



UTILISATION OF INSTRUCTIONAL RESOURCES AND ADOPTION OF OPEN EDUCATIONAL RESOURCES AMONG SECONDARY SCHOOL ENGLISH TEACHERS: CHALLENGES AND PROSPECTS

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ABSTRACT

This study surveys the utilisation of instructional resources and the adoption of Open Educational Resources (OER) among Secondary School English teachers in Thrissur district, Kerala. Data were collected from 189 teachers through an online survey. The results show that textbooks and teacher texts remain the primary instructional resources, with many teachers also incorporating online materials. OER usage is minimal, mainly due to low awareness and difficulty in locating appropriate materials. However, most teachers expressed a willingness to use OER-based materials if they were accessible. Respondents identified the need for training workshops, enhanced access to electronic resources, and opportunities for collaboration to address these challenges. The study shows that, while traditional resources predominate, there is substantial interest in OER. Enhancing awareness, infrastructure, and teacher training may promote the effective integration of OER in Secondary School English education. This research adds to the current discourse on OER in schools and provides important insights for teachers, curriculum planners, policymakers, and researchers.

KEYWORDS : Instructional resources; Open Educational Resources (OER); Secondary School English teachers; resource application; challenges; adoption; educational innovation

INTRODUCTION

Education is a dynamic process intended to facilitate learning and the holistic development of learners. Effective teaching calls for not only subject expertise and pedagogical skills but also familiarity with appropriate instructional resources. Instructional resources include a variety of materials, from textbooks to advanced digital learning tools, that support instructional objectives. The quality of classroom interaction is closely linked to the resources teachers use (Bhandari et al., 2021, pp. 73-100). Traditionally, classrooms relied heavily on textbooks, which were often regarded as the definitive authority on a subject. Over time, alternative tools have attained prominence in daily classroom practice. The effectiveness of instruction is now widely recognised to depend on the selection and use of suitable instructional materials (Fiedler, 2010).

Instructional materials enable teachers to make abstract concepts tangible and accessible to learners, thereby promoting meaningful classroom experiences and enhancing instructional efficiency (Bulgren et al., 1988, pp. 11-27). The advancement of Information and Communication Technology (ICT) has greatly transformed instructional resources. (Anil & Jayakumar, 2019, pp. 1948-1962) Digital materials, including online resources and Artificial Intelligence (AI)-based educational tools, offer increased flexibility, interactivity, and bespoke learning opportunities. However, these technologies can increase educational costs and exacerbate the digital divide, undermining the goal of equitable education. (Bhandari et al., 2021, pp. 73-100) Open Educational Resources (OER) address this problem by providing freely available, openly licensed instructional materials that can be used, adapted, and redistributed to support effective teaching and learning. OER offer high-quality, cost-effective resources appropriate for diverse classroom contexts. In English-language classrooms, textbooks and teacher handbooks are often the primary instructional resources. (Mili & Winch, 2019, pp. 1-15) Given the centrality of instructional materials in English teaching, there is a need for greater creativity and resourcefulness among teachers. Many educators supplement their instruction with digital resources, sometimes without adequate consideration of copyright issues. The availability of new instructional resources, such as Open Educational Resources (OER), creates opportunities to enhance English teaching and learning. The present study investigates the selection of instructional resources by

Secondary School English teachers to support classroom interaction. It further aims to assess teachers' attitudes toward Open Educational Resources (OER), their current practices, the challenges and barriers encountered, and their willingness to adopt OER as an effective resource for teaching and learning in Secondary School English classrooms.

REVIEW OF RELATED RESEARCH.

Conceptual Framework.

Constructivist Learning Theory (Piaget, Vygotsky): They emphasise learner-centred approaches, in which instructional resources, including OER, serve as scaffolds for knowledge construction.

Resource-Based Learning Model (Campbell & Norton, 2007): It emphasises the importance of diverse instructional resources for improved learning.

Open Pedagogy (Wiley, 2014) emphasises co-creation, remixing, and sharing knowledge through OER, aligning with collaborative and participatory teaching practices. Diffusion of Innovation Theory (Rogers, 2003) explains how innovations, such as OER, spread among teachers and is influenced by awareness, usefulness, and institutional support.

Studies on OER

- Mishra (2025) exposes gaps in sustainability and international cooperation, noting that while OER policies exist in many countries, implementation remains inconsistent.
- Hilton (2019) found that OER adoption in higher education improves student performance and reduces costs, but faculty awareness and training are critical.
- UNESCO (2019, 2023) emphasised OER as a driver of Sustainable Development Goal 4 (quality education) but found that national-level policy action was needed.
- Global Perspectives on OER Studies by UNESCO and Wiley (2014) highlight OER as an innovative instrument for democratising education, reducing educational costs, and improving accessibility for all. Research in higher education shows positive impacts on student achievement and faculty innovation.
- Bliss et al. (2013) found that cultural opposition and policy restrictions hinder adoption of OER in school settings.

- Boopathi & Gomathi (2023) discuss major open educational resource initiatives in India, such as SWAYAM, NPTEL, e-PG Pathshala, and the National Digital Library (NDL), highlighting accessibility issues and obstacles such as the digital divide and insufficient awareness.
- COL-CEMCA & NCERT (2025) launched large-scale OER training programs aligned with NEP 2020, striving to reach millions of teachers, but noted issues of copyright misuse and limited understanding of open licensing. It also finds that integration of open resources and AI improves accessibility and personalisation.
- Kumar & Thomas (2020) found that teacher awareness and training remain inadequate, limiting effective integration. In the Indian context, initiatives such as Diksha and KITE Vickers have introduced OER platforms in Kerala.
- Teacher Resource Utilisation: Previous studies (Mishra, 2017; Hilton, 2019) reveal that teachers rely heavily on textbooks and teacher texts, with online resources supplementing instruction. Self-created materials and peer collaboration are emerging trends but remain secondary.

Research Gaps

- **Pedagogical Integration:** Few studies examine how OER impacts instructional design and student achievement in Secondary School education.
- **Subject-Specific Research:** Most OER studies focus on higher education; limited research exists on Secondary School English teaching.

METHODOLOGY

Research Design: The study uses a descriptive survey design to investigate the utilisation of instructional resources and the adoption of Open Educational Resources (OER) among Secondary School English teachers. The design was chosen because it enables the collection of quantitative and qualitative data from a large group of respondents, thereby facilitating the identification of practices, challenges, and opportunities in selecting instructional materials.

Objectives of the Study

1. To examine the types of instructional resources utilised by Secondary School English teachers in preparing teaching materials.
2. To analyse the difficulties encountered by teachers in preparing instructional materials using OER.
3. To assess the level of awareness of Open Educational Resources (OER) among Secondary School English teachers.
4. To identify the barriers that hinder Secondary School English teachers from OER adoption.
5. To investigate the support needs for effective instructional material development using OER by teachers of English.
6. To evaluate teachers' willingness to use OER-based instructional materials if provided.

Hypotheses

- H1: There is significant variation in the types of instructional resources utilised by Secondary School English teachers.
- H2: Problems encountered by teachers significantly affect the preparation of instructional materials using OER.
- H3: Secondary School English teachers have no significant awareness of OER.
- H4: Barriers considerably obstruct the adoption of OER among Secondary School English teachers.
- H5: Support needs are significantly related to effective instructional material development using OER.
- H6: Teachers show no significant willingness to use OER-based instructional materials if provided.

Population and Sample

Population: All Secondary School English teachers working in Thrissur district, Kerala.

Sample Size: A total of 189 teachers (Both Government and Aided school teachers) participated in the study.

Sampling Technique: Random sampling was used to ensure that respondents were actively engaged in teaching English at the Secondary School level. This method was appropriate, as the study expressly targeted English teachers at the Secondary School level.

Demographic Coverage: The sample included teachers across age groups (26–35, 36–45, 46–56, and <25), gender categories, and levels of teaching experience (<5 years, 5–10 years, 11–15 years, and >15 years).

IMPORTANCE OF THE STUDY

This study is important for teachers, curriculum developers, policymakers, and students, notably within the context of secondary school English education. It provides insights into the application of Open Educational Resources (OER) in English language teaching and highlights current patterns of instructional resource utilisation, including their strengths and areas for improvement. The findings also point up the need to incorporate OER into school resource materials.

Variables Studied:

- Demographic profile (gender, age, teaching experience)
- Resource utilisation patterns
- Challenges in instructional manual preparation
- Copyright awareness
- Familiarity with OER
- Barriers to OER adoption
- Support required for instructional manual development
- Interest in OER-based manuals

LIMITATIONS

- **Geographical Limitation:** The study is confined to Thrissur district, Kerala. Findings may not fully represent teachers in other districts or states.
- **Sample Size:** With 189 respondents, the sample provides valuable insights but may not capture the full diversity of secondary school English teachers across larger populations.
- **Self-Reported Data:** Responses are based on teachers' self-reports, which may be influenced by biases such as social desirability or underreporting of challenges.
- **Focus on English Teachers:** The study expressly targets secondary English teachers; results may differ for teachers of other subjects.
- **Scope of Variables:** The study concentrates on resource utilisation and OER adoption. It does not measure direct impacts on student achievement or classroom performance.
- **Technological Context:** Barriers such as internet access and digital infrastructure are context-specific; findings may vary within regions having stronger technological support.
- **Temporal Limitation:** The study reflects practices and perceptions during the 2025–2026 academic year. Changes in policy, infrastructure, or public awareness efforts may alter future findings. Future.

Tool

The primary data collection tool was a standardised questionnaire designed to align with the study's objectives. It comprised 10 closed-ended items, grouped into 5 sections: Demographic Information, Resource Utilisation, Challenges in Instructional Material Preparation, Awareness and Use of OER, and Support and Professional Development. The questionnaire was validated by subject specialists in

educational research and piloted with a small group of teachers to ensure clarity and reliability.

Data Collection Procedure

- The questionnaire was administered online via Google Forms to maximise participation.
- Respondents were assured of confidentiality, and informed consent was obtained before participation.
- Data collection was conducted over four weeks during the 2025–2026 academic year.

Data Analysis Techniques

The collected data were analysed using both quantitative and qualitative methods:

Quantitative Analysis

- Frequency and Percentage Distribution:** To summarise demographic data, resource utilisation, challenges, and support needs.
- Comparative Study:** To compare responses across age groups, gender, and teaching experience.
- Cross-tabulation:** To examine relationships between OER familiarity and interest in adoption.
- Graphical Representation:** Pie charts and bar graphs were used to present findings visually for clarity.
- Qualitative Analysis**
- Thematic Analysis:** Responses were coded and categorised under themes, including barriers, support needs, and suggestions for OER integration.
- Interpretive Analysis:** Patterns in teacher attitudes and experiences were interpreted to provide greater understanding of the challenges and prospects of OER adoption.

Data Analysis and Findings

Samples were collected from 189 High School English Teachers (HST English). The analysis of each item given in the questionnaire is given below.

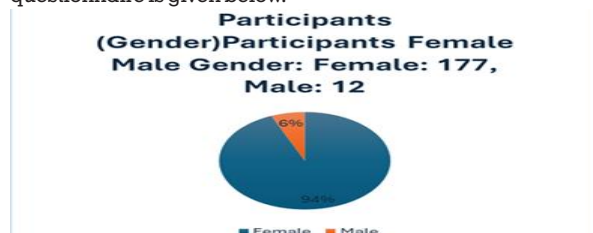


Chart 1.1

Among the samples, 177 were female teachers, and 12 were male teachers. It shows the strength of female English teachers at the Secondary School level in Thrissur district. According to the Education Department's data, 449 approved teachers are working in schools. So, 42% of the total population participated in the survey

Table 1: Distribution by Gender, Age, and Teaching Experience.

Variable	Categories	Percentage
Gender	Female: 177	93.7%
	Male: 12	6.3%
Age Group	26–35: 26	13.8%
	36–45: 78	41.3%
	46–56: 84	44.4%
	<25: 1	0.5%
Teaching Experience	> 15 years: 96	50.8%
	11–15 years: 37	19.6%
	5–10 years: 30	15.9%
	<5 years: 26	13.8%

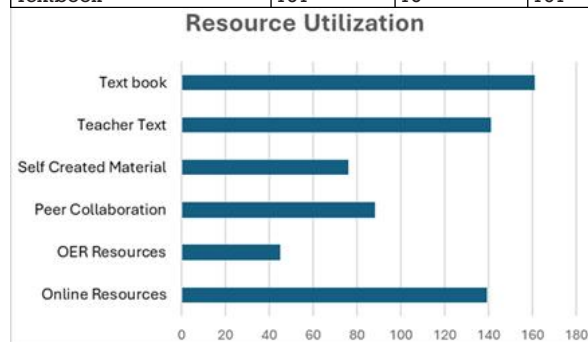
When we consider age groups, the 36-year-olds are the largest group in the sample. They include 84% of the total sample. When we studied the teaching experience, we found that more than 50% have 15 or more years of experience. More

than 70% of the teachers who participated in the survey had more than ten years of teaching experience

Educational Resource Utilisation

Table 2: Instructional Resources Used

Resources	Female	Male	Total
Online Resources	131	8	139
OER Resources	43	2	45
Peer Collaboration	83	5	88
Self Created Material	70	6	76
Teacher Text	133	8	141
Textbook	151	10	161

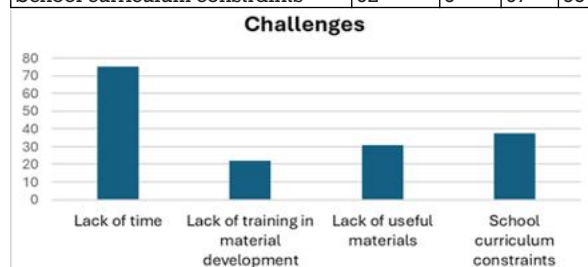


Textbooks remain the dominant resource (161), followed by teacher texts (141) and online resources (139). OER usage is low (45), showing limited integration despite availability. Self-created materials (76) and peer collaboration (88) reflect the innovation happening at schools.

Challenges in Instructional Material Preparation

Table 3: Challenges Faced

Challenges	Female	Male	Total	%
Lack of time	125	9	134	75
Lack of training in material development	38	1	39	22
Lack of useful materials	52	3	55	31
School curriculum constraints	62	5	67	38



The most significant challenge identified is a lack of time (75%), followed by curriculum constraints (38%), a lack of training in material development (22%), and insufficient useful resources (31%). These findings point out substantial gaps in professional development and access to resources.

Copyright / IPR Awareness Verification Awareness

Table 4: Copyright / IPR Awareness Verification

Awareness	Female	Male	Total	%
No	63	6	69	37
Yes	114	6	120	63



Approximately 63.5% of teachers were aware of copyright and intellectual property rights (IPR), while 36.5% were not. This

indicates a need for focused awareness programs on intellectual property rights and licensing for teachers.

Familiarity with OER

Table 5: OER Familiarity

Response	Frequency	Percentage (%)
No	177	73%
Yes	12	27%

Familiarity with OER



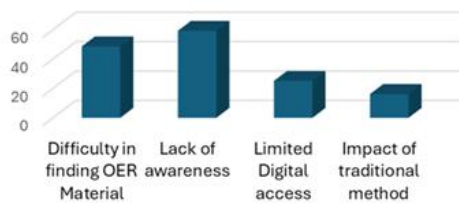
A majority of teachers (73%) are unfamiliar with OER, while only 27% report familiarity with OER sources. This stresses the requirement for comprehensive OER awareness programs among English teachers.

Barriers to OER Adoption

Table 6: Barriers to OER Use

Barriers	Femal	Male	Total	%
Difficulty in finding OER Material	79	8	87	49
Lack of awareness	97	9	106	59
Limited Digital access	43	2	45	25
Impact of traditional method	27	2	29	16

Barriers to OER



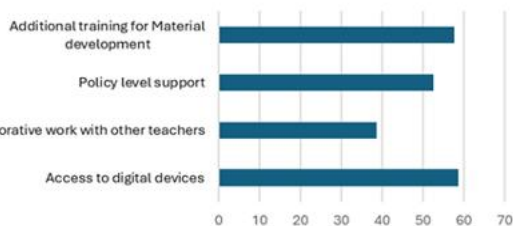
The primary barrier to OER adoption is lack of awareness (59%), followed by difficulty in locating materials (49%), limited digital access (25%), and the influence of established teaching methods (16%). These aspects collectively hinder the adoption of OER among teachers.

Support Needed for OER Adoption

Table 7: Support Preferences

Support	Female	Male	Total	%
Access to digital devices	96	7	103	58
Collaborative work with other teachers	65	4	69	39
Policy level support	86	8	94	53
Additional training for Material development	97	8	105	59

Support Needed for OER Adoption



Teachers express a strong need for training workshops (59%) and enhanced access to electronic resources (58%). Cooperation with peers (39%) and policy-level support (53%) are also considered important, indicating the requirement for professional development, enhanced infrastructure, and

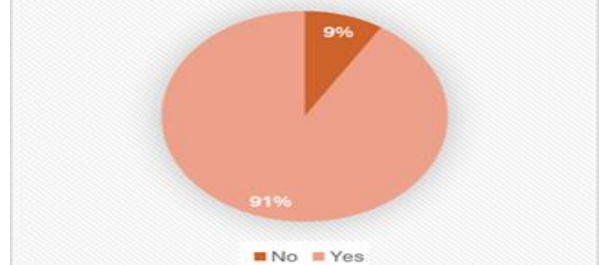
supportive policy measures.

Interest in OER-Based Resources

Table 8: Interest in OER Materials

Familiarity with OER	Female	Male	Total	%
No	15	2	17	9
Yes	162	10	172	91

Interest on OER Usage



The majority of teachers (91%) indicated a willingness to adopt OER-based resources if they were made available, demonstrating strong interest in OER integration.

The above Table 2 above shows significant variation in the types of instructional resources utilised by Secondary School English teachers; hence, the hypothesis is accepted.

The above Table 3 shows that the Difficulties encountered by teachers significantly affect the preparation of instructional materials using OER; hence, the hypothesis That Difficulties encountered by teachers significantly affect the preparation of instructional materials using OER is accepted.

The above Tables 4 and 5 show that the Secondary School English teachers have no significant awareness of OER; hence, the hypothesis Secondary School English teachers have no significant awareness of OER is accepted.

Table 6 above shows that Barriers considerably hinder the adoption of OER among Secondary School English teachers; hence, the hypothesis is accepted.

The above Table 7 shows that support needs are significantly related to effective instructional material development using OER; hence, the hypothesis That Support needs are significantly related to effective instructional material development using OER is accepted.

The above Table 8 shows that Teachers have a significant willingness to use OER-based instructional materials if provided; hence, the hypothesis that Teachers show no significant willingness to use OER-based instructional materials if provided is rejected.

Key Findings

- Textbooks (90%) and Teacher Texts (79%) are the primary instructional resources among Secondary School English teachers.
- Online resources (78%) are popular among Secondary School English teachers, but Open Educational Resources (OER) adoption is limited to 25%.
- The majority of Secondary School English teachers (91%) are ready to adopt Open Educational Resources (OER) in their teaching-learning process.
- Lack of time (75%), curriculum rigidity (38%) and lack of useful OER resources are the major barriers noticed by the Secondary School English language teachers.
- Secondary School English teachers (59%) are demanding continuous development in content making to practice OER.
- Secondary School English teachers have no significant awareness of OER and Copyright/ IPR Awareness

Implications

- The findings in the study show that teachers rely heavily on textbooks and teacher texts, yet show strong interest in adopting OER.
- The study's findings stress the need for in-service training regarding digital literacy, copyright awareness, and OER integration.
- Teachers must be empowered to collaboratively create, adapt, and share instructional materials.
- Curriculum rigidity and policy restrictions emerged as barriers to adopting OER and other digital resources.
- Schools should adopt flexible curriculum systems that allow integration of OER.
- Curriculum developers must embed OER into official teaching materials and encourage peer collaboration networks.
- The low awareness yet high interest in OER adoption highlights the necessity for policy interventions.
- Investment in digital networks (internet access, devices, repositories) is critical.
- Policies should mandate the embedding of OER into teacher training and classroom practice, in accordance with NEP 2020. The study delivers empirical evidence on OER adoption in Secondary School English education.
- It opens avenues for comparative studies across subjects and regions, and for evaluating the impact of OER on student achievement and teacher self-efficacy.

Recommendations

- Organise regular training workshops on OER awareness, copyright literacy, and instructional material development.
- Integrate OER modules into pre-service and in-service teacher education programs.
- Revise the curriculum guidelines to encourage the use of OER explicitly.
- Encourage collaborative networks across schools for peer sharing of instructional materials.
- Conduct awareness campaigns highlighting OER's benefits, including cost savings, flexibility, and innovation.
- Recognise and reward teachers who successfully integrate OER into their teaching practice.
- Encourage further empirical studies on OER's impact on student achievement and teacher self-efficacy.

CONCLUSION

Open Educational Resources (OER) have the potential to transform instructional practices by enhancing accessibility, innovation, and equity in education. This study examined the utilisation of instructional resources and the adoption of OER among Secondary School English teachers in Thrissur district, Kerala. While teachers predominantly rely on traditional resources such as textbooks and teacher texts, there is strong interest in adopting OER-based instructional materials. These findings highlight a significant opportunity for future integration of OER into classroom resources. The results emphasise the need for professional development, infrastructural support, and policy reforms to address barriers and facilitate OER adoption, ultimately improving English language learning.

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