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The Effect of Differentiated Learning on EFL Students' Reading Skills

Indi Azimah[1], **Wahyu Diny Sujannah**[2]

[1,2]Universitas Brawijaya, Indonesia

[1]indiazimah@student.ub.ac.id

Abstract

Students might have different levels of reading skills due to their knowledge and background. Implementing differentiated learning can be a solution to overcome this diversity by helping them face challenges and achieve good reading comprehension in 21st-century education. This pre-experimental research aimed to explore the effect of differentiated learning on students' reading skills. The application of this strategy focused on the aspects of process, content, and product differentiation. The participants were 29 eighth-grade students from one of the State Junior High Schools in Batu. The results indicate that implementing differentiated learning is effective in improving students' reading skills since it helps them face challenges in reading, learn more vocabulary, provide a fun reading experience, and achieve learning objectives. Hence, it is suggested that English teachers implement differentiated learning to teach reading. Moreover, future research may explore students' difficulties while implementing differentiated learning to learn reading.

Keywords: *differentiated learning, learning strategy, reading skills*

Introduction

Nowadays, education has undergone a significant transformation due to technological advances, cultural approaches, and the changing needs of society. It is becoming increasingly modern, which is now called 21st-century education. In this century, education encourages students to develop a higher understanding of the subject matter in order to succeed in this modern world (Zaitun et al., 2021). Reading with good comprehension is a key to learning and understanding the information (Hartono, 2023). In the world of education, students' reading skills will help them understand information and materials from various subjects from various sources. Reading skills are essential language skills that are tightly connected with writing, speaking, and listening (Ulfa et al., 2022). Developing proficiency in reading can enhance their ability to understand spoken language, communicate effectively in writing, and express themselves when speaking.

According to the United Nations Educational, Scientific and Cultural Organization (UNESCO) in 2016, Indonesia ranked second from the bottom globally in terms of literacy, indicating a deficient level of interest in reading (Pitoyo, 2020). The UNESCO statistics indicates that only 0.001% of Indonesians are interested in reading, which is quite concerning. Moreover, some teachers in Indonesia are involved in the learning process in regular schools and report that some students find reading difficult (Dapa, 2020). The majority of students face difficulties with reading, such as difficulties comprehending text, identifying main ideas, and understanding

vocabulary. Apparently, the reading skills of English as a Foreign Language (EFL) students in Indonesia still need to be improved because reading opens the door to knowledge, understanding, and effective communication. In this case, students should understand their learning styles to improve their reading skills due to their abilities, backgrounds, and knowledge (Tomlinson, 2015). Thus, teachers should be able to facilitate this diversity in one place to achieve those learning goals.

Differentiated learning is the strategy that is highlighted in the new Indonesian curriculum called Independent Curriculum. Tomlinson (2000) defines differentiated learning as learning where students have many choices to receive information, understand ideas, and express what they learn. This strategy allows students to gain information based on their learning methods and styles, whether visual, auditory, or kinesthetic. It also gives priority to students' need for personal expression, allowing them to demonstrate their understanding in a way that suits their different strengths and interests. Additionally, differentiated learning can assist students in developing critical and creative skills, which is exactly in line with the demands of 21st-century education (Mukhibat, 2023). Adaptability and innovative thinking are highly valued in this era. Implementing this strategy will encourage students to engage with the subject matter in various ways that can enhance creativity, critical thinking, and problem-solving skills. Thus, students will be able to deal with the evolving demands of this century. Teachers can utilize three different aspects of differentiated learning to help students understand learning materials: taught content, the process or activities students do outside class, and final product creation, which is used to measure the achievement of learning objectives (Putra, 2021). By considering these aspects, teachers can adapt their teaching to suit their needs to improve their understanding of the learning materials.

Ayuningtyas (2023) stated that the application of differentiated learning in online learning benefits language skills, involving reading, speaking, listening, and writing. The study also claimed that ten sources argued that differentiated learning could help students improve their reading skills, such as vocabulary, phonemic awareness, reading fluency, and comprehension. Thus, this strategy can be applied to optimize the potential development of language skills. By implementing differentiated learning, teachers can formulate learning activities that can improve students' reading skills. This approach allows teachers to provide facilities and materials that suit students' needs (Heningjakti & Surono, 2023). Teachers can also flexibly involve various reading materials while assisting students to understand the text. In addition, by implementing this differentiated learning strategy, teachers can more effectively accommodate students' different reading skills. This strategy ensures that each student gets a learning experience that suits their needs and ultimately improves reading comprehension, vocabulary acquisition, and critical thinking skills (Dafa, 2020).

Furthermore, research on the use of differentiated learning is still limited. Research conducted by Maulana and Oktavia (2023) shows that differentiated learning can accommodate students' learning needs so that they are more motivated and easier to understand learning English. Unfortunately, the research did not mention what skills to improve using differentiated learning. Besides, research carried out by Ayuningtyas et al., (2023) examined the benefits of differentiated learning in online learning. However, they did not mention how the use of differentiated learning can affect the development of reading skills in the current and expected times and that the application only focuses on online learning. Lastly, Mukhibat (2023) investigates the efficacy of junior high school teachers in utilizing the differentiation learning model to improve students' learning outcomes. However, the research only discussed the optimization and management of differentiated learning in learning to read in specific groups

and did not provide sufficient information on how differentiated learning was implemented in the learning context. Thus, it appeared that the implementation of differentiated learning to improve students' reading skills had not been thoroughly explored. Therefore, to fill the gap between previous studies, the researchers conducted a study to explore the effect of differentiated learning on students' reading skills.

Method

This study used pre-experimental research with one group pretest-posttest design. This design was chosen as it allowed complete control over the progress of the variables over time and provided reliable analytical data to explore the impact of pre- and post-treatment changes. The design consists of one group that has been determined, where the group is given a test twice: the test before treatment (pretest) and the test after treatment (posttest) (Campbell & Stanley, 1963). In this research design, a group is measured as a whole, which involves conducting a pretest, applying a treatment, and then administering a posttest to the students. This design provides answer to the research question through the result of comparing the data in the pre- and post-treatment.

The present study aimed to find out the effect of differentiated learning on students' reading skills. The participants were 29 eighth-grade students at one of State Junior High Schools in Batu. For the instruments, the pretest was administered at the beginning of the study, and the posttest was administered after the treatment was given. Both tests were in the form of multiple-choice questions about reading texts on greeting card material. The distribution and processing of these two tests were conducted through Quizizz for about 90 minutes. The tests were administered to identify students' reading skills before and after treatment.

The implementation of this strategy was carried out in six weeks, including pretest and posttest. At first, the students were presented greeting card material on Canva using differentiation of content. The material was presented with a variety of texts to make them more interested in reading. They may also read the material through the textbooks they have. After that, a differentiation process was applied by grouping the students in pairs and assigning tasks such as matching pictures, completing sentences, and searching words related to greeting cards. Those who needed reinforcement were given more attention. Next, the differentiation process was applied in collaboration with problem-based learning, where the students were grouped flexibly and asked to identify the problem and work on the tasks given. At the end, they were asked to make greeting cards individually according to their interests and talents, either technological or conventional, and to present their work to the class.

The pretest and posttest results were analyzed using Statistical Packages for Social Sciences (SPSS). The data were displayed in the form of descriptive statistics and checked for normality and hypothesis testing. In statistical analyses, the normality test is an important prerequisite to assessing whether a given data set follows a normal distribution. Normality test requirements are determined by examining the level of significance (α). If the significance value obtained from the normality test is greater than 0.05 or significant > 0.05, it can be concluded that the data follows a normal distribution. In contrast, if the significance level is smaller than 0.05 or significant < 0.05, the data are considered not normally distributed.

Then, in the hypothesis testing, if the significance level (p-value) is greater than 0.05 or significant > 0.05, the null hypothesis (H_0) is accepted, which leads to the rejection of the alternative hypothesis (H_1). In contrast, if the significance level is smaller than 0.05 or significant

< 0.05, the null hypothesis (H_0) is rejected, and the alternative hypothesis (H_1) is accepted. The results of hypothesis testing is determined by the normality test whether it uses parametric or non-parametric test.

Results

All data in the pretest and posttest were collected and tested using SPSS in terms of descriptive statistics, normality testing, and hypothesis testing. The data were in the form of students' reading scores taken from their pretest and posttest.

Descriptive Statistics

At first, the data in the pretest and posttest were analyzed and presented in the form of descriptive statistics. The result of descriptive statistics can be seen in Table 1.

Table 1. Results of Descriptive Statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean
Pretest	29	40	100	68.41
Posttest	29	60	100	83.45

Table 1 shows that the mean score in the pretest was 68.41, with a minimum score of 40 and a maximum score of 100. Meanwhile, the posttest score had an average score of 83.45, with a minimum score of 60 and a maximum score of 100. The descriptive statistical analysis results show an increase in the mean score of 15.04 after getting differentiated learning treatment.

Normality Testing

Before conducting hypothesis testing the pretest and posttest scores were tested for normality to determine whether the data were normally distributed or not by using SPSS. The results of the normality testing using Kolmogorov-Smirnov test can be seen in Table 2.

Table 2. Results of Normality testing

Tests of Normality

	Kolmogorov-Smirnov[a]		
	Statistic	df	Sig.
Pretest	.139	29	.159
Posttest	.150	29	.093

a. Lilliefors Significance Correction

Table 2 shows that the pretest data show significance value of 0.159 > 0.05 and the posttest data show significance value of 0.093 > 0.05. Thus, the data were normally distributed. Thus, a parametric test in this form of Paired Sample t-test can be done to check whether the null hypothesis can be rejected and the alternative hypothesis can be accepted.

Hypothesis Testing

After knowing that the data in the pretest and posttest were normally distributed, the data were then analyzed by using a Paired Sample t-test for the hypothesis testing. The result of the Paired Sample t-test can be seen in Table 3.

Table 3. Result of Paired Sample t-test

Paired Samples Test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Posttest – Pretest	15.034	9.719	1.805	11.337	18.731	8.330	28	.000

Table 3 shows that the difference between pretest and posttest scores shows a significant value of 0.000 < 0.05. This means that there was a significant difference in the pretest and posttest scores. It means that the null hypothesis 'there was no significant difference in students' reading skills before and after being taught using differentiated learning' was rejected, and the alternative hypothesis 'there was a significant difference in students' reading skills before and after being taught using differentiated learning' was accepted. In other words, the differentiated learning positively affected the students' reading skills.

Discussion

The results of the pretest and posttest analysis showed that differentiated learning had a significant effect on students' reading skills. This was in line with the research conducted by Magableh and Abdullah (2021) which found that differentiated learning had an impact on reading comprehension at the early secondary stage. It is supported by implementing the three aspects of differentiated learning: process, content, and product. These three aspects are evidenced to help students grow and develop reading skills. The first aspect is the differentiation of content. At this stage, teachers can choose several variations of texts, such as authentic texts from reading books or the internet that suit students' interests. They can collaborate with conventional and technological media to provide interesting learning variations. By utilizing learning platforms like Canva, Quizizz, Padlet, and Kahoot, students can be more engaged and interested in reading. The fun media will increase students' motivation and interest in learning (Heningjakti & Surono, 2023). It is critical to understand students' interests when implementing this strategy. Knowing students' interests will help teachers plan lessons and encourage more useful learning.

The second aspect is the implementation of a differentiation process that is student-centered. Teachers can organize students into individual or group discussions. Implementing group discussions has been proven to train students' abilities in socializing, critical thinking, and creativity (Heningjakti & Surono, 2023). It allows students to cooperate and collaborate with others by sharing their comprehension of the reading text. In addition, group discussions also make them actively involved in discussing the reading material while improving their reading skills. The differentiation process can be achieved by creating lessons tailored to students' interests, utilizing simulations related to the material, and providing opportunities for students to solve interesting challenges (Rigianti, 2023). In this application, teachers can improve students' reading skills by giving special attention to students who need deeper learning. A study performed by Tilamsari et al., (2023) supports that differentiation of process can help students absorb, organize, and process learning information more easily. It allows teachers to accommodate students' learning styles by providing appropriate texts that are neither easy nor difficult so that they can effectively understand the information in the text.

The last aspect is the application of differentiation of products, where teachers allow students to be creative by creating learning products based on their interests and creativity. Students can freely use various conventional and technological media, materials, and tools that will help produce a product. Teachers can give students assignments such as making mind maps, journaling, and making graphs of their comprehension of the text. In submitting the assignment, teachers can also give students the option to upload it on social media, make a video, or present the product in front of the class. As stated by Rigianti (2023), they can also give students the option to submit and present articles, poems, infographics, posters, and videos according to their abilities and interests. This strategy also helps students discover their interests and talents. As Maulana and Oktavia (2023) explained, students are happy when they have the freedom to express their creativity through learning products that they have designed based on their learning styles, interests, and abilities. This activity involves their enjoyment and motivate them to be more interested and excited, thus helping them improve their reading skills deeply.

The other activity that can be applied to improving reading skills is implementing problem-based learning. The application of this activity can be included in the differentiated learning aspect to develop deeper reading comprehension. In order to better understand the subject matter, students can solve problems and increase their knowledge using problem-based learning (Solehudin & Rochmiyati, 2023). This activity encourages students to engage in analyzing information, which allows them to read and evaluate information to solve the problem. According to Tilamsari et al., (2023), problem-based learning can improve the science literacy abilities of students in class X.3, as evidenced by the increase in the average score of students' science literacy skills. In addition, Defitriani (2018) problem-based learning in differentiated learning allows students to identify problems of their own choice and design projects that address problems in authentic and challenging ways. Thus, this activity is proven to challenge students to analyze the reading. Students will actively participate in better reading and get information that can support their solution in problem-based learning.

The implementation of differentiated learning is an effective way to help struggling students improve their reading skills. With this approach, students who previously had difficulties in reading and understanding texts are able to overcome these challenges and develop stronger reading skills. Moreover, those who were previously embarrassed to read English texts now become brave enough to read in front of the class. This was in line with the research conducted by Ayuningtyas et al., (2023) which found that differentiated learning

positively impacted students' reading skills, including vocabulary, phonemic awareness, reading fluency, and reading comprehension. By applying this strategy, students not only improve their reading skills but also significantly expand their vocabulary mastery. This approach is useful and beneficial for students who aim to achieve academic excellence. The implementation of differentiated learning can assist students in overcoming text difficulties and achieving higher performance (Magableh & Abdullah, 2021). It provides an opportunity for students to overcome their difficulties by delivering interesting materials. Teachers can provide instructions and learning aids such as audiobooks or videos to help them develop reading skills.

The differentiated learning strategy also helps teachers face the challenge of students' English reading in the classroom. Suprayogi et al., (2022) recommended applying this strategy to help students face learning challenges and get a better education. This strategy can help recognize students' challenges in reading, such as difficulty in understanding texts, reading limitations, and lack of motivation to read and help them overcome reading difficulties. This strategy can be applied in secondary schools, especially in the Independent Curriculum learning (Mukhibat, 2023). It will make it easy for teachers to provide learning that helps students achieve their potential social, emotional, creative, and intellectual skills (Dapa, 2020). It is designed to help students identify and manage their emotions, supporting their development in creating a learning environment. If the learning environment is peaceful and comfortable, it can support comprehensive learning and improve reading skills. This approach also helps students to learn at their own pace and creates a more inclusive learning environment. Implementing this strategy will also help sustainable learning activities for all stakeholders, both teachers and students, to face the challenges of reading in the world of learning, whether inside or outside the classroom.

This study also found that differentiated learning has a long-term impact on students. Students become active in their learning to understand the method and what kind of texts make them enjoy and be interested in reading. Implementing this strategy has obvious benefits, particularly in terms of enhancing students' capacity for learning and sense of overall well-being (Hasanah et al., 2022). The first benefit is increasing students' learning satisfaction because they are fully engaged during learning, and the contribution of learning needs and accommodations is also in accordance with their abilities and preferences. This finding is supported by research by Liou (2023), which found that differentiated learning can effectively improve students' learning outcomes and satisfaction with their learning. Therefore, it is essential to design learning that recognizes and accommodates the students' diverse needs, giving them attention, support, and satisfaction throughout the learning process. The next benefit is providing learning experience that encourages them to build reading habits to achieve academic success. The application of differentiated learning can improve the quality of learning in the classroom, including in reading habituation activities (Suratimah & Ngatmini, 2023). By addressing students' individual needs, preferences, and performance and utilizing a wide variety of reading materials, a sustainable reading habit can be fostered. The last benefit is to help recognize students' learning styles and create connections between the material and aspects of life that they like. Thus, they can achieve their goals and gain a better understanding of the diverse perspectives of reading in everyday life. Differentiated learning allows students to meet norm expectations while connecting the subject matter to aspects of life they enjoy (Coffey, 2014). By integrating social elements in learning, they can see the relevance and direct application of the subject matter in the context of everyday life. In general, differentiated learning has beneficial effects that can positively impact current and future outcomes. Therefore, it is an excellent strategy for educators to implement in their teaching practices. In general,

differentiated learning has beneficial effects that can positively impact both present and future outcomes. Thus, it is an excellent strategy for educators to implement in their teaching practices.

Differentiated learning is a strategy that can be applied in the current educational landscape and highly recommended for teachers to incorporate in their instruction, particularly in the context of EFL students. The variation of three excellent aspects of differentiated learning will help them improve their reading skills. Reading is no longer a boring activity, but it becomes a fun activity for them. By utilizing this strategy, they can improve their reading skills and reach learning goals for a brighter future.

Conclusion

The research aimed to explore the effect of differentiated learning on students' reading skills. The learning focused on addressing students' different needs that could affect their reading skills significantly. The results reveal the students' reading skills improved after implementing the strategy, meaning that differentiated learning was effective. This implementation focused on the aspects of process, content, and product combined with problem-based learning to help students improve their reading skills. Teachers can combine conventional and technological media, incorporate various fun activities, and enhance students' learning experience by selecting reading materials and assignments that suit their interests and talents.

The application of differentiated learning can also aid in enhancing vocabulary acquisition, helping students overcome reading challenges, and facilitating long-term learning. Thus, it is suggested that English teachers implement this strategy in their lessons. It may contribute to developing more effective, equitable, and inclusive learning methods based on the student's needs and capabilities. Future research is suggested to explore students' difficulties while implementing differentiated learning. By identifying these difficulties and developing solutions, teachers can better support students' learning journey and encourage academic success.

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