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Knowledge Of Open Educational Resources Among Research Scholars

Dr. U. Pandian
Assistant Professor
Tamil Nadu Teachers
Education University
Chennai-97.

D.E. Rajini Sujatha
Research Scholar
Tamil Nadu Teachers
Education University
Chennai-97.

Abstract

The study indicates the knowledge of open education resources among research scholars in Tamil Nadu. The researcher has taken research scholars in Tamil Nadu as a population for the present study. The researcher has utilized simple random sampling techniques for collecting the data from the samples. The researcher has collected 606 samples from 23 universities and Deemed(Private) universities. Based on the data analysis and interpretation, the researcher found that research scholars have an average knowledge of OER, and that there are no significant differences in awareness based on gender, residency and parents' education.

Key Words: knowledge, Open Educational Resources, Gender, Residency, Parents Education

Introduction

In today's digital and knowledge-based academic environment, research scholars must understand Open Educational Resources (OER). OER are teaching, learning, and research resources that are freely available in the public domain or under an open license that allows for free use, adaptation, and redistribution (UNESCO, 2019). Understanding and utilizing open educational resources (OER) allows researchers to access high-quality academic resources without financial or legal barriers.

Lutris and Simon (2021) provide details that textbooks, course materials, lesson plans, multimedia content, assessments, software, and any other tools or materials used for educational purposes are examples of OER. Miao et al.,(2016) simply explain that OERs are teaching and learning resources that are accessible to everyone, free of charge and with minimal restrictions on their use, reuse, and modification, regardless of the medium used.

Paywalls and subscription prices are common hurdles for research scholars. Knowledge of OER enables them to circumvent these constraints by giving free and equitable access to global academic resources. This promotes diversity and lifelong learning (Hilton 2020). With a solid understanding of OER, academics can reuse, revise, remix, and disseminate educational and research materials, fostering innovation and collaborative knowledge generation. This open sharing speeds up the dissemination of research findings and promotes interdisciplinary collaboration (Wiley & Hilton, 2018). Awareness of OER principles ensures that scholars follow copyright laws and open licensing standards like Creative Commons. It promotes ethical research procedures while also encouraging transparency and credibility in academic writing (UNESCO 2020).

Knowledge of OER fosters the spirit of open science and international academic collaboration. Researchers that use OER can publish their findings broadly, increasing the exposure and impact of their work (Cronin, 2017). OER serve to alleviate the financial burden connected with purchasing books, journals, and databases. As a result, they encourage a cost-effective and sustainable research ecosystem that benefits academics, particularly in developing nations (Atenas & Havemann, 2015). Understanding OER also assists researchers in developing the digital and information literacy skills required for modern research. Understanding open tools, repositories, and licenses leads to more successful and innovative academic practices (McGill et al., 2013).

Wiley(2014) explained challenges the conventional paradigms of knowledge distribution, which are frequently constrained by copyright and licensing obstacles, by encouraging the unrestricted sharing and adaption of educational resources.

To summarize, knowledge of OER enables researchers to be self-sufficient, collaborative, and ethical contributors to global knowledge. It is critical for democratizing education, enabling open access to knowledge, and encouraging innovation in research and academia.

Method of the study

The present study focused on open educational resources awareness among research scholars. It is providing a detailed explanation of OER awareness, among research scholars in Tamil Nadu state. In the present study to discover the existing level OER awareness of research scholars, to identify the level of OER knowledge of research scholars. Now, the researcher has utilized quantitative method for the present study and survey method to collect the data from the sample using structured awareness questionnaires.

Sample of the Study

The researcher selected the arts and science research scholars as a population for the current research study. From the population the researcher has selected the sample size is 606 research scholars in Tamil Nadu. The researcher justified the appropriateness of the sample selected based on **Krejcie and Morgan (1990)** criteria and they have (1990) published a standard table that is widely used for determining the appropriate size of the sample for research studies. This table suggests that a sample size of 278 is recommended for a population of 1000.

Tools Used in the Study

The Knowledge of OER research variable tool constructed and standardised by the researcher with help of research supervisor and the final tool contains 58 statements in English and Tamil language. The scoring procedure of the research tool is following 1- Co-scholars, 2- Guide, 3 – Websites, 4 – Media, 5 – Others. The minimum score for the tool is 58 and maximum score of the tool is 290.

Objectives of the Study

1. To study the level of Knowledge of Open Educational Resources of research scholars.
2. To find out whether there is any significant difference in Knowledge of Open Educational Resources of research scholars with respect to their:

a. Gender (Male/Female)
b. Education Stream (Arts / Science)
c. Parents' Income (Below Rs. 10000/ Rs. 10001 to Rs.50000/ Rs. 50001 and above)

Hypotheses of the Study

1. There is no significant difference among the research scholas Knowledge of Open Educational Resources with respect to their:

a. Gender (Male/Female)
b. Education Stream (Arts / Science)
c. Parents' Income (Below Rs. 10000/ Rs. 10001 to Rs.50000/ Rs. 50001 and above)

Data Analysis and Interpretations

DESCRIPTIVE ANALYSIS – OER Knowledge of Research Scholars'

Table: 1

The Mean and Standard Deviation of OER Knowledge of Research Scholars'

Sl. No.	Demographic Variables	Sample	N	Mean	S.D
1	Gender	Male	324	148.32	51.97
		Female	282	156.50	53.85
2	Marital Status	Married	328	156.73	52.18
		Unmarried	278	146.70	53.46
3	Locality of the Scholars'	Rural	371	152.24	52.94
		Urban	235	151.95	53.13
4	Internet Availability	Yes	432	150.05	52.37
		No	174	157.29	54.22
5	Educational Stream	Arts	408	152.18	53.54
		Science	198	152.02	51.91
6	Mode of Studies	Full Time	196	151.27	53.58
		Part Time	410	152.54	52.73
7	Types of Universities	Government	456	153.02	52.48
		Private	150	149.42	54.51
8	Parents' Education	Illiterate	140	140.00	48.13
		School Education	295	156.69	54.28
		Higher Education	171	154.19	53.22
9	Parents' Occupation	Daily Wages	118	134.63	46.56
		Govt.	77	150.27	51.01
		Private	271	156.91	53.33
		Business	140	158.64	55.58
10	Parents' Income	Below Rs. 10000	118	136.11	44.17
		Rs.10001 to Rs.50000	234	155.44	53.20
		Rs.50001 and Above	254	156.62	55.52
				152.13	52.97

Table: 2 - Level of OER Knowledge

Variable	Score range	Category
OER Knowledge	Above 160	High
	133 – 159	Average
	Below 132	Low

The OER Knowledge scale is consisting 58 items. The Maximum score for this scale is 290 and minimum score of the scale is 58.

As can be seen from the table above, the calculated mean and standard deviation of the research scholars' OER Knowledge scores for the entire sample are 152.13 and 52.97 respectively, with the mean value falling between 134.63 and 158.64. Therefore, the research study concluded that the null hypothesis, which states that "Research scholars' Open Educational Resources Knowledge is average". **Sahu and Khunte (2025)** found 92.54% of research scholars' aware of OER, with 82.09% actively using OER platforms like YouTube and Shodhganga, reflecting an average to good level of OER knowledge and usage among scholars.

a. There is no significant difference between male and female of research scholars' OER Knowledge.

Table: 3

OER Knowledge - Gender – "t" Value

Demographic Variable	Sample	N	Mean	S.D	't' Value	Remarks
Gender	Male	324	148.32	51.97	1.89	Not Significant at 0.05 level
	Female	282	156.50	53.85		

It is observed from the above table 3 that the calculated t-value 1.89 is less than the table value 1.96 at 0.05 level of significance. It shows that there is no significant difference between male and female of research scholars' OER knowledge. Hence, the null hypothesis is accepted. The mean value shows that female research scholars' is better than male research scholars' OER knowledge. **Sahu and Khunte (2025)** mean perception scores of male scholars' (140.05) and female scholars' (140.29) regarding OER knowledge were very close, indicating no significant gender difference in OER knowledge.

b. There is no significant difference between arts stream and science stream of research scholars' OER knowledge.

Table: 4

OER knowledge - Education Stream – "t" Value

Demographic Variable	Sample	N	Mean	S.D	't' Value	Remarks
Education Stream	Arts	408	152.18	53.54	0.37	Not Significant at 0.05 level
	Science	198	152.02	51.91		

It is observed from the above table 4 that the calculated t-value 0.37 is less than the table value 1.96 at 0.05 level of significance. There is no significant difference between arts stream and science stream of research scholars' OER knowledge. Hence, the null hypothesis is accepted. The mean value shows that arts stream research scholars' OER knowledge is higher than science stream research scholars' OER knowledge. **Subhashree Das (2024)** found a significant difference in OER knowledge and perception between research scholars from different streams. The mean perception score for science research scholars (149.50) was significantly higher than that of Arts scholars (139.60) and Commerce scholars (131.50), indicating a more positive orientation and better knowledge of OER among science scholars compared to their counterparts in arts and commerce. An above study results are indicating a contradictory finding to the present study.

c. There is no significant difference among the parents' income (Below Rs. 10000 / /Rs. 10001 to 50000/Rs.50001 and above) of research scholars' OER awareness.

Table: 5

OER Awareness – Parents' Income - ANOVA

Demographic Variable	Sample	Source of Variation	Sum of Squares	df	Mean Squares	'F' Ratio	Remarks
Parents' Income	Below Rs. 10000 / Rs. 10001 to Rs. 50000 / Rs. 50001 and Above	Between Groups	46830.53	3	15610.17	2.90	Not Sign. at 0.05 level
		Within Groups	3236191.62	602	5375.73		
		Total	3283022.15	605			

It is observed from the above table 5 that the calculated f-value 2.90 is less than the table value 3.08 at 0.05 level of significance. It shows that there is no significant difference among the parents' income (Below Rs. 10000 / /Rs. 10001 to 50000/Rs.50001 and above) of research scholars' OER awareness. Hence, the null hypothesis is accepted. So, the researcher does not like to see the difference "t" test among the parents' income (Below Rs. 10000 / /Rs. 10001 to 50000/Rs.50001 and above) of research scholars' OER awareness. **Gemechu Abera Gobena (2018)** study results showed that first, parents' income did not bring anything new to the students' studies. His study also encourages to the present study results.

Educational Implications

The researcher found that there are no significant differences among gender, education stream and monthly salary of parents in knowledge of OER. Hilton (2016) stated that knowledge of OER allows educators to locate, modify, and incorporate high-quality, freely available materials into their instruction. This encourages new educational approaches and enables material customisation to fit the demands of a varied range of learners.

OERs can bridge the existing gap between quality services and several limitations in many educational institutions in Africa by providing several formats of flexible and current materials online, under its open licenses on adaptable platforms, which at the same time can enable users to modify, translate, and tailor them to their specific requirements or target audience (Gemechu Abera Gobena (2018).

Recommendations

To meet the content and context needs of research scholars, institutions, particularly those at the advanced levels, should collaborate with subject matter experts to curate current, diverse, and comprehensive local OER repositories. This will reduce the gap between OER awareness and utilization, ensuring that OERs match the specific demands of many subject areas. Universities should also prioritize increasing the visibility and accessibility of open educational resources (OER) platforms for research scientists. Targeted promotion and dissemination strategies and initiatives, such as incorporating OER awareness exercises into orientation programs, reminding students on a regular basis via academic advisors, and emphasizing the availability and benefits of OER through digital platforms, can help achieve this.

Again, universities should create comprehensive training programs for research scientists to bridge the gap between OER awareness and utilization. When educating students about OERs, these programs must also provide hands-on instruction on how to identify, evaluate, and apply OERs in academic settings. To improve faculty members' OER competency and enable them to serve as mentors and advocates for students, educational institutions should consider innovative ways to provide frequent professional development opportunities.

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