Implementing Open Educational Resource to Strengthen English Speaking Skills

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Abstract: The purpose of this study was to analyze the improvement of English speaking skills from the application of Open Educational Resource (OER). The research method uses Exploratory Mixed Method. Qualitative data was taken during the observation process, while quantitative data was taken from the results of the pre-test and post-test. The participants were 4th-semester students who took the Speaking 2 course. The number of students who participated was 60 people. Qualitative data were analyzed through the data reduction stage, then the data presentation, and the conclusion stage. Meanwhile, the data on the results of the practice and the English-speaking test were presented in the form of descriptive statistics and t-tests. The results showed that OER had a positive impact on improving English speaking skills. This can be understood from the diversity of OER types used during the learning process. The results of the study have implications for the understanding of educators related to the provision of learning resources that are to the needs of students and current technological developments so that learning activities are relevant to the changes and needs of 21st-century educational competencies.

Article History
Received: 20-05-2022
Revised: 13-06-2022
Accepted: 22-06-2022
Published: 21-07-2022

Key Words:
Open Educational Resource; Speaking Skills; English.

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Introduction
The Covid-19 pandemic period has had an impact on changes in the implementation of education from the elementary school to university levels (Aristovnik et al., 2020). Currently, learning activities are carried out online or blended learning (combined online and offline learning). With the change in the concept of learning, teachers must also think about learning resources which are the most important elements today. Moreover, learning activities have guided students to be independent in utilizing learning resources. Moreover, open educational resources (OER) are easier to access and used by everyone with an internet network. The Internet gives a positive perception of teaching (Celik, 2013).

However, does the ease of access from OER have a positive impact on increasing student achievement or learning success? especially for the process of learning to speak English. This is because learning to speak English requires direct conversation practice that must be carried out by fellow students. In the preliminary study, some of the problems faced in learning to speak English at a private university in Bengkalis Riau are the practice of interactive speaking and the use of OER for learning activities, the internet network which often provides obstacles during learning activities, and using OER as authentic material for speaking English activities by the teacher.

From the findings of this problem, it can be understood that the most important part of the current education implementation process is the use of OER so that the objectives of learning to speak English can be achieved. Moreover, technology trends are always used in the provision of education not only as a source of authentic material but also as interactive multimedia. YouTube videos are often used to help students focus on learning (Albahlah & Albahlah, 2019; Meinawati et al., 2020). Videos for practicing speaking have an impact on
oral fluency (Moreno & Vermeulen, 2015; A.Saed et al., 2021). YouTube is very effective for improving students' abilities (Hamad et al., 2019). This means that videos accessed on websites via the internet become OER which can be used to teach speaking skills (Shih, 2010; Suryana et al., 2020). Thus, technology has become a learning resource that provides many variations such as videos, animations, interactive games, and technology applications for video conferencing that are easily accessible via the internet, even though face-to-face learning activities are not carried out. However, students can still communicate interactively (Ahmad, 2012).

Many definitions of OER are available, but many people think of OER only as a freely available resource, mostly on the Internet (Wiley & Hilton, 2018). The Open Educational Resources has been a teaching and learning resource released to the public sphere under an intellectual property license that permits its use and uses reprinted for free by others. OER can take the form of teaching materials, textbooks, streaming videos, tests, software, and other tools, materials, or techniques used to support access to knowledge. OER, however, is a valuable resource that must be developed and maintained. OER can finally be a true balancer for education (Olcott, 2012). The results across several studies show that students generally achieve the same learning outcomes when OER is used and simultaneously save large sums of money (Hilton, 2016). In addition, OER has also changed the systematic learning that is centred from teacher to student (Lane & McAndrew, 2010; Clements & Pawlowski, 2012). At the University of Pennsylvania, the OER program has been used as a learning resource in basic German classes to provide grammar themes and topics for live online class sessions and asynchronous assignments outside of class, such as through the use of blogs (Dixon & Hondo, 2014). OER intervention is very helpful in using students' communicative strategies (Lin & Wang, 2018).

From previous research, it is shown that OER has not been widely studied regarding the impact of OER on student learning outcomes. Therefore, this research gap is focused on the study of OER to improve English speaking skills. However, the application of OER used in this study is associated with various open educational sources that can be accessed free of charge. This is due to the limitations of online learning resources that are paid under the intellectual property license of an institution. However, many OERs can be used as learning resources in the classroom. The reasons for this research were 1) to determine the level of effectiveness of online learning resources on student learning outcomes, 2) to determine the interactive communication process in learning to speak English, and 3) the obstacles faced by students while using OER, and 4) to provide convenience for students in obtaining learning resources.

Thus, the purpose of this study was to analyze the improvement of English speaking skills from the application of OER. The results of this study are expected to have an impact on the use of OER by teachers and students during the learning process. In addition, OER is also expected to have an impact on the development of authentic teaching materials for students that are relevant to current conditions so that students can achieve increased skills for 21st-century education.

Research Method

Research method using Exploratory Mixed Method. The researcher started the research by collecting qualitative data first to explore more deeply the research problem being studied, then continued with the process of collecting quantitative data to support the qualitative data (Creswell & Creswell, 2018). Qualitative data was taken during the
observation, interview and document, after the learning process has been done, the educator asks the students about OER that is used by them. While quantitative data was taken from the results of the pre-test and post-test. The stages of the research started from qualitative and continued with quantitative. The first stage is to collect and analyze qualitative data which is built from the results of exploratory analysis, the next is a quantitative method to test or generalize the initial findings. The researcher then interprets how the results of qualitative research are built by the initial findings (qualitative data) (Creswell, J.W., Clark, 2017). The following is the design of the research stages.

![Research Steps](image)

**Picture 1. Research Steps**

Qualitative data were taken from observations and interviews, while quantitative data were taken from the results of tests and speaking exercises that had been carried out during the learning process. Observations are carried out as an activity to observe problems and implementation of OER. Interviews were conducted at the end of the lecture related to the implementation of OER during learning to speak English. Meanwhile, speaking exercises and tests were assessed through aspects of vocabulary, syntax, cohesion, pronunciation, ideational functions, and fluency (Srikaew et al., 2015). The participants were 4th-semester students who received the Speaking 2 course. The number of participants was 100 students. This research was conducted from March to May 2022. The data analysis used qualitative and quantitative. Qualitative data was analyzed through the data reduction stage which was carried out to summarize and have a pattern of research problems and data that had been found, then the data presentation was carried out to determine the relationship between data categories, and the stage of concluding (Miles et al., 2014). Meanwhile, the data on the results of the English speaking practice and test were presented in the form of descriptive statistics and t-tests to determine the differences in English speaking skills before and after the teacher applied the use of OER as a learning resource.

**Results and Discussion**

The results of the observations are related to students' attitudes in using OER to complete an English-speaking video project which is presented in the form of a narrative of findings. Meanwhile, quantitative data were taken from test results and practice speaking English documents. This assignment is part of the process of assessing English speaking skills and monitoring the use of OER by students. Quantitative data are presented in the form of descriptive statistics and t-test results.
To find out which OER has been used by students, the researchers identified from the results of the OER interviews that are widely accessed by students are technology applications used to make video conversations, source material from videos and YouTube, images, and learning websites that have been designed by the university. This means that these findings illustrate that the appropriate OER for learning to speak is video and YouTube as a reference for making videos designed using technology applications. The YouTube platform has become a multimedia tool developed from current ICT advances and is easily accessible and used by students (Alobaid, 2020). While the sources of teaching materials are online learning materials, journals, encyclopedias, and presentation materials. The diversity of learning resources illustrates that OER is an appropriate and easy-to-use electronic learning resource today. Students easily access and read various reference sources from OER in preparing and doing assignments.

While the results of the analysis of learning outcomes in the form of test scores and practice speaking English are presented in the form of comparison charts, descriptive statistical tables and t-tests.

**Table 1. The Result of Statistic Descriptive**

<table>
<thead>
<tr>
<th>Statistic Descriptive</th>
<th>Pre-Test</th>
<th>Post-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>62.54</td>
<td>86.78</td>
</tr>
<tr>
<td>Standard Error</td>
<td>0.653</td>
<td>0.403</td>
</tr>
<tr>
<td>Median</td>
<td>60</td>
<td>87</td>
</tr>
<tr>
<td>Mode</td>
<td>60</td>
<td>90</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>6.534</td>
<td>4.036</td>
</tr>
<tr>
<td>Sample Variance</td>
<td>42.695</td>
<td>16.294</td>
</tr>
<tr>
<td>Range</td>
<td>27</td>
<td>20</td>
</tr>
<tr>
<td>Minimum</td>
<td>50</td>
<td>75</td>
</tr>
<tr>
<td>Maximum</td>
<td>77</td>
<td>95</td>
</tr>
</tbody>
</table>
Table 1 shows that OER has affected improving English speaking skills. This can be seen from the test results or the final value of learning. The average value of the class has increased to 86.78 with the highest score of 95. This means that the increase in skills is caused by the learning process that is directed properly by educators related to online learning resources, namely OER. Moreover, the t-test results also show a positive impact of OER on English speaking skills, which is shown as follows:

Table 2. t-Test: Paired Two Samples for Means

<table>
<thead>
<tr>
<th></th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>62.54</td>
<td>86.78</td>
</tr>
<tr>
<td>Variance</td>
<td>42.695</td>
<td>16.294</td>
</tr>
<tr>
<td>Observations</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>0.48</td>
<td></td>
</tr>
<tr>
<td>Hypothesized Mean Difference</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>df</td>
<td>99</td>
<td></td>
</tr>
<tr>
<td>t Stat</td>
<td>-41.818</td>
<td></td>
</tr>
<tr>
<td>P(T&lt;=t) one-tail</td>
<td>4.987</td>
<td></td>
</tr>
<tr>
<td>t Critical one-tail</td>
<td>1.66</td>
<td></td>
</tr>
<tr>
<td>P(T&lt;=t) two-tail</td>
<td>9.97</td>
<td></td>
</tr>
<tr>
<td>t Critical two-tail</td>
<td>1.98</td>
<td></td>
</tr>
</tbody>
</table>

Table 2 shows that t Stat < t-table (-41.81 < 1.98). It means that Ho is rejected and H1 is accepted. So, it concluded that OER has given a positive impact on English speaking skills.

The findings that have been presented in the graphs and tables illustrate that technology currently has a very important role in teaching (Altavilla, 2020). Moreover, the COVID-19 pandemic has directed all learning activities using technology. OER is a medium that facilitates language teaching (Pulker & Hélène, 2020). Openness OER transforms the relationship between educators, learners and content (resources) and becomes a key agent of change (Lane & McAndrew, 2010). Educators must have the freedom to use, adapt, improve and redistribute educational resources without restrictions (D’Antoni, 2009). Thus, trust in resources, organization, and technology seems to be very important today to see the quality of education delivery (Clements & Pawlowski, 2012).

The results of previous studies showed that the effectiveness of OER learning and conventional textbooks did not have a significant difference, both had the same learning outcomes. However, technological developments have made electronic learning resources widely used as authentic teaching materials in the classroom (Zhang, 2018). Thus, these findings illustrate that educators, educational institutions and learning spaces (classrooms or online classrooms) must make a revolution related to the conception of technology and tools (OER) to become a unified whole in today's learning environment (Garcia & Nichols, 2021).

Some of these findings illustrate that the learning to speak English that has been carried out by students using OER shows that it is easy for students to use technology applications in making video conversations, the results of video conversations can be uploaded to YouTube to make it easier for teachers to assess conversation assignments, online news web, story books, online, encyclopedias or journals have become alternatives as learning resources (authentic teaching materials), and students make video projects according to references from the syllabus and the material being studied.

The benefits of using Open Educational Resources (OER) around the world have perpetuated great interest in baselines and reporting on how OER is used in developing
countries. The use of OER also achieves academic challenges, and collaborative learning, and enriches educational experiences. The basic obstacle highlighted by respondents regarding the effectiveness of using OER is the lack of internet followed by a lack of time and skills to use OER (Shams et al., 2020). Implementing OER as a learning strategy is challenging but can be effective in supporting positive learning outcomes when designed properly (Luo et al., 2020).

Conclusion
The results of the study concluded that OER had a positive impact on improving English speaking skills. Students use various types of OER to complete English-speaking assignments in the form of video conversations uploaded to YouTube. In addition, the OER used is also the main learning material. Meanwhile, from the results of practice assessments and tests of speaking English before the educator directs students to use OER, it is different from after using OER. Students have improved English speaking skill scores after using OER and their assignments also have higher quality content. This also has implications for the courage of students to carry out conversations using English. This means that OER has become the right authentic teaching material today. Moreover, the ease of access to OER through the internet network can make it easier for students to access OER anywhere and anytime. Students do not have to sit in the library reading books, but they can do activities in the library at home or in their community where they play. So, electronic learning resources have a positive impact on student activities in accessing teaching materials.

Recommendation
The results of this study are still limited to the study of the effectiveness of OER which is currently accessed for free via the internet to improve English speaking skills. During the research process, they also faced several obstacles such as identifying the type of OER used by students during the interview process, so researchers had to be more careful in processing data, assessing references used in completing assignments, and also observing student learning activities during class conversations. Therefore, further researchers can consider collecting OER data using a questionnaire technique. Research results can also be developed on OER needs by student perceptions so that the data can be used as material for developing OER teaching materials under the intellectual property license of educational institutions. For English language teachers, the results of this study can be used as data to develop electronic learning resources that are suitable for the needs of the course or study program. Thus, the OER provided can have the characteristics of a study program as well as a university digital library.

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