International Journal of Research in Library Science (IJRLS)

ISSN: 2455-104X

DOI: 10.26761/IJRLS.11.4.2025.2020

Volume 11, Issue 4 (October-December) 2025, Page: 491-500, Paper ID: IJRLS-2020

Open Educational Resources in Higher Education: A Study of Academic Use and Teaching Benefits among Undergraduate Teachers

Roopa Kashappanavar[1]; Dr. Ramesh B. Kuri[2]

Research Scholar [1]; Assistant Professor [2]; Dept. of LIS, RCU, Belagavi, Karnataka, India[1,2]

ABSTRACT

The present study aimed to examine the academic utilization and instructional benefits of Open Educational Resources (OERs) among undergraduate college teachers affiliated with Rani Channamma University. A survey-based research design was adopted, involving 120 faculty members. Data were collected using a structured questionnaire and analyzed through percentage analysis and chi-square test. The findings revealed significant differences in OER benefits across subjects, with Commerce teachers benefiting more in teaching methods and Science teachers in other dimensions. Teachers showed greater use of OERs for self-directed learning and supporting slow learners, while lower use was observed in lesson planning and assessment. Overall, teachers demonstrated a positive perception of OERs, particularly in terms of adaptability and alignment with curriculum needs.

KEYWORDS: OERs, Higher Education, Undergraduate, University and Awareness.

INTRODUCTION

Open Educational Resources (OERs) have emerged as a transformative force in higher education, offering freely accessible, openly licensed teaching and learning materials that support flexible and inclusive educational practices. The concept of OER was formally introduced by UNESCO in 2002, emphasizing the importance of democratizing knowledge and expanding access to quality education worldwide (UNESCO, 2019). OERs include a wide range of resources such as textbooks, lecture notes, videos, and online courses, which can be freely used, adapted, and redistributed by educators and learners (Wiley, 2014).

In recent years, the integration of OERs into higher education has gained significant attention due to their potential to reduce educational costs and enhance teaching effectiveness (Hilton, 2020). Studies indicate that OER adoption not only improves access to learning materials but also promotes innovative teaching practices and collaborative

learning environments (Hew & Cheung, 2013; Bliss et al., 2013). Moreover, OERs support self-directed learning and lifelong learning by providing diverse and customizable resources tailored to learners' needs (Butcher, 2015).

Teachers play a crucial role in the successful implementation of OERs, as their awareness, perception, and utilization directly influence classroom practices. Research shows that faculty members generally hold positive attitudes towards OERs, particularly in terms of accessibility, adaptability, and relevance to curriculum standards (Allen & Seaman, 2016; Mishra, 2017). However, challenges such as lack of awareness, limited technical skills, and insufficient institutional support continue to hinder effective utilization (Rolfe, 2012; Cox & Trotter, 2017).

In the Indian context, the adoption of OERs has been promoted through national initiatives such as National Mission on Education through ICT, which provides platforms like SWAYAM, e-PG Pathshala, and e-Gyankosh to enhance access to quality educational content (Government of India, 2020). Despite these efforts, variations exist in the extent of OER usage and perceived benefits among teachers across different disciplines.

Therefore, it becomes essential to examine how undergraduate college teachers utilize OERs in their academic practices and the instructional benefits they derive from them. Understanding subject-wise differences in OER utilization and perception can provide valuable insights for improving teaching strategies and promoting effective integration of OERs in higher education. This study, therefore, focuses on the academic utilization and instructional benefits of OERs among undergraduate college teachers affiliated with Rani Channamma University.

Statement of Problem:

Academic Utilization/Use and Instructional Benefits of Open Educational Resources (OER): A Study of Undergraduate College Teachers under Rani Channamma University.

OBJECTIVES

The study focused on exploring the extent to which faculty members in undergraduate colleges affiliated with Rani Channamma University make use and benefit of Open Educational Resources (OERs).

- To examine the integration of OERs into teaching practices among teachers of undergraduate colleges affiliated to Rani Channamma University, Belagavi.
- To examine the perception towards OERS in related to academic of teachers of undergraduate college affiliated to Rani Channamma University, Belagavi.
- To examine whether there is a significant difference in attitudes towards the benefits of OERs on teaching among Arts, Commerce, and Science teachers of undergraduate colleges affiliated with Rani Channamma University.

Hypothesis:

- There is no significant difference in the level of befit of OERs on bringing changes in teaching methods among Arts, Commerce, and Science teachers of undergraduate colleges affiliated with Rani Channamma University.

- There is no significant difference in the level of befit of OERs on bringing collaboration and professional among Arts, Commerce, and Science teachers of undergraduate colleges affiliated with Rani Channamma University.
- There is no significant difference in the level of befit of OERs on bringing students engagement and learning among Arts, Commerce, and Science teachers of undergraduate colleges affiliated with Rani Channamma University.
- There is no significant difference in the level of befit of OERs on bringing impact on students' performance among Arts, Commerce, and Science teachers of undergraduate colleges affiliated with Rani Channamma University.

Research Design:

This study employed a survey-based research approach. Data were collected from undergraduate colleges affiliated to Rani Channamma University, specifically from colleges located in the Belagavi and Bagalkot districts.

Sample:

The study included a group of 120 faculty members drawn from undergraduate colleges affiliated with Rani Channamma University.

Tools Used:

To gather relevant data, the researcher designed and administered a structured questionnaire aimed at evaluating how teachers in these undergraduate colleges engage with Open Educational Resources (OERs).

Statistical Techniques:

The collected data were examined using a combination of descriptive and inferential statistical methods. Percentage analysis was applied to summarize the data, while the chi-square test was employed to evaluate the study's hypotheses.

Analysis and Interpretation of Data Using Percentage Analysis:

1. To examine the integration of OERs into teaching practices among teachers of undergraduate colleges affiliated to Rani Channamma University, Belagavi.

Table-1: Integration of OERs into teaching practices

Integration of OERs		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total
Designing lesson plans	N	14	17	42	40	7	120
	%	11.67%	14.17%	35.00%	33.33%	5.83%	100.00%
Preparing lecture materials	N	6	19	37	46	12	120
	%	5.00%	15.83%	30.83%	38.33%	10.00%	100.00%
Assigning student projects	N	10	19	34	46	11	120
	%	8.33%	15.83%	28.33%	38.33%	9.17%	100.00%
Creating assessment tools	N	9	20	38	43	10	120
	N	7.50%	16.67%	31.67%	35.83%	8.33%	100.00%

Enhancing collaborative learning	N	10	13	41	45	11	120
	N	8.33%	10.83%	34.17%	37.50%	9.17%	100.00%
Supporting slow learners	N	8	11	35	48	18	120
	N	6.67%	9.17%	29.17%	40.00%	15.00%	100.00%
Flipped classroom activities	N	6	19	39	45	11	120
	N	5.00%	15.83%	32.50%	37.50%	9.17%	100.00%
Encouraging self-directed learning	N	6	15	35	48	16	120
	N	5.00%	12.50%	29.17%	40.00%	13.33%	100.00%
Updating content with current knowledge	N	6	17	38	47	12	120
	N	5.00%	14.17%	31.67%	39.17%	10.00%	100.00%
Promoting interdisciplinary approaches	N	6	20	38	44	12	120
	N	5.00%	16.67%	31.67%	36.67%	10.00%	100.00%

Table presents the integration of OERs into teaching practices among undergraduate college teachers, considering only the highest percentage in the "Agree" or "Strongly Agree" categories. The highest agreement is observed for "Encouraging self-directed learning" and "Supporting slow learners" (40.00% Agree each), followed by "Updating content with current knowledge" (39.17% Agree). "Preparing lecture materials" and "Assigning student projects" (38.33% Agree each) also show notable levels of integration.

Further, "Enhancing collaborative learning" and "Flipped classroom activities" (37.50% Agree each), along with "Promoting interdisciplinary approaches" (36.67% Agree) and "Creating assessment tools" (35.83% Agree), indicate moderate levels of agreement among teachers. "Designing lesson plans" (33.33% Agree) shows comparatively lower agreement in terms of OER integration.

Overall, the highest percentages are concentrated in the "Agree" category across all teaching practices, indicating that teachers generally integrate OERs positively into their teaching in colleges affiliated with Rani Channamma University.

2. To examine the perception towards OERS in related to academic of teachers of undergraduate college affiliated to Rani Channamma University, Belagavi.

Table-2: Perception towards OERS

Perception		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total
OER provide high-quality, accessible educational materials	N	14	21	29	48	8	120
	%	11.67%	17.50%	24.17%	40.00%	6.67%	100.00%
OER are adaptable to specific teaching needs and	N	8	15	36	55	6	120
	%	6.67%	12.50%	30.00%	45.83%	5.00%	100.00%

curriculum standards.							
Using OER fosters innovative teaching	N	9	11	43	49	8	120
	%	7.50%	9.17%	35.83%	40.83%	6.67%	100.00%
Improves student engagement and outcomes	N	10	15	34	46	15	120
	N	8.33%	12.50%	28.33%	38.33%	12.50%	100.00%
OER are aligned with current teaching practices and curriculum standards	N	17	15	25	52	11	120
	N	14.17%	12.50%	20.83%	43.33%	9.17%	100.00%
Engaging with OER enhances my professional skills and knowledge	N	7	13	38	47	15	120
	N	5.83%	10.83%	31.67%	39.17%	12.50%	100.00%
OER leads to improved student engagement and learning outcomes.	N	10	16	32	45	17	120
	N	8.33%	13.33%	26.67%	37.50%	14.17%	100.00%

Table presents the perceptions of undergraduate college teachers towards OERs in relation to academic aspects, considering only the highest percentage in the "Agree" or "Strongly Agree" categories. The highest agreement is observed for "OER are adaptable to specific teaching needs and curriculum standards" (45.83% Agree), followed by "OER are aligned with current teaching practices and curriculum standards" (43.33% Agree). "Using OER fosters innovative teaching" (40.83% Agree) and "OER provide high-quality, accessible educational materials" (40.00% Agree) also show notable levels of agreement.

Further, "Engaging with OER enhances professional skills and knowledge" (39.17% Agree), "Improves student engagement and outcomes" (38.33% Agree), and "OER leads to improved student engagement and learning outcomes" (37.50% Agree) indicate moderate agreement among teachers.

Overall, the highest percentages are concentrated in the "Agree" category across all statements, indicating that teachers generally hold a positive perception towards the academic benefits of OERs in colleges affiliated with Rani Channamma University.

Analysis and Interpretation of Data Using Hypothesis Testing:

Hypothesis-1: There is no significant difference in the level of befit of OERs on bringing changes in teaching methods among Arts, Commerce, and Science teachers of undergraduate colleges affiliated with Rani Channamma University.

Table-3: Comparison of the level of benefits of OERs in bringing changes in teaching methods among Arts, Commerce, and Science teachers

Subject	Level of Benefits			Total	S/NS
	Low	Moderate	High		

Arts	N	20	18	9	47	$X^2 = 10.411$ p = .034 (p < .05) Significant
	%	42.55%	38.30%	19.15%	100.00%	
Commerce	N	6	11	14	31	
	%	19.35%	35.48%	45.16%	100.00%	
Science	N	8	17	17	42	
	%	19.05%	40.48%	40.48%	100.00%	
Total	N	34	46	40	120	
	%	28.33%	38.33%	33.33%	100.00%	

The table shows subject-wise differences in the levels of benefits of OERs in bringing changes in teaching methods among undergraduate teachers. Among Arts teachers (N = 47), 20 teachers (42.55%) reported a low level of benefits, 18 teachers (38.30%) reported a moderate level of benefits, and 9 teachers (19.15%) reported a high level of benefits. In the Commerce group (N = 31), 6 teachers (19.35%) reported low benefits, 11 teachers (35.48%) reported moderate benefits, and a larger proportion, 14 teachers (45.16%), reported a high level of benefits. Similarly, among Science teachers (N = 42), 8 teachers (19.05%) reported low benefits, while an equal proportion of 17 teachers (40.48%) each reported both moderate and high levels of benefits. Overall, out of 120 teachers, 34 teachers (28.33%) reported low benefits, 46 teachers (38.33%) reported moderate benefits, and 40 teachers (33.33%) reported high benefits.

The chi-square analysis shows a significant difference in the levels of benefits of OERs among Arts, Commerce, and Science teachers ($\chi^2 = 10.411$, p = .034; p < .05). Commerce teachers benefit the most and actively use OERs, followed by Science teachers, while Arts teachers benefit comparatively less in colleges affiliated with Rani Channamma University.

Hypothesis-2: There is no significant difference in the level of befit of OERs on bringing collaboration and professional among Arts, Commerce, and Science teachers of undergraduate colleges affiliated with Rani Channamma University.

Table-4: Comparison of the level of benefits of OERs in collaboration and professional among Arts, Commerce, and Science teachers

Subject		Level of Benefits			Total	S/NS
		Low	Moderate	High		
Arts	N	19	19	9	47	$X^2 = 9.505$ p = .049 (p < .05) Significant
	%	40.43%	40.43%	19.15%	100.00%	
Commerce	N	9	12	10	31	
	%	29.03%	38.71%	32.26%	100.00%	
Science	N	6	18	18	42	
	%	14.29%	42.86%	42.86%	100.00%	
Total	N	34	49	37	120	
	%	28.33%	40.83%	30.83%	100.00%	

The table shows subject-wise differences in the levels of benefits of OERs in bringing collaboration and professional development among undergraduate teachers. Among Arts teachers (N = 47), 19 teachers (40.43%) reported a low level of benefits, 19 teachers (40.43%) reported a moderate level of benefits, and 9 teachers (19.15%) reported a high level of benefits. In the Commerce group (N = 31), 9 teachers (29.03%) reported low benefits, 12 teachers (38.71%) reported moderate benefits, and 10 teachers (32.26%) reported a high level of benefits. Similarly, among Science teachers (N = 42), 6 teachers (14.29%) reported low benefits, while an equal proportion of 18 teachers (42.86%) each reported both moderate and high levels of benefits. Overall, out of 120 teachers, 34 teachers (28.33%) reported low benefits, 49 teachers (40.83%) reported moderate benefits, and 37 teachers (30.83%) reported high benefits.

The chi-square analysis shows a significant difference in the levels of benefits of OERs among Arts, Commerce, and Science teachers ($\chi^2 = 9.505$, $p = .049$; $p < .05$). Science teachers benefit the most in terms of collaboration and professional development, followed by Commerce teachers, while Arts teachers benefit comparatively less in colleges affiliated with Rani Channamma University.

Hypothesis-3: There is no significant difference in the level of befit of OERs on bringing students engagement and learning among Arts, Commerce, and Science teachers of undergraduate colleges affiliated with Rani Channamma University.

Table-5: Comparison of the level of benefits of OERs in students engagement and learning among Arts, Commerce, and Science teachers

Subject		Level of Benefits			Total	S/NS
		Low	Moderate	High		
Arts	N	23	19	5	47	$X^2 = 25.557$ p = .001 (p < .05) Significant
	%	48.94%	40.43%	10.64%	100.00%	
Commerce	N	9	12	10	31	
	%	29.03%	38.71%	32.26%	100.00%	
Science	N	2	21	19	42	
	%	4.76%	50.00%	45.24%	100.00%	
Total	N	34	52	34	120	
	%	28.33%	43.33%	28.33%	100.00%	

The table shows subject-wise differences in the levels of benefits of OERs in bringing students' engagement and learning among undergraduate teachers. Among Arts teachers (N = 47), 23 teachers (48.94%) reported a low level of benefits, 19 teachers (40.43%) reported a moderate level of benefits, and 5 teachers (10.64%) reported a high level of benefits. In the Commerce group (N = 31), 9 teachers (29.03%) reported low benefits, 12 teachers (38.71%) reported moderate benefits, and 10 teachers (32.26%) reported a high level of benefits. Similarly, among Science teachers (N = 42), 2 teachers (4.76%) reported low benefits, 21 teachers (50.00%) reported a moderate level of benefits, and 19 teachers (45.24%) reported a high level of benefits. Overall, out of 120 teachers, 34 teachers (28.33%) reported low benefits, 52 teachers (43.33%) reported moderate benefits, and 34 teachers (28.33%) reported high benefits.

The chi-square analysis shows a significant difference in the levels of benefits of OERs among Arts, Commerce, and Science teachers (χ^2 = 25.557, p = .001; p < .05). Science teachers benefit the most in terms of students' engagement and learning, followed by Commerce teachers, while Arts teachers benefit comparatively less in colleges affiliated with Rani Czannamma University.

Hypothesis-4: There is no significant difference in the level of befit of OERs on bringing impact on students' performance among Arts, Commerce, and Science teachers of undergraduate colleges affiliated with Rani Channamma University.

Table-6: Comparison of the level of benefits of OERs in impact on students' performance among Arts, Commerce, and Science teachers

Subject		Level of Benefits			Total	S/NS
		Low	Moderate	High		
Arts	N	18	19	10	47	X^2 = 11.387 p = .023 (p < .05) Significant
	%	38.30%	40.43%	21.28%	100.00%	
Commerce	N	10	9	12	31	
	%	32.26%	29.03%	38.71%	100.00%	
Science	N	6	14	22	42	
	%	14.29%	33.33%	52.38%	100.00%	
Total	N	34	42	44	120	
	%	28.33%	35.00%	36.67%	100.00%	

The table shows subject-wise differences in the levels of benefits of OERs in bringing impact on students' performance among undergraduate teachers. Among Arts teachers (N = 47), 18 teachers (38.30%) reported a low level of benefits, 19 teachers (40.43%) reported a moderate level of benefits, and 10 teachers (21.28%) reported a high level of benefits. In the Commerce group (N = 31), 10 teachers (32.26%) reported low benefits, 9 teachers (29.03%) reported moderate benefits, and 12 teachers (38.71%) reported a high level of benefits. Similarly, among Science teachers (N = 42), 6 teachers (14.29%) reported low benefits, 14 teachers (33.33%) reported a moderate level of benefits, and a larger proportion, 22 teachers (52.38%) reported a high level of benefits. Overall, out of 120 teachers, 34 teachers (28.33%) reported low benefits, 42 teachers (35.00%) reported moderate benefits, and 44 teachers (36.67%) reported high benefits.

The chi-square analysis shows a significant difference in the levels of benefits of OERs among Arts, Commerce, and Science teachers (χ^2 = 11.387, p = .023; p < .05). Science teachers benefit the most in terms of impact on students' performance, followed by Commerce teachers, while Arts teachers benefit comparatively less in colleges affiliated with Rani Channamma University.

MAJOR FINDING OF THE STUDY

- A significant difference was found in the benefits of OERs for teaching methods among Arts, Commerce, and Science teachers (χ^2 = 10.411, p = .034), with Commerce teachers benefiting the most.

- A significant difference was observed in the benefits of OERs for collaboration and professional development ($\chi^2 = 9.505$, $p = .049$), with Science teachers benefiting the most.
- A significant difference was found in the benefits of OERs for students' engagement and learning ($\chi^2 = 25.557$, $p = .001$), with Science teachers benefiting the most.
- A significant difference was observed in the benefits of OERs on students' performance ($\chi^2 = 11.387$, $p = .023$), with science teachers benefiting the most.
- **Integration of OERs:** Encouraging self-directed learning and supporting slow learners show the highest level of integration (40.00% each), followed by updating content with current knowledge (39.17%) and preparing lecture materials/assigning projects (38.33%), while designing lesson plans (33.33%) and creating assessment tools (35.83%) show relatively lower levels of integration.
- **Perception towards OERs:** Adaptability to teaching needs shows the highest agreement (45.83%), followed by alignment with curriculum (43.33%), innovative teaching (40.83%), and quality materials (40.00%), while improving student engagement (38.33%) and learning outcomes (37.50%) show comparatively lower agreement, though overall perception remains positive.

CONCLUSION

The study reveals that there is a significant difference among Arts, Commerce, and Science teachers in the benefits of Open Educational Resources (OERs) across all dimensions. Commerce teachers benefit the most in improving teaching methods, while Science teachers show higher benefits in collaboration, professional development, student engagement, learning, and students' academic performance.

Teachers demonstrate a considerable level of integration of OERs in teaching, particularly in encouraging self-directed learning and supporting slow learners, followed by updating content and preparing instructional materials. However, comparatively lower integration is observed in designing lesson plans and creating assessment tools.

Further, teachers hold a positive perception towards OERs, especially regarding their adaptability to teaching needs and alignment with curriculum standards. Although perceptions related to student engagement and learning outcomes are slightly lower, the overall findings indicate that OERs significantly enhance teaching practices and learning outcomes, while emphasizing the need for improved utilization in certain areas.

REFERENCE

[1] Allen, I. E., & Seaman, J. (2016). *Opening the textbook: Educational resources in U.S. higher education, 2015–16*. Babson Survey Research Group.

[2] Bliss, T. J., Robinson, T. J., Hilton, J., & Wiley, D. A. (2013). An OER COUP: College teacher and student perceptions of open educational resources. *Journal of Interactive Media in Education, 2013*(1), 1–25. https://doi.org/10.5334/2013-04

[3]Butcher, N. (2015). *A basic guide to open educational resources (OER)*. Commonwealth of Learning & UNESCO.

[4] Cox, G., & Trotter, H. (2017). Factors shaping lecturers' adoption of OER at three South African universities. *International Review of Research in Open and Distributed Learning, 18*(4), 21–44. https://doi.org/10.19173/irrodl.v18i4.2900

[5] Government of India. (2020). *National Mission on Education through Information and Communication Technology (NMEICT)*. Ministry of Education, Government of India. https://www.education.gov.in

[6] Hew, K. F., & Cheung, W. S. (2013). Students' and instructors' use of open educational resources in higher education. *Educational Technology Research and Development, 61*(2), 191–215. https://doi.org/10.1007/s11423-012-9277-8

[7] Hilton, J. (2020). Open educational resources, student efficacy, and user perceptions: A synthesis of research. *Educational Technology Research and Development, 68*(3), 853–876. https://doi.org/10.1007/s11423-019-09700-4

[8]Kashappanavar, R., & Kuri, R. B. (2025). Awareness, access, and use of open educational resources by teachers of undergraduate colleges under Rani Channamma University. *International Journal of Research in Library Science (IJRLS), 11*(3), 400–410. https://doi.org/10.26761/IJRLS.11.3.2025.1958.

[9] Mishra, S. (2017). Open educational resources: Removing barriers from within. *Distance Education, 38*(3), 369–380. https://doi.org/10.1080/01587919.2017.1369350

[10] Praveen M., Kuri, R., Patil S & Dharmatti, G. (2025) Perceptions and Engagement with Open Educational Resources among Postgraduates: A Study. *PEARL - A Journal of Library and Information Science*, 19(4), 304-312 ISSN: 0973-7081; E0975-6922

[11] Rolfe, V. (2012). Open educational resources: Staff attitudes and awareness. *Research in Learning Technology, 20*. https://doi.org/10.3402/rlt.v20i0.14395

[12] UNESCO. (2019). *Recommendation on open educational resources (OER)*. United Nations Educational, Scientific and Cultural Organization. https://unesdoc.unesco.org

[13] Wiley, D. (2014). The access compromise and the 5th R. Retrieved from http://opencontent.org

---