Use of Open Educational Resources (OERs) by the LIS professionals in Academic Institutions: A Study

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Abstract

The present paper emphasises the use of Open Educational Resources by the LIS professionals working in the academic institutions of the Uttara Kannada district of Karnataka. A survey method was adopted, with a questionnaire used to collect data from LIS professionals. The structured questionnaire was distributed to 53 LIS professionals working in degree colleges affiliated to Karnatak University, Dharwad. Eight colleges were excluded because no qualified professionals were working in them. Hence, only 45 colleges were considered for the study. Out of 45 questionnaires distributed, only 40 were returned, yielding a response rate of 88.88%. The outcomes of the study reveal that the majority of the LIS professionals are aware and familiar with Open Educational Resources (OER) (more than 60%), 67.5% of the respondents agreed that OER makes quality education available to everyone; connection with formal learning programmes (23, 57.50%) was the most mentioned motivational factor to use OER; and 32 (80.00%) respondents opine that collecting and organizing good quality OER materials should be the prime objective of the LIS professionals.

Keywords

Digital Learning Platforms: LIS Practitioners: NPTEL: Online Education

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1. INTRODUCTION

Higher education worldwide is undergoing a fundamental transformation as digital technologies reshape how knowledge is accessed, shared, and constructed. The traditional model of education, anchored in physical classrooms and synchronous instruction, is being augmented by technology-enabled learning environments that transcend geographical and temporal limitations (Daniel, 2012). This shift reflects broader societal changes driven by internet proliferation, mobile computing, and the growing expectation that quality educational resources should be universally accessible regardless of learner location or economic circumstances. At the forefront of this educational revolution are Open Educational Platforms (OEPs), comprehensive digital ecosystems that integrate technological infrastructure, pedagogical frameworks, and open licensing principles to deliver educational content at scale (Joshi, 2017).

The philosophical foundation of OEPs rests on principles of educational equity and knowledge democratization. By eliminating conventional barriers, including tuition costs, admission requirements, and geographical constraints, these platforms enable diverse populations to access learning materials developed by leading educational institutions and subject experts (Willinsky, 2006). This inclusive approach aligns with international development priorities, particularly the United Nations Sustainable Development Goal 4, which advocates for inclusive, equitable quality education and lifelong learning opportunities for all individuals (UNESCO, 2015). The emergence of OEPs thus represents both a technological innovation and a digital divide in education. For practitioners in the LIS field, the proliferation of OEPs carries profound professional implications. Contemporary academic libraries have evolved beyond their historical function as custodians of print collections to become dynamic information hubs that facilitate access to diverse digital resources and support emerging modes of scholarly communication (Cox & Corrall, 2013).

Central to understanding OEPs is the concept of Open Educational Resources (OER), which UNESCO (2019) defines as "teaching, learning and research materials in any medium, digital or otherwise, that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation and redistribution by others with no or limited restrictions." OER

encompasses a broad spectrum of educational materials, including digital textbooks, multimedia lectures, interactive assessments, simulation software, and complete course curricula, all made freely available through open licensing frameworks such as Creative Commons (Das & Lihitkar, 2016). The integration of OER into educational platforms has fundamentally altered the economics of higher education by reducing textbook costs, enabling collaborative content development, and facilitating rapid updating of educational materials to reflect current knowledge. The significance of OER for the LIS profession extends beyond mere awareness of free resources. Contemporary librarians increasingly serve as institutional OER advocates, assisting faculty in identifying, evaluating, and integrating openly licensed materials into their courses (Eldredge, 2000).

REVIEW OF LITERATURE

Open Educational Resources (OER) represent a transformative movement in higher education, democratizing access to quality learning materials through openly licensed content available for free use, adaptation, and redistribution. This paradigm shift encompasses diverse resources, including textbooks, courseware, learning modules, multimedia content, and assessment tools released under open licenses that permit the 5R activities: retain, reuse, revise, remix, and redistribute. The literature examined in this paper encompasses OER development, exploring theoretical foundations, implementation strategies, impact assessments, sustainability models, policy frameworks, and knowledge-sharing practices. This review synthesizes scholarly contributions from international and Indian contexts, documenting OER's evolution from experimental initiatives to mainstream educational infrastructure supporting lifelong learning, professional development, and universal education access.

Conole and Alevizou (2010) examined OER from a social constructivist perspective, analyzing how open resources supported collaborative knowledge construction and participatory learning cultures. The research investigated how Web 2.0 technologies enabled new forms of OER, including user-generated content, collaborative authoring platforms, and social knowledge repositories. Ramakrisnan et al. (2011) examined the emergence of OERs in India and their potential impact on lifelong learning, documenting government initiatives supporting OER development and adoption. The authors analyzed major Indian OER programs, including National Programme on Technology Enhanced Learning (NPTEL), providing free online courses for science & technology education courses, National Mission on Education through ICT (NMEICT) coordinating various digital learning initiatives, and Sakshat portal aggregating educational resources. Kanwar et al. (2012) investigated diverse OER initiatives, including teacher education programs, technical and vocational training materials, and health sciences resources developed through collaborative partnerships.

Bliss et al. (2013) investigated faculty and student perceptions of open textbooks in community college contexts, examining attitudes toward OER quality, usability, and effectiveness compared to traditional commercial textbooks. The findings revealed generally positive perceptions, with most faculty reporting that open textbooks were comparable or superior to commercial alternatives in content quality and pedagogical effectiveness. Naik and Padma (2014) investigated open educational resources initiatives specifically within Indian Library and Information Science education, examining awareness levels and utilization patterns among the LIS professionals and students. The research revealed that while awareness of OER concept existed among LIS community, actual utilization remained limited due to multiple barriers, including inadequate training in OER discovery and adaptation, concerns about content quality and currency, time constraints for resource evaluation, and preference for traditional textbooks. The study documented that LIS professionals valued OER potential for continuous professional development and staying current with rapidly evolving information technologies.

Rolfe (2015) investigated repository infrastructure supporting OER discovery, access, and reuse, examining technical and organizational dimensions of effective OER repositories. Hodgkinson-Williams and Trotter (2017) examined OER adoption and adaptation practices in South African higher education, documenting faculty experiences and institutional contexts shaping OER engagement. The research employed case study methodology across multiple universities, revealing diverse adoption patterns influenced by disciplinary cultures, institutional. The findings demonstrated that faculty adapted OER through various strategies including content updates, localization for South African contexts, integration of local examples, and recombination with other resources. Sheeja (2018) conducted an empirical study examining the usage

and impact of National Programme on Technology Enhanced Learning (NPTEL) among engineering students at Cochin University of Science and Technology, Kerala. The outcomes of the study indicate that most of the respondents were aware of NPTEL's freely available video lectures and supplementary learning materials covering various engineering disciplines. The study demonstrated that students utilized NPTEL resources primarily for examination preparation, concept clarification beyond classroom instruction, and supplementing course materials provided by faculty.

Tlili et al. (2019) examined OER development and utilization in China, analyzing cultural, policy, and practical dimensions shaping Chinese approaches to open education. The research documented rapid growth in Chinese OER initiatives, including national platforms, institutional repositories, and government-supported projects. Clinton and Khan (2020) conducted a meta-analysis examining the efficacy of OER compared to commercial educational resources, synthesizing quantitative research evidence from multiple empirical studies. The systematic review analyzed studies comparing student-learning outcomes between courses using OER and equivalent courses using traditional commercial textbooks. The findings revealed no significant differences in learning outcomes, indicating that OER performed equivalently to commercial materials across diverse disciplines and educational levels. Mishra (2021) examined the contribution of OER in achieving Sustainable Development Goal 4 (quality education) and implications for educational equity and inclusion. Otto and Kerres (2022) investigated OER engagement among university faculty in Germany, examining motivations, practices, and perceived barriers to OER creation and use. The study identified motivational factors including pedagogical improvement desires, professional satisfaction from resource sharing, institutional encouragement, and belief in open education principles.

Nascimbeni and Burgos (2023) examined institutional strategies for mainstreaming OER beyond pilot projects toward systemic integration within higher education institutions. The authors analyzed case studies from universities successfully embedding OER into institutional culture, policies, and practices. Huang et al. (2024) investigated artificial intelligence applications in OER development and personalization, examining how AI technologies enhanced resource creation, adaptation, and delivery. The research explored AI capabilities, including automated content generation, intelligent tutoring systems integrated with OER, learning analytics to inform resource recommendations, and natural language processing to enable multilingual OER access. Zawacki-Richter et al. (2025) conducted a comprehensive systematic review analyzing two decades of OER research, examining the evolution of scholarly discourse, methodological approaches, and knowledge development in the field. The authors reviewed 450 peer-reviewed articles published between 2002 and 2024 across major educational technology and open education journals. Findings revealed several notable trends including shift from descriptive case studies toward empirical effectiveness research, increased attention to equity and social justice dimensions, growing focus on sustainability models, and emergence of studies. The literature existed on OERs mainly emphasizes on the theoretical aspects. Very less studied were conducted on its use studies. Through this paper, the authors study about the use of OERs by the LIS professionals working in HEIs.

OBJECTIVES OF THE STUDY

The main purpose of the present study is to determine the use of Open Educational Resources (OERs) by the LIS professionals working in Higher Educational Institutions (HEIs) of the Uttara Kannada district of Karnataka. The specific objectives of the study are to:

1. Know the awareness of online education platforms by the LIS professionals working in degree colleges;
2. Study the awareness about open educational resources by the LIS professionals;
3. determine the use of different types of Open Educational resources by the LIS professionals; and
4. identify the motivational factors to use OERs by the LIS professionals; and
5. Identify the factors to check the quality of OERs.

METHODOLOGY

For the present study, descriptive and survey methods were adopted, and a census survey was conducted to collect data from LIS professionals working in degree colleges in the Uttara Kannada district affiliated to Karnatak University, Dharwad. A total of 53 colleges were found in this region. Eight colleges do not have librarians working in the college library, instead a faculty member is in charge of the library. Such

colleges were excluded from the study, thereby reducing the total number to 45. The authors distributed questionnaires to all 45 LIS professionals. Two reminders were sent to LIS professionals, sufficient time was given to them. Finally, only 40 questionnaires were received with duly filled information, with a response rate of 88.88%. The data was further fed into MS-excel for its frequency calculation.

ANALYSIS AND INTERPRETATION OF DATA

Institution-wise distribution of questionnaires

There are 53 degree colleges in the Uttara Kannada district affiliated to the Karnatak University, Dharwad, and only 45 LIS professionals are working in these colleges are considered for the study. In eight colleges, no LIS professionals are working; hence, these colleges were excluded from the study. Hence, a total of 45 LIS professionals were considered for the study and questionnaires were distributed to these target audience only. Finally, only 40 duly filled in questionnaires were considered for the study. Out of 40 colleges, 14 (35.00%) are private aided colleges with all the streams like Arts, Science, Commerce, Education, BBA, BCA and others, and unaided colleges respectively, whereas 14 (35.00%) colleges are unaided colleges, majority of them belongs to BBA, BCA etc. 11 (27.50%) colleges are Government colleges. Among 40 colleges studied, no constituent and only one autonomous college was found in this district. The details are presented in table 1.

Table 1: Type of Institution-wise distribution of questionnaires

Sl. No.	Type of Institution	No. of Respondents	Percentage (%)
1	Government Colleges	11	27.50
2	Private Aided Colleges	14	35.00
3	Unaided Colleges	14	35.00
4	Autonomous College	01	2.50
5	Constituent Colleges	--	---
	Total	**40**	**100**

Professional Experience of LIS Professionals

A question was asked to the LIS professionals regarding their experience in the LIS field. The data reveals that 14 (35.00%) respondents had 6 to 15 years of experience, whereas, 12 (30.00%) respondents had 16 to 25 years of experience, 10 (25.00%) respondents had less than 5 years and 4 (10.00%) respondents had more than 25 years of experience working in the degree colleges affiliated with the Karnatak University, Dharwad.

Table 2: Professional Experience of LIS Professionals

Sl. No.	Experience	No. of Respondents	Percentage (%)
1	Less than 5 years	10	25.00
2	6 - 15 years	14	35.00
3	16 - 25 years	12	30.00
4	More than 25 years	04	10.00
	Total	**40**	**100**

Familiarity with Online Education Platforms

A question was posed to the LIS professionals on the use of online education platforms like Zoom classes, Google Meet etc. about their familiarity with these platforms. The statistics are presented in Table 3 which reveals that 16 (40.00%) respondents are moderately familiar (having a basic understanding) with the online education platforms, whereas 15 (37.50%) respondents are very much familiar, means the respondents have good understanding and some experience using it, 7 (17.50%) respondents are slightly familiar (having limited exposure) and only 2 (5.00%) respondents are extremely familiar (having extensive experience and understanding).

Table 3: Familiarity with Online Education Platforms

Sl. No.	Familiarity	No. of Respondents	Percentage (%)
1	Moderately familiar (Basic understanding)	16	40.00
2	Very much familiar (Good understanding and some experience	15	37.50
3	Slightly familiar (Limited Exposure)	07	17.50
4	Extremely familiar (Extensive experience and understanding	02	5.00
5	Not familiar (No prior exposure)	00	---

	Total	**40**	**100**

Opinion by the LIS professionals on online education methods

Among the 40 respondents, 21 (52.5%) LIS professionals agree with the statement 'online education delivers the same quality of learning as traditional classroom instruction' and 10 (25.00%) respondents are uncertain with the statement. Whereas 23 (57.5%) respondents agree that 'digital learning makes quality education available to more people' and 10 (25.00%) respondents strongly agreed about the statement. 22 (55.00%) respondents agreed about 'online platforms work well for different types of learners', 16 (40.00%) respondents are uncertain about the statement, 'learning with technology helps students remember information better' and 16 (40.00%) respondents agreed with the statement, 'digital education supports learning throughout your entire life.'

Table 4: Opinion by the LIS professionals on online education methods

Sl. No.	Statement	SA	A	U	DA	SDA
1	Online education delivers the same quality of learning as traditional classroom instruction	2 (5.00)	21 (52.5)	10 (25.00)	04 (10.00)	03 (7.5)
2	Digital learning makes quality education available to more people	10 (25.00)	23 (57.5)	04 (10.00)	02 (5.00)	01 (2.50)
3	Online platforms work well for different types of learners	05 (12.50)	22 (55.00)	10 (25.00)	02 (5.00)	01 (2.50)
4	Learning with technology helps students remember information better	06 (15.00)	15 (37.5)	16 (40.00)	02 (5.00)	01 (2.50)
5	Digital education supports learning throughout your entire life	09 (22.5)	16 (40.00)	12 (30.00)	02 (5.00)	01 (2.50)

Figures in parenthesis indicates percentage

Familiarity with Open Educational Resources (OER)

Open Educational Resources (OER) are freely accessible, openly licensed teaching and learning materials. They democratize education by removing financial barriers, promoting academic equity, and using customised content. A question was raised to the LIS professionals about their familiarity with OERs, the same data is depicted in Table 5 which indicates that 19 (47.5%) respondents are somewhat familiar (had basic understanding), whereas, 14 (35.00%) respondents are familiar with OERs (they understand the concept and occasionally use them), 8 (20.00%) respondents are very familiar with the concept (actively use and contribute to OER).

Table 5: Familiarity with Open Educational Resources (OER)

Sl. No.	Familiarity	No. of Respondents	Percentage (%)
1	Somewhat familiar (Basic understanding)	18	45.00
2	Familiar (Understand the concept and occasionally use)	14	35.00
3	Very familiar (Actively use and contribute to OER)	08	20.00
4	No familiar (No prior exposure)	00	---
	Total	**40**	**100**

Opinion on the statements about OER

A question was asked to the respondents about their opinion on various statements pertaining to OERs. The data is presented in table 6. Out of 40 LIS professionals studied, 27 (67.50%) respondents agreed about the statement, 'OER makes quality education available to everyone, 29 (72.5%) respondents agreed about 'Open resources help people work together to create knowledge,' 21 (52.5%) LIS professionals agreed about 'free educational materials are as good as paid ones,' 17 (42.5%) respondents agreed on 'OER helps in continuous career development, 14 (35.0%) respondents agreed with the statement and 17 (42.50%) respondents strongly agreed about 'Libraries should actively promote OER use', and 14 (35.00%) respondents agreed about the statement.

Table 6: Opinion on statements about OER

Sl. No.	Statement	SA	A	U	DA	SDA
1	OER makes quality education available to everyone	06 (15.00)	27 (67.5)	03 (7.50)	--	01 (2.50)
2	Open resources help people work together to create knowledge	06 (15.00)	29 (72.5)	04 (10.00)	--	01 (2.50)
3	Free educational materials are as good as paid ones	05 (12.5)	21 (52.5)	11 (27.5)	--	03 (7.50)
4	OER helps in continuous career development	07 (17.5)	17 (42.5)	14 (35.00)	01 (2.50)	01 (2.50)
5	Libraries should actively promote OER use	17 (42.50)	14 (35.00)	04 (10.00)	03 (7.50)	02 (5.00)

Figures in parenthesis indicates percentage

Use of different types of OER

Open Educational Resources (OER) are teaching and learning materials that are freely available under open licenses. They enable teachers and students to preserve, reuse, revise, remix, and redistribute content. They range from comprehensive degree programs to individual digital assets. The data related to the use of various types of Open Educational Resources (OER) is presented in Table 7 which shows that 32 (80.00%) respondents used free textbooks and digital books, 29 (72.50%) respondents used video lectures and recorded presentations, 26 (65.00%) respondents used research data scholarly databases and 24 (60.00%) respondents used test materials and learning exercises. Professional development webinars and student and professional shared learning resources were given less importance.

Table 8: Use of different types of OER

Sl. No.	Types of OER	No. of Respondents	Percentage (%)
1	Free textbooks and digital books	32	80.00
2	Video lectures and recorded presentations	29	72.50
3	Research data and scholarly databases	26	65.00
4	Test materials and learning exercises	24	60.00
5	Professional development webinars	21	52.50
6	Student and professional shared learning resources	15	37.50

Motivational factors to use OER

Open Educational Resources (OER) allow for the free sharing, downloading, and adapting of high-quality learning materials, empowering users with the freedom to tailor content to their specific needs. Keeping this in view, a question was raised to the respondents on the motivational factors to use open educational resources and the data is presented in table 8. The statistics reveal that 23 (57.50%) respondents felt that 'connection with formal learning programmes' motivates them to use OER, followed by, 22 (55.00%) respondents felt that OER allows them for 'freedom to use and modify materials', whereas, 19 (47.50%) respondents said that they receive good quality contents and expert authors makes them use OER, 15 (37.50%) respondents each said updated information and regular contents updates and professional networking opportunities are the motivational factors to use OER respectively.

Table 8: Motivational factors to use OER

Sl. No.	Motivational factors	No. of Respondents	Percentage (%)
1	Connection with formal learning programmes	23	57.50
2	Freedom to use and modify materials	22	55.00

3	Good quality content and expert authors	19	47.50
4	Updated information and regular content updates	15	37.50
5	Professional networking opportunities	15	37.50
6	Free access and cost savings	14	35.00
7	Community approval and peer feedback	13	32.50
	Total	**40**	

Factors used to check quality on OER

Evaluating the quality of OERs relies on examining pedagogical value, content accuracy, technical accessibility, and legal permissions. The data on the factors used to check quality on OER is presented in Table 9 which indicates that 27 (67.00%) LIS professionals check 'reviewers and feedback from others' before they use OER, whereas 22 (55.00%) respondents said academic references and recognition, 21 (52.50%) respondents check website reputation and quality, 20 (50.00%) respondents check for author(s) background and qualifications, 18 (45.00%) respondents check for how recent the content is and 16 (40.00%) respondents check for user ratings and reviews. The study's findings reveal that LIS professionals assess the quality of OER before using them.

Table 9: Factors used to check quality on OER

Sl. No.	Factors	No. of Respondents	Percentage (%)
1	Reviewers and feedback from others	27	67.50
2	Academic references and recognition	22	55.00
3	Website reputation and quality	21	52.50
4	Author background and qualifications	20	50.00
5	How recent content is	18	45.00
6	User ratings and reviews	16	40.00
	Total	**40**	**100**

Opinion on the librarians' role in promoting OER

Table 10 presents data on the opinion about the librarians' role in promoting OER and the results reveal that 32 (80.00%) respondents opine that collecting and organizing good quality OER materials is the primary role of librarians, whereas 24 (60.00%) respondents opine that training users on finding and evaluating OER, 22 (55.00%) respondents said helping faculty members to use OER materials, 19 (47.50%) respondents opine that supporting open access policies, 17 (42.50%) respondents opine that helping create institutional OER content and 15 (37.50%) respondents opine that building partnerships with OER groups are the roles that librarians can play to promote Open Educational Resources (OERs) in the academics.

Table 10: Opinion on the Librarian's role in promoting OER

Sl. No.	Opinion on Librarians Role	No. of Respondents	Percentage (%)
1	Collecting and organizing good quality OER materials	32	80.00
2	Training users on finding and evaluating OER	24	60.00
3	Helping faculty members to use OER materials	22	55.00
4	Supporting open access policies	19	47.50
5	Helping create institutional OER content	17	42.50
6	Building partnerships with OER groups	15	37.50
	Total	**40**	**100**

CONCLUSION

The present study examined the use of Open Educational Resources (OER) by the LIS professionals working in Higher Educational Institutions (HEIs) of the Uttara Kannada district affiliated with the Karnatak University, Dharwad. The authors found that more than 80 % of the respondents are familiar with various OERs available online, more than 50 % of the LIS professionals opine that 'online education delivers the same quality of learning as traditional classroom instruction'; more

than 70% of the respondents opine that 'Open resources help people work together to create knowledge'; the respondents give priority to free and digital books among the various OERs; more than 65% respondents look for Reviewers and feedback from others before they use any OER and 80% respondents opine that librarians' role is to collect and organize good quality OER materials for the benefit of the users. The LIS professionals are the best advocators of OERs. This advocacy role requires librarians to develop expertise in open licensing models, understand the pedagogical implications of different resource types, and navigate the complex landscape of OER repositories and aggregation platforms. Librarians can make a significant contribution to institutional efforts to lower student expenses, enhance educational quality, and take part in the worldwide movement toward open access to knowledge by presenting themselves as OER specialists. To sum up, the adoption of Open Educational Resources (OER) is hampered by issues like digital divides, skill gaps, and sustainability concerns. OER has the potential to change the educational landscape by increasing access, improving quality, and lowering costs.

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