of Alagappa University. A positive trend in the use of open resource materials is evident from the utilization perspectives. Open access materials are used with the intention of obtaining up-to-date information and improving knowledge to fully satisfy the study objectives of DDE students. Comparatively speaking, the majority of responders (59%) belonged to the 23 female gender categories. As postgraduate students at Alagappa University, the majority of respondents have experience. As well as the use of open access resources by 39 out of 54 users.

Nagpal, R. & Radhakrishnan, N. this study examines the function of open educational resources and open access (in terms of licensing, publishing, and sharing research data) in distance learning, with an emphasis on the University of London's international programs. In order to embrace Open Access or other cooperative schemes to bring together repositories across institutions, there are no systematic institutional or cross-institutional initiatives. When adopting open educational resources (OERs), there are genuine concerns about the impact on resources and related quality along with a lack of understanding of OERs and the licensing connected with them, particularly among academics and tutors.

6   DATA ANALYSIS AND INTERPRETATION

The collected data were tabulated, analyzed and interpreted to draw references against the objectives of study under various heads as below:

6.1 Educational Qualification

The table 1 presents the educational qualifications of respondents along with the corresponding number and percentage of individuals in each category. Undergraduate (UG) degree holders constitute 71 respondents, which accounts for 42.5% of the total. Postgraduate (PG) degree holders comprise 80 respondents, representing 47.9% of the total. Research scholars, totaling 16 respondents, make up 9.6% of the sample. Overall, the majority of respondents hold a PG degree, followed by UG degree holders, with research scholars being the smallest proportion among the surveyed population.

TABLE 1: EDUCATIONAL QUALIFICATION (N=167)

Educational Qualification	NO. of Respondent	Percentage (%)
UG	71	42.5%
PG	80	47.9%
Research Scholar	16	9.6%
Total	167	100%

6.2 User's Awareness Towards Open Acess Resources

The table 2 illustrates the level of awareness among respondents, including the number and percentage of individuals in each category. 72 respondents, constituting 43.1% fully aware of the total, exhibit a comprehensive understanding and 43 respondents, comprising 25.7% of the sample, possess a partially level of understanding. 52 respondents, representing 31.1% of the total, have to some extent understanding of OARs. Overall, the majority of

respondents fall into the "Fully aware" category, indicating a significant level of understanding, followed by those who are "To Some extent aware" and " partially Aware" to lesser extents.

TABLE 2: USER'S AWARENESS TOWARDS OPEN ACESS RESOURCES

Level	NO. of Respondent	Percentage (%)
Fully aware	72	43.1%
Partially aware	43	25.7%
To some extent aware	52	31.1%
Total	167	100%

6.3 User's Present Status Towards Open Access Resources

The table 3 represents respondents' current status regarding their interaction with open access resources, with corresponding numbers and percentages in each category. A notable percentage (15%) of respondents have heard of open access resources but have not yet utilized them. A considerable portion (35.3%) are newcomers to open access resources, indicating they are just starting to engage with them. A significant percentage (39.5%) of respondents are actively using open access resources, demonstrating a strong adoption rate. A small proportion (1.8%) have contributed to open access resources, indicating active involvement in their development or dissemination. A minor percentage (8.4%) have used open access resources sporadically. Over all the majority of respondents either have recently started utilizing or are actively engaged with open access resources, showcasing a positive trend towards their utilization in the surveyed population.
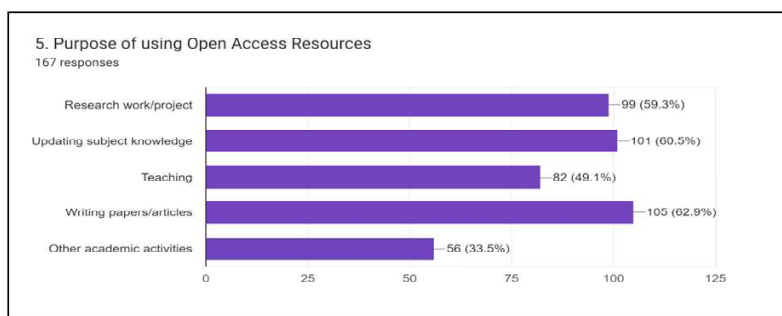
TABLE 3: USER'S PRESENT STATUS TOWARDS OPEN ACCESS RESOURCES (N=167)

Present Status	NO. of Respondent	Percentage (%)
I heard it but not used	25	15%
I am new to open access resources	59	35.3%
I am using open access resources	66	39.5%
I have contributed to open access resources	3	1.8%
I have used open access resources every now and then	14	8.4%
Total	167	100**%**

6.4 PURPOSE OF USING OPEN ACCESS RESOURCES

The figure 1 represent outlines the purposes for which respondents utilize open access resources, along with the corresponding number and percentage of individuals in each category. 99 respondents, comprising 59.3% of the total, use open access resources for research-related tasks or projects. 101 respondents, representing 60.5% of the sample, utilize open access resources to stay updated on subject matters. And 82 respondents, accounting for 49.1% of the total, use open access resources in their teaching activities.

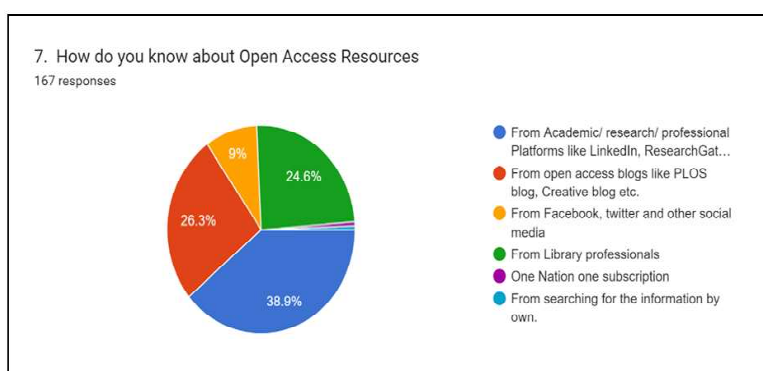FIGURE 1: PURPOSE OF USING OPEN ACCESS RESOURCES (N=167)

105 respondents, making up 62.9% of the sample, utilize open access resources for writing papers or articles. Other academic activities 56 respondents, constituting 33.5% of the total, use open access resources for various other academic purposes. Overall, the majority of respondents utilize open access resources for updating subject knowledge and writing papers/ articles, indicating their significance in research and academic endeavours. They are also commonly used for research work/projects and teaching activities, with a smaller portion being used for other academic activities.

6.5 MEDIUM TO KNOW OPEN ACCESS RESOURCES

The below figure 2 presents the mediums through which respondents become aware of open access resources, along with the corresponding number and percentage of individuals in each category. 65 respondents, or 38.9% of the total, said they learned about open access materials from academic, research, or professional sites including LinkedIn, ResearchGate, and Academia.edu. From open access blogs like PLOS blog, Creative blog, etc.:44 respondents, representing 26.3% of the sample, become informed about open access resources through open access blogs. From Facebook, Twitter, and other social media 15 respondents, comprising 9% of the total, gathers knowledge about open access resources through social media platforms. From 41

respondents, making up 24.6% of the sample, obtain information about open access resources from library professionals. Only 1 respondent, accounting for 0.6% of the total, is aware of open access resources through a policy promoting universal access and 1 respondent, representing 0.6% of the sample, discovers open access resources by conducting their own searches for information. Overall, respondents acquire awareness of open access resources through various channels, including academic platforms, blogs, social media, library professionals, and individual searches.

FIGURE 2: MEDIUM TO KNOW OPEN ACCESS RESOURCES

6.6 PERCEPTION TOWARDS OPEN ACCESS RESOURCES

The table 4 represent summarizes respondents' perceptions regarding open access resources (OARs), including the number and percentage of individuals in each category. OARs are less in quality and easily available 40 respondents, accounting for 24% of the total, perceive open access resources as being lower in quality but readily accessible. OARs are high in quality and easily available, 46 respondents, representing 27.5% of the sample, view open access resources as being both high in quality and easily accessible. 53 respondents out of 167 comprising 31.7% of the total, believe that open access resources offer broader accessibility compared to traditional resources and 17 respondents, making up 10.2% of the sample, perceive that open access may limit authors' interest in publishing or contributing. Open access can be ensured even with protecting 11 respondents, accounting for 6.6% of the total, hold the opinion that open access can still be maintained while protecting intellectual property rights or other interests. Overall, the perceptions of respondents regarding open access resources vary, with some emphasizing their quality and accessibility, while others express concerns about potential limitations or the need for protection.

TABLE 4: PERCEPTION TOWARDS OPEN ACCESS RESOURCES (N=167)

Perception	NO. of Respondent	Percentage (%)
OARs are less in quality and easily available	40	24%
OARs are high in quality and easily available	46	27.5%
Open Access Resources have wider accessibility	53	31.7%
Open access limits authors interest	17	10.2%
Open access can be ensured even with protecting	11	6.6%
Total	167	100%

6.7 AWARENESS ON VARIOUS TOOLS FOR OPEN ACCESS

The table 5 represents respondents' awareness of various tools for open access resources (OARs), along with the corresponding number and percentage of individuals in each category.

59 respondents, accounting for 35.5% of the total, are aware of SHERPA/ROMEO, a tool providing information on publishers' copyright and self-archiving policies and 64 respondents, representing 38.6% of the sample, are aware of SHERPA/Juliet, a tool providing information on funders' open access policies. Comprising 45.2% of the total, are aware of ROARMAP, a registry of open access repository mandates and policies. 56 respondents, making up 33.7% of the sample, are aware of UPenn's FAQ, a resource providing frequently asked questions and answers on open access. HowOpenIsIt? 30 respondents, accounting for 18.1% of the total, are aware of HowOpenIsIt? a guide illustrating the spectrum of open access and 150 respondents, representing 90.4% of the sample, are aware of Google Scholar, a publicly available web search tool that indexes academic literature's full text or information from a variety of publication formats and fields. Overall, Google Scholar stands out as the most widely recognized tool among respondents, followed by ROARMAP, SHERPA/Juliet, SHERPA/ROMEO, UPenn's FAQ, and HowOpenIsIt?

**TABLE 5: AWARENESS ON VARIOUS TOOLS FOR OPEN ACCESS
(N=167)**

Tools for OARs	NO. of Respondent	Percentage (%)
SHERPA/ROMEO	59	35.5%
SHERPA/Juliet	64	38.6%
ROARMAP	75	45.2%
UPenn's FAQ	56	33.7%
HowOpenIsIt?	30	18.1%
Google Scholar	150	90.4%
Total	167	100%

6.8 AWARENESS ON VARIOUS OPEN ACCESS DATABASES

The Table 6 represents respondents' familiarity with various open courseware/MOOC providers, along with the corresponding number and percentage of individuals in each category. 79(47.3%) respondents, accounting for of the total, are aware of arXiv database. And only 6(3.6%) familiar with Brill Open E-Book Collection open access database. It revealed that 33(19.8%) of respondent use Claisphere database and 18% use OpenStax database to retrieve open access resource. While 57.5% user accessed DOAB database. Majority of user used Shodhganga e-thesis database. Overall, 146(88%) out of 167 respondent accessed Shoshana database and 30.6% user accessed open DOAR database.

**TABLE 6: AWARENESS ON VARIOUS OPEN ACCESS
DATABSE (N=167)**

OA Database	NO. of Respondent	Percentage (%)
arXiv	79	47.3%
Brill Open E-Book Collection	6	3.6%
Calisphere	33	19.8%
OpenStax	30	18%
DOAB: Directory of Open Access	96	57.5%
Shodhganga (E –Thesis Database)	146	88%
Open DOAR	51	30.6%
Total	167	100%

6.9 AWARENESS ON VARIOUS OPEN ACCESS SEARCH ENGINES

By analyzing the table 7, it outlines respondents' preferences regarding

different search engines of open access resources with corresponding numbers and percentages in each category. 59 respondents, accounting for 35.5% of the total, are aware of CiteSeerX and 30 respondents, accounting for 18.1% of the total, are aware of CORE. According to data response we say that majority of respondent use OJASE search engines. Total 76(45.5%) respondent Use OJASE search engine. Only 11 respondents, representing 6.6% of the sample, are familiar with OATD search engine. 15 (9%) user uses Microsoft academia search engine for retrieve open access resource. And data show 33(19.8%) user familiar with Row 7 search engine.

TABLE 7: AWARENESS ON VARIOUS OPEN ACCESS SEARCH ENGINES

OA Search Engines	NO. of Respondent	Percentage (%)
CiteSeerX	59	33.5%
CORE	30	18.1
Open Access Journals Search Engine (OAJSE)	76	45.5%
OATD	11	6.6%
Microsoft Academic Search	15	9%
Row 7	33	19.8%
Total	167	1%

6.10 PROBLEMS FACED IN ACCESSING OPEN ACCESS RESOURCES

The table 8 outlines the problems faced by respondents in accessing open access resources, along with the corresponding number and percentage of individuals in each category. 73 respondents, accounting for 43.7% of the total, face challenges due to slow internet speeds when accessing open access resources. 70.7% of the sample encounters difficulties due to a lack of proper guidance and training in accessing open access resources effectively. 79(47.3%) of the total, face interruptions in accessing open access resources due to power failures. And 93 respondents, making up 55.7% of the sample, struggle with accessing open access resources due to a lack of knowledge in information and communication technologies (ICT). Data show 33.5% of the total, experience challenges due to a lack of information literacy skills required for effective use of open access resources.79 (47.3%) of the sample, encounter issues with incomplete subject coverage in the available open access resources.

TABLE 8: PROBLEMS FACED IN ACCESSING OPEN ACESS RESOURCES

PROBLEMS	NO. of Respondent	Percentage (%)
Slow internet speed	73	43.7%
Lack of proper guidance and training	118	70.7%
Power failure	79	47.3%
Lack of ICT Knowledge	93	55.7%
Lack of information literacy	56	33.5%
In complete subject coverage	79	47.3%
Total	167	100%

7. FINDINGS

1. It is found the study that 72(43.1%) respondents fully aware of the open access resources, exhibit a comprehensive understanding and 43 respondents, comprising 25.7% of the sample, possess a partially level of understanding and 31.1% of the total, have to some extent understanding of OARs.

2. The finding Show a notable percentage (15%) of respondents has heard of open access resources but has not yet utilized them. A considerable portion (35.3%) is newcomers to open access resources, indicating they are just starting to engage with them.

3. Most of respondent i.e. 99(59.3%) of the total, use open access resources for research-related tasks or projects. 101 respondents, representing 60.5% of the sample, utilize open access resources to stay updated on subject matters.

4. The highest of 62.9% respondent of the sample utilizes open access resources for writing papers or articles. Other academic activities 56 respondents, constituting 33.5% of the total, use open access resources for various other academic purposes. Overall, the majority of respondents utilize open access resources for updating subject knowledge and writing papers/articles.

5. It is observed from the study 53 respondents out of 167 comprising 31.7% of the total, believe that open access resources offer broader accessibility compared to traditional resources and 17 respondents, making up 10.2% of the sample, perceive that open access may limit authors' interest in publishing or contributing.

6. A maximum of 90.4% of the samples are found to be aware of Google Scholar, a publicly available web search engine that indexes the entire text or metadata of academic literature from a variety of fields and

publishing formats. Overall, Google Scholar stands out as the most widely recognized tool among respondents, followed by ROARMAP, SHERPA/Juliet, SHERPA/ROMEO, UPenn's FAQ, and HowOpenIsIt.

7. The finding shows highest 79(47.3%) respondents are aware of arXiv database. And only 6(3.6%) familiar with Brill Open E-Book Collection open access database. It revealed that 33(19.8%) of respondent use Claisphere database.

8. 59(35.5%) are aware of CiteSeerX and 30 respondents are aware of CORE search engine. And 76(45.5%) sample are use OJASE search engine according to data response we say that majority of respondent use OJASE search engine.

9. In this study 43.7% user face challenges due to slow internet speeds when accessing open access resources. 70.7% of the sample encounters difficulties due to a lack of proper guidance in accessing OARs effectively.

10. The finding Show 79(47.3%) respondent face interruptions in accessing open access resources due to power failures. And 93 respondents, making up 55.7% of the sample, struggle with accessing open access resources due to a lack of knowledge in information and communication technologies (ICT).

8. CONCLUSION

In conclusion, the examination of the usage and perceptions towards Open Access Resources (OARs) among undergraduate (UG), postgraduate (PG) students, and research scholars at the University of Delhi reveals valuable insights into the evolving landscape of academic resource accessibility and scholarly communication. The findings underscore the growing importance of OARs in supporting the academic initiatives of students and scholars across different levels of education and research. Through this study, it becomes evident that while awareness and utilization of OARs vary among UG, PG students, and research scholars. Overall, the majority of respondents fall into the "Fully aware" category, 72(43.1%) indicating a significant level of understanding of OARs. And 70.7% of the sample encounters difficulties due to a lack of proper guidance in accessing OARs effectively. So, the University of Delhi's Department of Library and Information Science has also been found to require further information literacy programs about open access resource.

9   REFERENCES

Bhardwaj, R. K. (2018) Information Access Mechanism for Visually Impaired Students in Higher Education Institutions in Delhi: A Study. *DESIDOC*

Journal of Library and Information Science

Journal of Library & Information Technology, 38(6), pp. 387-395. Doi: 10.14429/djlit.38.6.13603

Chigbu, E. D.: Njoku, E. O. & Uzoagba, N. (2016) "Management and usage of open access scholarly online resources in university libraries in Nigeria." *The Electronic Library,* 34(6), 2016, pp 974-984. Doi: 10.1108/EL-08-2015-0140

Chan, Jennifer, et al. (2024) "Metadata Librarians for Open Access." International Journal of Librarianship. 8(4), pp. 30–41. https://doi.org/10.23974/ijol.2024.vol8.4.351.

Hatzipanagos, S. & Gregson, Jon. (2015) "The Role of Open Access and Open Educational Resources: A Distance Learning Perspective." *Electronic Journal of e-Learning,* 13(2), pp. 97-105

Holley, R. P. (2018) Open Access: Current Overview and Future Prospects. *Library Trends*, 67(2), pp. 214-240. Doi: 10.1353/lib.2018.0034

Hussain, N.; Shahzad, K. & Awan, S. I. (2021) "Usage of Subscribed & Open Access Information Resources by LIS Research Scholars." *Library Philosophy and Practice*, pp. 1-25.

Ishfaq, A. P.; Sheikh, A. & Baquee, A. (2022) "Awareness, use and attitudes of the Indian higher educational Institutions students about scholarly open access: An empirical analysis*." Library Management*, 43(6), pp. 476-491. Doi: 10.1108/LM-12-2021-0107

Matonkar, P. V. & Dhuri, K. R. (2021) "Open Access and Free Resources on The Internet: Awareness and Use During Covid-19 Pandemic*." Library Philosophy and Practice*, pp 1-15.

Muthuvennila, S. & Thanuskodi, S. (2018) "Impact of Open Access Resources on Library and Information Science Students in India." *Library Philosophy and Practice,* pp. 1-9.

Mangai, G. & Ganesan, P. (2021) "Researchers' perception and attitude towards Open Access (OA) resources: an alternative model and important for academic and research libraries." Library *Philosophy and Practice*, pp. 1-13.

Majhi, S.; Baral, S. & Maharana, B. (2018) "Perceptions of Scholarly Publishing in Open Access Routes: A Survey of LIS Professionals in Odisha*." Library Philosophy and Practice,* pp. 1-21.

Muthuvennila, S. & Thanuskodi, S. (2020) "User Perception on Open Access Resources among College Students in India: A Survey*." Library Philosophy and Practice*, pp. 13-19.

Mangai, G. & Ganesan, P. (2023) "Researchers' perception and response to the open access resources (OAR) in higher learning institutions of Tamil Nadu, India*." Library Management*, 44(1), pp. 40-55.

Nagpal, R and Radhakrishnan, N. (2022) "India and a Historical Perspective of Open Access. *Library Hi Tech News, vol. 39, no. 4,* pp. 6–10. https://doi.org/10.1108/lhtn-12-2021-0090.

Nazim, M. & Ali, A. (2023) "An Investigation of Open Access Availability of Library and Information Science Research." *DESIDOC Journal of Library & Information Technology*, 43(2), 2023, pp.101-111. Doi: 10.14429/djlit.43.02.18580

Owens, Jacqueline K., and Vickie, (2022) "Journal article access: Free, open, and subscription." Nurse Author & Editor, vol. 32, no. 2, pp. 23–27. https://doi.org/10.1111/nae2.12037.

Shahzadi, U. & Hussain, B. (2019) "Awareness and Access of Open Access Resources by Teacher Educators and Student Teachers: Potential for Reflection." *Pakistan Journal of Distance & Online Learning,* 5(1), pp. 17-30.

Woszczynski, A. B. & Whitman, M. E. (2016) "Perspectives on Open Access Opportunities for IS Research Publication: Potential Benefits for Researchers, Educators, and Students. *The Journal of Information and Systems in Education*, 27(4), pp. 259–276.