

ATTITUDE OF SECONDARY SCHOOL TEACHERS TOWARDS OER (OPEN EDUCATIONAL RESOURCES)

Prabina Priyadarsini Behera¹, Lakshmi Kanth², Sai Bargav Chowdary B³, Ismail Kakarwada⁴

¹⁻⁴Lecturer in Education, RNIASE, Cuttack, Odisha.

Abstract: This research paper deals with the secondary school teachers, and open educational resources in secondary school educational context. In light of analysis and recommendation of the report of common wealth of learning, UNESCO 2011 described the concept of OER digitized material offered freely and openly for educators, students and self learners to use and develop, use and distribute content and implementation resources such as open license. The paper tries to throw light on the attitude of secondary school teachers towards open educational resources. It also tries to analyze OER effectiveness in making teacher reflective practitioners especially in the light of various economic and educational reforms undertaken. OER can play a very important role in making good quality instructional material available to all at minimal cost. This paper discusses in detail about the attitude of secondary school teachers towards OER, in relation to their awareness, gender and their streams.

In this context the objectives

1. To study the perception of secondary school teachers about OER.
2. To compare the attitude of secondary school teachers towards OER with respect to their gender
3. To compare the attitude of secondary school teachers towards OER with respect to their stream of study.

The **hypotheses** were

1. attitude of secondary school teachers is favourable towards OER.
2. There exist no significant difference between the attitude of male and female secondary school teachers towards OER.
3. There exist no significant difference between the attitude of arts and science secondary school teachers towards OER.

Methodology: Here the researcher followed the descriptive survey method.

Sample: Out of 150 secondary schools in Mayurbhanj district 10 High school were selected randomly. 60 teachers from these schools were taken in the study. The sample was consisting of 30 Male and 30 female teachers from both Arts and Science stream.

Tools: The following tool was developed by the investigator for collection of data, rating scale on attitude of secondary school teachers towards OER. (Inferential t- test was used).

The **findings** were

1. The attitude of secondary school teachers is favourable towards OER. As the maximum number of samples gave positive response to the attitude scale provided. (Mean = 63, SD = 19.465)
2. The attitude of the female teachers is as equal to the attitude of Male teachers. So there is no significant difference in the attitude of secondary school teachers towards OER with regards to gender. (T value =0.76, not significant)
3. The attitude of science teachers is equal to the attitude of arts teachers. So there is no significant difference exist in the attitude of secondary school teachers towards OER with respect to stream of study. (T value = 0.92, not significant)

Keywords: Open Educational Resources; OER; common wealth of learning; COL; open license; secondary school teachers

INTRODUCTION

The education systems world over are being enriched by various OERs. The use of OERs holds great promise of improving the access to and the overall quality of education, especially for a developing country like India. This paper provides an overview of the research which explores the status and use of Open Educational Resources (OERs) in various distance education and training institutions in India. A learning resource may be referred to as any element or component of teaching or learning process used to facilitate learning and stimulate student perception and attention. World-wide, open educational resources (OER) have come up as a very useful medium in the fields of education, research and training. The concept of the OER came into existence in 2002 during a conference hosted by UNESCO. After which OER has travelled across the globe in different formats such as OER, Open Courseware (OCW), open textbooks, digital library, open access journal etc. With the basic motto to provide open access to knowledge, one thing that strikes about OER is

that there is a lot of activity surrounding this concept. OER is considered as democratization of knowledge and education. It believes in the concept of sharing and participation. The existing literature on the trends and usage of OER shows that OER is in the infancy stage in Indian secondary education and is not utilized completely. Although there are many potential benefits of OER, at the same time challenges are also more in number. It is seen that the acceptance and usefulness of OER still poses a question. In this entire movement the faculty, educators, researchers and trainers play a pivotal role in establishing this concept. In order to get a comprehensive status about the acceptance and usability of OER in Indian secondary education, this study aims to investigate about the acceptance and usability of OER in India.

A learning resource can refer either to any resource used by teachers and students for the purpose of learning, or to resources particularly designed to be used in learning settings. As mentioned by Little John, Falconer and McGill (2008), the use of print-based resources, which form an integral part of teaching across all sectors of education, has evolved with time. In the last few decades, there have been major changes in teaching methods, and in the availability and affordances of new types of resources based on digital technologies. The methods, approaches and resources used by the educators to provide instruction have a significant impact on the entire teaching-learning process (Littlejohn, Falconer & McGill, 2008; Barrett et al, 2007; Cohen, Raudenbush & Ball, 2002). With move towards learner-centered learning, there is emphasis on the use of learner-centered instructional methods in active learning environment where students engage actively in the learning process through participation in collaborative activities and discussions (Prince, 2004; Weimer, 2002; Felder & Brent, 1996). The use of learning resources (in a variety of formats such as images, audio/videos, multimedia simulations and so on) becomes crucial in these active learning environments to inculcate higher order thinking skills in students. Siemens (2003) lists a number of reasons for educators to share learning resources for free, including: it does not cost anything to share digital resources; it gives educators alternatives and increases competition on the market; it is democratic and a way to preserve public education.

As teachers and students seriously engage in the process of repurposing OER for their individualized contexts, they will also become constructive learners and enhance their own knowledge. Paucity of high-quality teachers and poor quality of educational resources both in government and private affordable schools are key challenges facing the Indian education system. Increasing the amount of OER can play a big role in helping solve these problems, by providing students and teachers with much improved access to quality educational resources. Further, OER are available for free-of-cost, thus leading to reduction in the initial and overall cost of producing teaching and learning material. While India has more than 800 universities, it is not common to use OER in secondary education. However, the potential for OER to both improve teaching and learning quality and achieve cost effectiveness is enormous, and India as a developing country appears to have a growing appetite for education openness, including the creation and dissemination of OER (CEMCA, 2017).

OPEN EDUCATIONAL RESOURCES: CONCEPTUAL FRAMEWORK

Several definitions of OER have been proposed (UNESCO, 2002; The OECD, 2007). UNESCO (2002) defines OER as the open provision of educational resources through the use of information and communication technologies (ICTs), for consultation, use, and adaptation by a community of users for non-commercial purposes. The OECD (2007) defines OER as “digitized materials offered freely and openly for educators, students, and self-learners to use and reuse for teaching, learning and research”. While the definition proposed by the OECD avoids limiting OER to non-commercial use, it clearly eliminates all print-based information resources as OER. In his case, Wiley (2007) equates learning objects with OER. OER include learning objects such as lecture materials, references, readings, simulations, experiments, and demonstrations, as well as syllabi, curricula, and teachers’ guides (UNESCO, 2002). These are resources that can be used to support instructional activities as well as for the purpose of learning. Wiley (2007) categorizes OER into two broad types:

- (a) OER designed for teaching
- (b) OER designed for studying.

The use of OER within secondary education flows from numerous impulses that originate within the individual, the broader influences of faculty members upon the teaching and learning environment, and the institutional support for innovations to teaching

There is a large diversity in Indian education system. On one hand there are privately managed international schools that charge hefty tuition fees and provide good educational facilities. On the other hand, there are schools that lack even essential facilities. The software exports from India runs into billions of dollars. India being a large country, the aim of democratizing education needs learner centric education. There is a dire need to change current education system making education more open and beyond four walls of the classroom. As this 21st century has paved the way of learning experience through technology, this Open Educational Resource (OER) has become the perfect material to enhance the learning efficiency in cost effective way, in a developing country like India. This study checks the awareness among the teachers of secondary schools their knowledge and acceptance of OER as resource for quality teaching. ‘

One of the main values of OER is that they can be used worldwide independently of the system of education and national curricula frameworks" (Grodecka, Sliwowski, 2014)”. The European Commission has also recognized the values of OER,

stressing that Open Educational Resources and open practices allow more personalized learning, a better learning experience, and an improved use of resources, which promote equity by increasing the availability of knowledge because individuals may learn anytime, anywhere, with the support of anyone, using any device (<http://ec.europa.eu/> and <http://openeducationeuropa.eu/>). By using OER, students are exposed to different educational resources that are in accordance with their learning style, learners can become more active participants in educational process through a collaboration in virtual communities of learning, teachers can compare their own teaching materials with other teachers all around the world, they can learn how to release their work under an open license and to improve quality of teaching practice and encourage pedagogical innovation, and finally OER can reduce the cost of accessing educational materials (McGraw et al, 2013).

The researcher taken the present study entitled as:- **“Attitude of secondary school teachers towards OER in relation to gender and stream of study.”**

Objective of the study

- To study the attitude of secondary school teachers about OER
- To compare the attitude of secondary school teachers towards OER with respect to their gender
- To compare the attitude of secondary school teachers towards OER with respect to their stream of study.

Hypothesis of the study:

- HA – attitude of secondary school teachers is favorable towards OER.
- Ho1- there exist no significant difference between the attitude of male and female secondary school teachers towards OER.
- Ho2- there exist no significant difference between the attitude of arts and science secondary school teachers towards OER.

DESIGN OF THE STUDY

Design of the present study includes a detailed description of the matter in which decision had been made about the type of data needed for the study, the tools and devices used for their collection and the method by which they have been collected. It refers to the quality of any study. In fact, the research design was the conceptual structure within which research was conducted. Collection of data, analysis and interpretation of data are carried on.

METHODOLOGY

The purpose of the methodology of this study is to provide a research plan to study the attitude of for secondary school teachers towards OER. The research paradigm and design chosen was a quantitative approach of research. Quantitative research generally follows a positivistic form of study where reality is considered to be observable and measurable. Also, quantitative methodology was followed to describe the hypotheses. Descriptive survey method was followed in the present study.

POPULATION

The population of the present study consists of secondary school teachers from 10 high schools of Mayurbhanj district. The following tool was developed by the investigator for collection of data. ATTITUDE SCALE FOR THE TEACHERS Attitude scale is used when factual information is desired before development of questionnaire, literature on OER was studied. Items which were to be taken in the attitude scale were selected keeping in mind the objectives of the study. Importance was given to the attitude of secondary school teachers towards OER, their stream of study and gender while constructing attitude scale.

SAMPLE Out of 30 high schools in Mayurbhanj district 10 schools were selected randomly. Sixty Trained graduate male and female teachers from both arts and science stream were taken in the study. The sample consisted of 15 male and 15 female teachers from arts stream and 15 male and 15 female teachers from science.

Hypothesis testing HA : Hypothesis the alternate hypothesis stated “attitude of secondary school teachers are favorable towards OER”.

N	MEAN	SD
60	63	19.465

Table-1 : Attitude of secondary school teachers towards OER are favorable

Interpretation From the above table it was found that the calculated mean of the sixty samples is 63 and the standard deviation of total sample is 19.465. Therefore, the hypothesis stated that “attitude of secondary school teachers towards OER are favorable towards OER”.

H01: “There is no significant difference exists in the attitude of secondary school teachers towards OER with respect to their gender.”

Variable Gender	N	Mean	SD	df	T value	Sig/not sig
Male	30	63.86	21.20	58	0.76	Not significant
Female	30	63.80	17.007			

Table -2: No Significant Difference exists in the attitude of secondary school teachers towards OER with respect to gender

Interpretation: From the above table it was found that the calculated “t” value was smaller than critical table value at 0.05 level. Therefore, the hypothesis stated that “There is no significant differences exist in the attitude of secondary school teachers towards OER with respects to gender”. It was also revealed from the table that the mean of the attitude of male teachers towards OER is 63.86 and mean of attitude towards OER of female teachers Is 63.80. The table also reveals the standard deviation of male teachers is 21.20 and the female teacher is 17.007. As the degree of freedom 58. It can be assumed that to find the critical value of t, according to t table the critical value of ‘t’ is 2.00. But the calculated t value and the table 4.1 is 0.76, which is much smaller than the critical t value. Hence the result is not significant.

Testing of Hypothesis Ho2: The second hypothesis of the study stated “There is no significant differences exist in attitudes of secondary school teachers towards OER with respect to streams of study”.

Variable Gender	N	Mean	SD	df	T value	Sig/not sig
Arts	30	62.241	16.05	58	0.92	Not significant
Science	30	57.103	25.83			

Table - 4.3 No Significant Difference exists in the attitudes of secondary school teacher towards OER, With respect to Stream of Study Stream

Interpretation: From the above Table 3 it was found that the calculated “t” value was smaller than critical table value at 0.05 level. Therefore, the hypothesis stated that there is, “no significant differences exist in the attitudes of secondary school teachers towards OER with respect to streams of study“. It was also revealed from the table that the mean of the attitude of arts teachers towards OER is 62.241 and mean of the attitude of science teachers towards OER is 57.103. According to the table 3 the Standard deviation of arts teachers is 16.05 and the science teachers is 25.83. the t value of 60 is 2.00, but the calculated t value is 0.92, which is much smaller than the critical t value. Hence the result is not significant.

MAJOR FINDINGS

The following are the main findings of the study

* The background information of the teachers revealed that from 60 teachers 30 teachers were Male and 30 were female teachers. Out of the 30 male teachers 15 teachers were from science stream and 15 teachers were from Arts stream. Out of 30 female teachers 15 teachers were from science stream and 15 were from Arts stream.

* The attitude of secondary school teachers is favorable towards OER. As the maximum number of samples gave positive response to the questionnaire provided. (Mean = 63, SD = 19.465)

* The attitude of the female teachers is as equal to the attitude of Male teachers. So there is no significant difference in the attitude of secondary school teachers towards OER with regards to gender. (T value =0.76, not significant)

* The attitude of science teachers is equal to the attitude of arts teachers. So, there is no significant difference exist in the attitude of secondary school teachers towards OER with respect to stream of study. (T value = 0.92, not significant)

RESULT AND DISCUSSION

Open educational resources have a great impact on the teaching learning process. Major findings of the study have also revealed the same. First objective of the study was to study the attitude of secondary school teachers in Mayurbhanj district. And from the study we found that there is positive and favourable attitude of secondary school teachers towards OER. Related studies also revealed that openly sharing educational resources and stated OER has immense potentials to help different users. However, the awareness of OER among participants was limited. Use of OER is also minimum by the secondary school teachers. They referred to OER as merely information and learning and teaching materials. The second objective was to study the attitude of secondary school teachers towards OER with regards to their gender. Both male and female secondary school teachers have favourable attitude towards OER. Both male and female teachers have realized that OER helps in improving learning. Third objective was to study the attitude of secondary school teachers towards OER with regards to their stream of study. Teachers of Arts and Science stream have favourable attitude towards OER. Though the awareness and use of OER is limited, they have created positive view towards its benefits.

EDUCATIONAL IMPLICATION

On the basis of the major findings the following suggestions may be given for improving the attitude of secondary school teachers towards OER of Mayurbhanj district.

1. Awareness of OER among secondary school teachers
2. Free Wi-Fi zones in schools
3. Adequate computer facility provided in the school
4. Access to sufficient online materials should be provided in their mother tongue
5. Online courses should be provided for the teachers' development
6. Using and remixing of teaching and online resources for their effective classroom conduction
7. Strengthening school-based classroom focused on effective practice and use of OER
8. Maximizing access and use of OER
9. Government should facilitate all the school for becoming virtually connected
10. All the higher authority and mass education should encourage teachers to adopt OER in their teaching and learning process.

CONCLUSION

OER initiatives serve diverse learning communities and set to bridge knowledge gaps between privileged and underprivileged communities. As it is cost effective, faculty members are encouraged to use such materials for teaching and learning purpose. Teachers are likely to incorporate OER in their teaching learning process. It is a good initiative towards improving teaching and learning.

REFERENCES

- Das, A. K. (2008). Open Access to Knowledge and Information: Scholarly Literature and Digital Library Initiatives The South Asian Scenario. (B. K. S. and J. Josiah, Ed.) (p. 137). New Delhi: UNESCO.
- McGill, L. (2013). OER management considerations. PBworks. Retrieved from [https://openeducationalresources.pbworks.com/w/page/24838155/Management considerations](https://openeducationalresources.pbworks.com/w/page/24838155/Management%20considerations).
- Misra, P. K. (2013). Pedagogical quality enrichment in OER based courseware: Guiding principles. Open Praxis, 5(2)
- UNESCO. (2015). Open educational resources. Retrieved from <http://www.unesco.org/new/en/communication-and-information/access-to-knowledge/open-educational-resources>
- Wiley, D. (n.d.). Brief history of OER. Retrieved from <http://www.hewlett.org/uploads/files/HistoryofOER.pdf>