

IMPACT OF OPEN EDUCATIONAL RESOURCES: A COMPARATIVE ANALYSIS OF GOVERNMENT AND PRIVATE SCHOOL IN ERODE DISTRICT, TAMILNADU

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Abstract

Open Educational Resources (OER) are the recently emerging concept in education across the world. The rapid technological advances in the current era have placed a demand of everything to be available on the fingertips. Also, there is a demand for self-paced, independent learning experience from the learners. These developments have opened up newer possibilities for alternate channels of dissemination of information and knowledge. Also, with the creation of new knowledge, proficient sharing of resources is an essential for a healthier tomorrow. Therefore, OER is considered one of the most important means of sharing knowledge, learning and teaching. Open educational resources (OER) are digital content, available online, free of copyright issues and licensing limitations and at no cost for lifelong learning. Hence, the researchers planned to make a comparative study on the impact of open educational resources among selected students between government and private school in Erode district, Tamilnadu. To achieve the study objectives, the sample size (n=50) has been selected by the researchers like 25 government school students and 25 private school students. To understand the responses of school students regarding their demographic profile and impact of OER, a well-structured questionnaire has been designed and spread among the population of this study. The collected sample data have been put into tabulation by approaching MS-Excel software and investigated by utilizing the statistical techniques such as percentage analysis, mean score analysis, standard deviation and paired 't' test with the help of SPSS 22.0. The result from analysis confirmed that most of the students used laptop both government and private school have perceived high level impact of open educational resources. Further, most of the students who allotted 3 hours in government school and 2 hours in private school allotted for e-learning have perceived high level impact of open educational resources.

Keywords: Open Educational Resources, Government School, Private School, impact of OER, Erode.

I. INTRODUCTION

The term 'Open Educational Resources' first came into use at UNESCO's "Forum on the Impact of Open Course Ware for Higher Education in Developing Countries" in 2002. In view of UNESCO, Open Educational Resources are defined as "technology enabled, open provision of educational resources for consultation use and adaptation by the community of the users for non-commercial purposes". At all educational material in the public domain or released under an open licence qualifies as an OER (UNESCO, 2011). Anyone can legally and freely copy, use, adapt, and

redistribute this open material due to its nature. As a result, an OER definition should emphasise a licence that is as open as feasible, promotes everyone to have access to the resource, and mentions users' capacity to repurpose or alter it. The William and Flora Hewlett Foundation defined open educational resources as "materials that are either in the public domain or licenced under an intellectual property licence that allows for their free use and reuse". Open educational resources (OER) include complete courses, course materials, modules, textbooks, streaming videos, tests, software, and other methods, materials, or strategies that promote access to information (Hewlett Foundation,

[N.D.]). OER is a relatively new phenomenon in the educational business, with the goal of improving educational quality and democratising unrestricted access to knowledge (William and Flora Hewlett Foundation, 2013). Open Educational Resources (OERs) like this video footage are becoming more freely available on free internet platforms like YouTube, and they may be leveraged to create authentic, active learning tasks for undergraduate and graduate students (Parisky & Boulay, 2013; Grossman & Chernoff, 2018).

In India, there has been a gradual increase in the use of open educational resources (OERs), with a number of institutions establishing OER websites to provide nationwide access to their educational resources. Institutions with better access to online infrastructure will make more use of open resources rather than those lacking adequate infrastructure. In view of Organization for Economic Co-operation and Development (OECD) “open educational resources are digitized materials offered freely and openly for educators, students and self-learners to use and reuse for teaching, learning and research. OER includes learning content, software tools to develop, use and distribute content and implementation resources such as open licences” (OECD, 2007). These present a new idea and platform for dissemination of information. In the present era India has taken several steps for the development and welfare of OERs in India. Government of India via National Knowledge Commission understood the role of OER in the enhancing quality education and access to it in the country. The National Mission on Education through Information and Communication Technology under the canopy of ministry of Human Resource Development (HRD) is an efficient step for the enhancement of OER in India.

2. REVIEW OF LITERATURE

The researchers TLS and Kusumah (2022) revealed that students were happy with the online calculus course since it matched their needs. As a result, students valued the online course content and utilisation of OER, as well as the classroom environment and lecturer facilitation. Furthermore, students' performance in the online calculus course was outstanding, with all students receiving A grades.

Furthermore, they are successful in designing digital learning activities as pair projects and learning movies regarding integral application as group projects. According to Maimoona Al Abri and Nada Dabbagh (2018), the OER movement has not yet fully penetrated the educational sector, and faculty and student awareness was minimal. Furthermore, OER adoption in educational sectors was at an all-time low. Furthermore, OER adoption had run into a number of roadblocks: potential users were having trouble accessing the right OER materials, and there were challenges with resource quality management. When OER replaced traditional textbooks, however, students saved a large amount of money. Gary D. Grossman and Troy N. Simon (2020) found that active learning exercises resulted in high levels of satisfaction and interest. As a result, the active learning practise was novel to the majority of students and represented deeper learning. In addition, in four classes representing various academic levels, the majority of students obtained new and deeper learning experiences as a result of video OER based, real (i.e., witnessing animals interacting with conspecifics and their environment) active learning tasks.

The study of Rabiya Mushtaq (2017) observed that various OER initiatives in India had greatly supported distant learning making it possible for students to access information sources at home rather than to visit in person the respective institution. Also, these OERs provided a diversified modes dissemination of information by means of multimedia (audio, video lectures), thus helping teaching learning an interactive process. In view of Weller et al. (2015) assessed from study a number of direct effects, including an increase in aspects related to student achievement, enhanced educator reflection, and the use of OER to try out and augment formal study There are also indirect effects, such as widespread adaptation reporting and an increase in sharing and open practise as a result of OER use, whose benefits will be recognised after multiple iterations.

According to KreljaKurelovic (2016) inferred that despite their favourable opinions regarding OER, the respondents only shared a small amount of educational resources. Similarly, familiarity with OER and Creative Commons licences was minimal, and people with scientific titles performed better. As a result, teachers and

academics must be educated about the benefits and possibilities of Creative Commons licences and Open Educational Resources in general. Most students would like to have access to a portal with OERs for film studies categorised by area of interest from their PC, according to a study by ElissavetGeorgiadou and IoannisKolaxizis (2019), and they were most interested in OERs on film history and theory, with a lesser interest in other film fields. They also used OERs in the form of e-books, films from various free access archives, tutorials for image, audio, and video editing tools, and to a lesser extent, video and audio lectures and open courseware. According to John Hilton (2019), when students used OER, they achieved the same or better learning results while saving a lot of money. In addition, the majority of faculty and students who utilised OER said they like it and would use it again. According to Sathish Kumar et al. (2021), there is a significant difference in educational accomplishment between men and women academic researchers. Also, among Tamilnadu state universities, there was no significant link between open educational infrastructure and educational success. Furthermore, despite the flu epidemic, storms, flooding, and global war, open educational services and OEP were a viable and straightforward form of education for the future. According to Monica B. Fine's (2020) research, positive student perceptions of open educational course materials were influenced by feelings of connection to the course, a preference for lower educational costs, the likelihood of rating faculty members higher, and preferences for online courses, while factors such as income or perceived monetary benefit had little impact. Furthermore, the vast majority of students viewed OER materials favourably.

OER adoption, according to Nicholas B. Colvard et al. (2018), accomplished considerably more than simply saving students money and reducing student debt. OER also improved end-of-course grades while lowering DFW (D, F, and Withdrawal letter grade) rates. Furthermore, Pell beneficiaries, part-time students, and historically marginalised communities in higher education saw bigger increases in course grades and lower DFW rates. According to author Yongchao Zhao (2020), adopting OER can be an effective way to save the high expense of textbooks, which was especially essential at New York City College of

Technology (City Tech). Furthermore, as compared to non-OER courses, OER courses had a lower rate of student course dropout and a higher retention rate. Furthermore, student performance did not deteriorate, and there was no statistically significant change in grades as a result of the data. According to Theodoros Komineas and Antonia Tassopoulou's (2016) research, the percentage of people who were aware of the OER and their functions was equivalent to the percentage of people who had heard the object but didn't know enough about it. In addition, the majority of pupils preferred "easy of use" and "cheap cost of disciple." As a result, the vast majority of respondents said yes to the question of "whether they would advocate OER or not," with the majority of people describing OER as "pertaining to their subjects of extensive academic and research material." Open textbooks as a sort of OER, as well as its comparative economic advantages or quality comparability with traditional educational material, are an emerging study issue, according to Daniel Otto et al. (2021). This study identified more needs for empirical research on the effects of OER use on pedagogical approaches and present educational practises. According to Ahmed Idris's (2020) research, a large number of undergraduates did not use many of the listed OER. In addition, there was a significant variation in the use of OER for learning among undergraduates based on gender and area of specialisation. Furthermore, several of the identified OER sites had little adoption, while the others that were used had an average degree of usage. Furthermore, increasing undergraduates' awareness and use of OER would improve their learning process as well as the quality of their studies.

The study of Young Mi Choi and Cathy Carpenter (2017) stated that overall student reaction to the free materials had been positive and most students opined that they appreciated the cost savings. Hence, many students also enjoyed the flexibility to access and read the materials from anywhere on a variety of devices. Further, digital formats offered students ease and flexibility, though they can lead to eyestrain and other physical challenges for some. The researchers Kamleshkumar Patel et al. (2021) confirmed that there was a rapid and humungous growth in the digitally available content, online, that from a part of OER. The researchers noted that the many advantages of OER such as

improve the quality of education, access the OER at any time and anywhere, scalability, the rise of class materials, enrichment of traditional course materials, swiftly disseminate the information by OER, cost-saving for students, etc. Although, the disadvantages like language barriers, cultural barriers, technological issues, sustainability issues and limitation of copyright property protection. It is obtained by Caroline Kinskey et al. (2018) that it's possible that the technique of instruction is more important than the cost. Similarly, OERs would reduce these costs, but few students had been exposed to this type of learning material before, and the overall influence on teaching quality remained uncertain. In addition, the discrepancies between two-year and four-year universities were analysed, and solutions to the problem were proposed. Issa et al. (2020) found that undergraduates had a favourable attitude about using open educational resources for learning. In addition, there was a difference in mindset between male and female undergraduates when it came to using OER for learning, with male undergraduates having the upper hand. Furthermore, no significant variations in undergraduates' Areas of Specialization were found. Eric O. Nyamwembe et al. (2018) found a positive association between utilisation and awareness index, indicating that the relationship was significant. In addition, the majority of the students were relatively aware of OERs and could affirmatively answer to the comments that were positive. The findings revealed that students need to be further educated about OERs in order to raise their awareness and, as a result, increase their use of OERs.

3. PROBLEM IDENTIFICATION

Now-a-days, the education system is totally changed into innovative technology owing to the new invention of new technology. So, education system is completely depended on this new technology that leads to anytime anywhere education to all the common people. The utilization of new invention of educational methods has continuously popular in the school premises. In this way, most of the schools are utilizing the open educational resources to their students that leads to increase the knowledge on particular subject and also increase the know-how skills among their students. The perception of students over the new technological modern

method of educational resources is having drastic change in different environment like government sector and private sector. The students who are studying in government school perceived the knowledge of open educational resources (OER) and its utilization is completely varied from a set of students who are studying in private school. It occurs due to ups and down the utilization of the open educational resources. Eventually, the OER plays a vital role in all the schools after the pandemic situation. At this juncture of the backyard discussion, the researcher has probed the following questions : 1) what extend the open educational resources aware among the students studying in both government and privateschools and 2) how the students are motivated to utilize the open educational resources in their premises ?.

4. OBJECTIVES OF THE STUDY

Based on the problem identification, the followed objectives have framed.

- To identify the awareness of open educational resources among the students of Government and Private school.
- To examine, how the motivation is induced to utilize the open educational resources among the students of Government and Private schools.

5. RESEARCH DESIGN AND SAMPLING FRAME

Basically, this research is descriptive in nature, because all the data are primary and having the nature of demographic and dichotomous questions. For testing the objectives of this research, this research has two schools viz., one government school named as Government Municipal Higher Secondary School, Seenapuram and one private school named as Grace Matriculation Higher Secondary School, Bhavani. Both the schools are placed in Erode district of Tamilnadu. Around 50 higher secondary mathematical students have been selected from the selected two schools consists 25 from Government school and remaining 25 from Grace Matriculation Higher Secondary school. In this study, the researcher has developed a well-structured questionnaire for primary data collection and conducted a survey

among population. The opinion about the OER of the selected students of both government and private schools have been collected and entered into MS-Excel software for tabulation purpose. Then, the tabulated data have been analyzed by using the statistical techniques like percentage analysis, mean score analysis, standard deviation and paired 't' test with the help of SPSS 22.0.

6. OBJECTIVES OF THE STUDY

- To evaluate the demographic profile of the selected students of government and private schools in Erode district, Tamilnadu.
- To compare the impact of open educational resources among selected students of government and private schools in the study area.

7. HYPOTHESIS OF THE STUDY

- There is no significant mean difference in impact of open educational resources among male students between government and private schools.
- There is no significant mean difference in impact of open educational resources among female students between government and private schools.
- There is no significant mean difference in impact of open educational resources among students of family living in urban between government and private schools.
- There is no significant mean difference in impact of open educational resources among students of family living in semi-urban between government and private schools.

- There is no significant mean difference in impact of open educational resources among students of family living in rural between government and private schools.
- There is no significant mean difference in impact of open educational resources among students allotted 1 hour for e-learning between government and private schools.
- There is no significant mean difference in impact of open educational resources among students allotted 2 hours for e-learning between government and private schools.
- There is no significant mean difference in impact of open educational resources among students allotted 3 hours for e-learning between government and private schools.
- There is no significant mean difference in impact of open educational resources among students allotted above 3 hours for e-learning between government and private schools.

8. RESULTS AND DISCUSSION

The section explores about the relationship between demographic profile and impact of open educational resources among the students of government and private school in Tamilnadu.

8.1 Demographic Profile of the Students (Percentage analysis)

In the following table, an investigation has been made to explore the demographic profile (gender, family living location, family monthly income, number of siblings, type of gadget using, study atmosphere at home and time allotted for e-learning) among the selected students of government school and private school in Erode district, Tamilnadu.

Table 1: *Demographic Profile of the Students*

S.No.	Variables	Government School		Private School	
		No. of Respondents	Percentage	No. of Respondents	Percentage
1	Gender				
	• Male	14	56.0	12	48.0
	• Female	11	44.0	13	52.0

	Total	25	100.0	25	100.0
2	Family Living Location				
	• Urban	5	20.0	10	40.0
	• Semi-Urban	8	32.0	9	36.0
	• Rural	12	48.0	6	24.0
	Total	25	100.0	25	100.0
3	Family Monthly Income				
	• Below Rs.10,000	5	20.0	4	16.0
	• Rs.10,000-25,000	10	40.0	5	20.0
	• Rs.25,001-50,000	6	24.0	7	28.0
	• Rs.50,001-1,00,000	4	16.0	9	36.0
	Total	25	100.0	25	100.0
4	Number of Siblings				
	• One	5	20.0	12	48.0
	• Two	11	44.0	8	32.0
	• Above Two	7	28.0	4	16.0
	• No Sibling	2	8.0	1	4.0
	Total	25	100.0	25	100.0
5	Type of Gadget Using				
	• Laptop	12	48.0	8	32.0
	• Tab	5	20.0	9	36.0
	• Mobile Phone	8	32.0	6	24.0
	• Smart TV	0	0.0	2	8.0
	Total	25	100.0	25	100.0
6	Study Atmosphere at Home				
	• Good	6	24.0	11	44.0
	• Moderate	9	36.0	8	32.0
	• Poor	10	40.0	6	24.0
	Total	25	100.0	25	100.0
7	Time allotted for E-Learning				
	• 1 Hour	6	24.0	2	8.0
	• 2 Hours	10	40.0	9	36.0

	• 3 Hours	7	28.0	11	44.0
	• More than 3 Hours	2	8.0	3	12.0
	Total	25	100.0	25	100.0

- From the investigation, it is obtained that 56.0% of the government school students and 48.0% of the private school students are male whereas 44.0% of the government school students and 52.0% of the private school students are female.

- From the investigation, it is measured that 20.0% of the government school students and 40.0% of the private school students' family living location as urban. Also, 32.0% of the government school students and 36.0% of the private school students' family living location as semi-urban while 48.0% of the government school students and 24.0% of the private school students' family living location as urban.

- From the above table, it is assessed that 20.0% of the government school students and 16.0% of the private school students' family monthly income as below Rs.10,000 whereas 40.0% of the government school students and 20.0% of the private school students' family monthly income as Rs.10,000-25,000. Further, 24.0% of the government school students and 28.0% of the private school students' family monthly income as Rs.25,001-50,000 while 16.0% of the government school students and 36.0% of the private school students' family monthly income as Rs.50,001-1,00,000.

- From the investigation, it is explored that 20.0% of the government school students and 48.0% of the private school students have one sibling whereas 44.0% of the government school students and 32.0% of the private school students have two siblings. Also, 28.0% of the government school students and 16.0% of the private school students have above two siblings whereas 8.0% of the government school students and 4.0% of the private school students have no sibling.

- From the investigation, it is revealed that 48.0% of the government school students and 32.0% of the private school students utilize laptop though 20.0% of the government school students and 36.0% of the private school students use tab for e-learning. In addition, 32.0% of the government school students and 24.0% of the private school students use mobile phone while 8.0% of the private school students utilize smart TV for e-learning.

- From the investigation, it is obtained that 24.0% of the government school students and 44.0% of the private school students have good study atmosphere at home whereas 36.0% of the government school students and 32.0% of the private school students hold moderate study atmosphere at home. Further, 40.0% of the government school students and 24.0% of the private school students have poor atmosphere at home.

- From the investigation, it is examined that 24.0% of the government school students and 8.0% of the private school students allotted 1 hour for e-learning while 40.0% of the government school students and 36.0% of the private school students utilized 2 hours for e-learning. Also, 28.0% of the government school students and 44.0% of the private school students spent 3 hours while 8.0% of the government school students and 12.0% of the private school students spent more than 3 hours for e-learning.

8.2 Demographic Profile and Impact of Open Educational Resources (Mean Score analysis)

To find significant difference in mean impact of open educational resources among the selected school students studying in selected government and private schools in Erode district, Tamilnadu, an investigation is approached.

Table 2: Demographic Profile and Impact of Open Educational Resources

S.No.	Variables	Government School		Private School	
		Mean Score	SD	Mean Score	SD
1	Gender				
	• Male	1.27	0.10	1.14	0.08
	• Female	1.30	0.12	1.17	0.09
2	Family Living Location				
	• Urban	1.26	0.08	1.08	0.06
	• Semi-Urban	1.32	0.08	1.21	0.07
	• Rural	1.30	0.17	1.14	0.08
3	Family Monthly Income				
	• Below Rs.10,000	1.33	0.17	1.21	0.09
	• Rs.10,000-25,000	1.28	0.09	1.13	0.09
	• Rs.25,001-50,000	1.30	0.08	1.14	0.08
	• Rs.50,001-1,00,000	1.25	0.10	1.13	0.05
4	Number of Siblings				
	• One	1.26	0.08	1.19	0.10
	• Two	1.33	0.14	1.15	0.06
	• Above Two	1.27	0.09	1.18	0.11
	• No Sibling	1.40	0.01	1.07	0.01
5	Type of Gadget Using				
	• Laptop	1.32	0.13	1.16	0.07
	• Tab	1.25	0.10	1.13	0.08
	• Mobile Phone	1.30	0.09	1.15	0.11
	• Smart TV	1.27	0.00	--	--
6	Study Atmosphere at Home				
	• Good	1.25	0.08	1.14	0.07
	• Moderate	1.29	0.10	1.16	0.10
	• Poor	1.34	0.14	1.15	0.09
7	Time allotted for E-Learning				
	• 1 Hour	1.30	0.05	1.12	0.05
	• 2 Hours	1.27	0.09	1.19	0.11
	• 3 Hours	1.31	0.11	1.12	0.07

	• More than 3 Hours	1.22	0.04	1.17	0.05
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• It is revealed from the investigation that the mean impact score and standard deviation of the male students in government school as 1.27 and 0.10 respectively while private school as 1.14 and 0.08 respectively. On the other hand, female students in government school got the mean impact score and standard deviation as 1.30 and 0.12 whereas private school as 1.17 and 0.09 respectively.

• It is observed from the investigation that the mean impact score and standard deviation of the students' living location of urban in government school as 1.26 and 0.08 whereas private school as 1.08 and 0.06 respectively. Also, the mean impact score and standard deviation of the students' living location of semi-urban in government school as 1.32 and 0.08 while private school as 1.21 and 0.07 respectively. On the other hand, the mean impact score and standard deviation of the students' living location as rural in government school as 1.30 and 0.17 whereas private school as 1.14 and 0.08 respectively.

• From the investigation, it is evaluated that the mean impact score and standard deviation of the government school students belong to below Rs.10,000 as 1.33 and 0.17 while private school students as 1.21 and 0.09 respectively. In addition, the mean impact score and standard deviation of the students came into monthly income of Rs.10,000-25,000 as 1.28 and 0.09 whereas private school as 1.13 and 0.09 respectively. Also, the mean impact score and standard deviation of the students belong to monthly income of Rs.25,001-50,000 as 1.30 and 0.08 while private school as 1.14 and 0.08 respectively. On the other hand, the mean impact score and standard deviation of the students came into monthly income of Rs.50,001-1,00,000 as 1.25 and 0.10 while private school as 1.13 and 0.05 respectively.

• It is examined from the study that the mean impact score and standard deviation of the students have one sibling in government school as 1.26 and 0.08 whereas private school as 1.19 and 0.10 respectively. The mean impact score and standard deviation of students who have two siblings in government school as 1.33 and 0.14 while private school as 1.15 and 0.06

respectively. Also, the mean impact score and standard deviation of the students belong to above two siblings in government school as 1.27 and 0.09 while private school as 1.18 and 0.11 respectively. On the other hand, the mean impact score and standard deviation of the students have no siblings as 1.40 and 0.01 while private school as 1.07 and 0.01 respectively.

• From the study, it is inferred that the mean impact score and standard deviation of the students among government and private schools who utilize laptop as 1.32 and 0.13 and also 1.16 and 0.07 respectively. The mean impact score and standard deviation of the students among government and private schools who use tap as 1.25 and 0.10 while 1.13 and 0.08 respectively. Further, the mean impact score and standard deviation of students utilize mobile phone in government school as 1.30 and 0.09 whereas private school students as 1.15 and 0.11 respectively. On the other hand, the mean impact score and standard deviation of the government school students belong to smart TV as 1.27 and 0.00 respectively.

• It is showed from the investigation that the mean impact score and standard deviation of the students among government and private schools who have good atmosphere at home as 1.25 and 0.08 while 1.14 and 0.07 respectively. The mean impact score and standard deviation of the students among government and private schools who hold moderate atmosphere at home as 1.29 and 0.10 whereas 1.16 and 0.10 respectively. In addition, the mean impact score and standard deviation of government and private school students who have poor atmosphere at home as 1.34 and 0.14 while 1.15 and 0.09 respectively.

• From the investigation, it is confirmed that the mean impact score and standard deviation of the government and private school students who allotted 1 hour for e-learning as 1.30 and 0.05 while 1.12 and 0.05 respectively. The mean impact score and standard deviation of the both school students who spent 2 hours for e-learning as 1.27 and 0.09 as well as 1.19 and 0.11 respectively. Further, the mean impact score and standard deviation of government and private school students who utilize 3 hours for e-

learning as 1.31 and 0.11 whereas 1.12 and 0.07 respectively but belong to both school students allotted more than 3 hours as 1.22 and 0.04 while 1.17 and 0.05 respectively.

8.3 Relationship between Demographic Profile and Impact of Open Educational Resources ('t' Test)

For examining the relationship between selected demographic profile of the students and their opinion towards impact of open educational resources, a null hypothesis has been framed and tested with the help of paired 't' test. The results are discussed in this section as follows.

Impact of Open Educational Resources among Male Students

H₀ : There is no significant mean difference in impact of open educational resources among male students between government and private schools.

Table 3: *Impact of Open Educational Resources among Male Students*

	Mean	SD	't' value	'p' Value
Government	1.27	0.10	3.169	0.009*
Private	1.14	0.08		

Note : * – Significant at 1% level

From the test, it is described that the impact of open educational resources among male students of government and private schools. It is found from the analysis that the male students of government school have perceived maximum impact of open educational resources.

The result of paired 't' test shows that the null hypothesis is rejected according to the 'p' value is lesser than 0.05. In addition, male students of government school have highest mean value and there is a significant difference in impact of open educational resources among male students between government and private schools.

Impact of Open Educational Resources among Female Students

H₀ : There is no significant mean difference in impact of open educational resources among female students between government and private schools.

Table 4: *Impact of Open Educational Resources among Female Students*

	Mean	SD	't' value	'p' Value
Government	1.30	0.12	3.823	0.003*
Private	1.17	0.09		

Note : * – Significant at 1% level

It is discussed about the impact of open educational resources among female students of government and private schools in the above table. It is identified from the analysis that the female students of government school have perceived high impact of open educational resources.

The result of paired 't' test confirms that the null hypothesis is rejected because the 'p' value is lesser than 0.05. Also, female students of government school have highest mean value and there is a significant difference in impact of open educational resources among female students between government and private schools.

Impact of Open Educational Resources among Urban area Students

H₀ : There is no significant mean difference in impact of open educational resources among students of family living in urban between government and private schools.

Table 5: *Impact of Open Educational Resources among Urban area Students*

	Mean	SD	't' value	'p' Value
Government	1.26	0.08	4.707	0.009*
Private	1.08	0.06		

Note : * – Significant at 1% level

From the above table, it is measured that the impact of open educational resources among urban area students of government and private schools. It is noted from the analysis that the government school students of family living in urban have perceived maximum impact of open educational resources.

The result of paired 't' test confirms that the null hypothesis is rejected as the 'p' value is lesser

than 0.05. Moreover, urban area students belong to government school have highest mean value and there is a significant difference in impact of open educational resources among urban area students between government and private schools.

Impact of Open Educational Resources among Semi-Urban area Students

H₀ : There is no significant mean difference in impact of open educational resources among students of family living in semi-urban between government and private schools.

Table 6: *Impact of Open Educational Resources among Semi-Urban area Students*

	Mean	SD	't' value	'p' Value
Government	1.30	0.08	-	0.033**
Private	1.21	0.07	2.646	

Note : ** – Significant at 5% level

From the above table, it is measured that the impact of open educational resources among semi-urban area students of government and private schools. It is noted from the analysis that the government school students of family living in semi-urban have perceived maximum impact of open educational resources.

The result of paired 't' test shows that the null hypothesis is rejected since the 'p' value is lesser than 0.05. Further, semi-urban area students belong to government school have highest mean value and there is a significant difference in impact of open educational resources among semi-urban area students between government and private schools.

Impact of Open Educational Resources among Rural area Students

H₀ : There is no significant mean difference in impact of open educational resources among students of family living in rural between government and private schools.

Table 7: *Impact of Open Educational Resources among Rural area Students*

	Mean	SD	't' value	'p' Value
Government	1.30	0.17	-	0.070 ^{NS}
Private	1.14	0.08	2.298	

Note : NS – Not Significant

From the above table, it is measured that the impact of open educational resources among rural area students of government and private schools. It is indicated from the analysis that the government school students of family living in rural have perceived high impact of open educational resources.

The result of paired 't' test explores that the null hypothesis is accepted as the 'p' value is greater than 0.05. Also, rural area students belong to government school have highest mean value and there is no significant difference in impact of open educational resources among rural area students between government and private schools.

Impact of Open Educational Resources among the Students allotted 1 hour for e-Learning

H₀ : There is no significant mean difference in impact of open educational resources among students allotted 1 hour for e-learning between government and private schools.

Table 8: *Impact of Open Educational Resources among the Students allotted 1 hour for e-Learning*

	Mean	SD	't' value	'p' Value
Government	1.30	0.05	-	0.126 ^{NS}
Private	1.12	0.05	5.000	

Note : NS – Not Significant

It is surmised from the analysis that the impact of open educational resources among students allotted 1 hour for e-learning between government and private schools. It is showed from the analysis that the government school students who allotted 1 hour for e-learning have

perceived maximum impact of open educational resources.

The result of paired 't' test confirms that the null hypothesis is accepted due to the 'p' value is greater than 0.05. Further, students allotted 1 hour for e-learning belong to government school have highest mean value and there is no significant difference in impact of open educational resources among students allotted 1 hour for e-learning between government and private schools.

Impact of Open Educational Resources among the Students allotted 2 hours for e-Learning

H0 : There is no significant mean difference in impact of open educational resources among students allotted 2 hours for e-learning between government and private schools.

Table 9: *Impact of Open Educational Resources among the Students allotted 2 hours for e-Learning*

	Mean	SD	't' value	'p' Value
Government	1.27	0.09	-	0.096 ^{NS}
Private	1.19	0.11	1.886	

Note : NS – Not Significant

From the test, it is evaluated that the impact of open educational resources among students allotted 2 hours for e-learning between government and private schools. It is showed from the analysis that the government school students who allotted 2 hours for e-learning have perceived high impact of open educational resources.

The result of paired 't' test indicates that the null hypothesis is accepted according to the 'p' value is greater than 0.05. In addition, students allotted 2 hours for e-learning belong to government school have highest mean value and there is no significant difference in impact of open educational resources among students allotted 2 hours for e-learning between government and private schools.

Impact of Open Educational Resources among the Students allotted 3 hours for e-Learning

H0 : There is no significant mean difference in impact of open educational resources among students allotted 3 hours for e-learning between government and private schools.

Table 10: *Impact of Open Educational Resources among the Students allotted 3 hours for e-Learning*

	Mean	SD	't' value	'p' Value
Government	1.30	0.11	3.488	0.013**
Private	1.12	0.07		

Note : ** – Significant at 5% level

The above table divulged that the impact of open educational resources among students allotted 3 hours for e-learning between government and private schools. It is showed from the analysis that the government school students who allotted 3 hours for e-learning have perceived high impact of open educational resources.

The result of paired 't' test confirms that the null hypothesis is accepted due to the 'p' value is greater than 0.05. Further, students allotted 3 hours for e-learning belong to government school have highest mean value and there is no significant difference in impact of open educational resources among students allotted 3 hours for e-learning between government and private schools.

Impact of Open Educational Resources among the Students allotted above 3 hours for e-Learning

H0 : There is no significant mean difference in impact of open educational resources among students allotted above 3 hours for e-learning between government and private schools.

Table 11: *Impact of Open Educational Resources among the Students allotted above 3 hours for e-Learning*

	Mean	SD	't' value	'p' Value
Government	1.22	0.04	1.333	0.410 ^{NS}
Private	1.17	1.05		

Note : NS – Not Significant

From the analysis, it is noted that the impact of open educational resources among students allotted above 3 hours for e-learning between government and private schools. It is confirmed from the analysis that the government school students who allotted above 3 hours for e-learning have perceived maximum impact of open educational resources.

The result of paired 't' test shows that the null hypothesis is accepted because the 'p' value is greater than 0.05. Additionally, students allotted above 3 hours for e-learning belong to government school have highest mean value and there is no significant difference in impact of open educational resources among students allotted above 3 hours for e-learning between government and private schools.

9. FINDINGS

From the Percentage analysis of Demographic Profile of the Students,

- It is indicated that most of the students are male in government school and female in private school.
- It is showed that most of the students' family living location of government school as rural and private school as urban.
- It is cleared that most of the students' family monthly income of government school as Rs.10,000-25,000 and private school as Rs.50,001-1,00,000.
- It is noted that majority of the students in government school have two siblings and private school as 1 sibling.
- It is identified that majority of the students in government school use laptop and private school utilize tab for e-learning.
- It is found that most of the students in government school have poor and private school have good study atmosphere at home.
- It is stated that most of the students in government school allotted 2 hours and private school allotted 3 hours daily for e-learning.

From the Mean Score analysis of Demographic Profile and Impact of Open Educational Resources

- It is found from the analysis that the female students in government and private schools have perceived maximum level impact of open educational resources.
 - It is found from the analysis that the government and private school students whose family living in semi-urban have perceived maximum level impact of open educational resources.
 - It is identified that most of the government school students and private school students belong to below Rs.10,000 as family monthly income have perceived maximum level impact of open educational resources.
 - It is found that most of the government school students who have no sibling and private school students belong to one sibling have perceived highest level impact of open educational resources.
 - It is found that majority of the government and private school students who use laptop have perceived maximum level impact of open educational resources.
 - It is found that most of the government school students who belong to poor atmosphere at home and private school students who belong to moderate atmosphere have perceived high level impact of open educational resources.
 - It is found that most of the government school students allotted 3 hours while private school students as 2 hours for e-learning have perceived high level impact of open educational resources.
- From the 't' Test of Relationship between Demographic Profile and Impact of Open Educational Resources
- The paired 't' test confirmed that male students of government school have highest mean value and there is a significant difference in impact of open educational resources among male students between government and private schools.
 - It could be observed from paired 't' test that female students of government school have highest mean value and there is a significant difference in impact of open educational resources among female students between government and private schools.

- The result from paired 't' test indicated that urban area students belong to government school have highest mean value and there is a significant difference in impact of open educational resources among urban area students between government and private schools.
- From the paired 't' test, it is found that semi-urban area students belong to government school have highest mean value and there is a significant difference in impact of open educational resources among semi-urban area students between government and private schools.
- It is inferred from paired 't' test that rural area students belong to government school have highest mean value and there is no significant difference in impact of open educational resources among rural area students between government and private schools.
- The paired 't' test showed that students allotted 1 hour for e-learning belong to government school have highest mean value and there is no significant difference in impact of open educational resources among students allotted 1 hour for e-learning between government and private schools.
- It could be revealed from paired 't' test that students allotted 2 hours for e-learning belong to government school have highest mean value and there is no significant difference in impact of open educational resources among students allotted 2 hours for e-learning between government and private schools.
- The paired 't' test examined that students allotted 3 hours for e-learning belong to government school have highest mean value and there is no significant difference in impact of open educational resources among students allotted 3 hours for e-learning between government and private schools.
- From the study of paired 't' test, it is concluded that students allotted above 3 hours for e-learning belong to government school have highest mean value and there is no significant difference in impact of open educational resources among students allotted above 3 hours for e-learning between government and private schools.

10. RECOMMENDATIONS

- From the study findings, it is cleared that female students in both government and private schools have perceived maximum level impact of open educational resources because their attitude on open educational resources is high. So, the selected school should establish various facilities for utilizing open educational resources like internet, wi-fi connection, laptop, digital lab through impact of OER among school students will be increased.
- It is found from the analysis that the government and private school students whose family living in semi-urban have perceived maximum level impact of open educational resources due to they have awareness on open educational resources. Hence, head of the selected schools should make adequate awareness about various open educational resources among students to increase their impact level.
- This study observed that most of the government and private school students using laptop have perceived high level impact of open educational resources as it is convenient for accessing OER. Therefore, school management should ensure that all the students have kept and utilized laptop for using OER also provide the device for the students who are not having laptop.
- The findings indicated that most of the government school students who allotted 3 hours and private school students who allotted 2 hours for e-learning have perceived high level impact of open educational resources. Hence, the school students should be encouraged by their teachers to use Open Educational Resources because of the numerous benefits it possesses on learning purpose by this school students will allot much time for accessing OER.
- The different sources in the collection of free materials may have stimulated some students to explore various subjects more than they might have done with a single textbook.

11. CONCLUSION

This study made a comparative study to analyze the impact of open educational resources between government and private school students in Erode district, Tamilnadu. Open Educational

Resources bring an important contribution to the diversified supply of learning resources among the global community of students. OER has promising benefits for institutions, teachers and students and that the open nature of OER promotes students the possibilities of getting more skill and development. In recent, OER is latest trend which aimed at providing free access to a variety of learning resources over the internet free of cost and has gained enormous momentum. The study analysis confirmed that there is a significant difference in impact of open educational resources among male students between government and private schools as well as among female students between government and private schools. Further, there is a significant difference in impact of open educational resources among urban area students between government and private schools also among semi-urban area students between government and private schools. Hence, both government and private school should ensure adequate various digital sources for students' utilization which offer ease and flexibility for accessing OER through the students can enhance their impact of OER in the study area.

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