THE EFFECTIVENESS OF LOCAL WISDOM-BASED ENGLISH READING TEACHING MATERIALS IN IMPROVING READING LITERACY OF DEAF STUDENTS

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Article Info

Abstract
This research is motivated by the problem of the reading literacy of deaf students, who are still relatively weak. This study aims to determine the effectiveness of local wisdom-based English reading teaching materials on improving the reading literacy of deaf students in class XI SMALB. This type of research uses a quantitative approach with an experimental research design. The sample for this study used the purposive sampling technique; the research sample was in class XI with 25 students. Data collection techniques include tests and documentation. Instrument testing uses validity and reliability. Data analysis techniques include descriptive analysis and pre-requisite tests, namely the normality test, hypothesis test, and N-Gain test. Based on data processing, the results of the study show that English reading teaching materials based on local wisdom effectively improve the reading literacy of deaf students. This is evidenced by the results of the sig value of 0.000> 0.05; thus, it can be said that there is an increase in reading literacy with local wisdom-based English reading teaching materials, which are in the high category, where the N-Gain value is 0.76.

Keywords
Teaching Materials; English; Deaf Students; Local Wisdom; Reading Literacy

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INTRODUCTION
The reading culture in Indonesia, based on The World's Most Literate Nations ranking data (Connecticut, 2020) shows that Indonesia's position in the world is ranked 60th regarding the reading habits of its people and 36th regarding the availability of libraries out of 61 countries. The high awareness and culture of reading in Japanese society have an impact on the education sector, so Japan is the best country in the field of education, with the third rank and the 20th rank as the cleanest country regarding corruption (Transparency International, 2018). Public awareness of reading has a major effect on education (Andreani et al., 2021; Anita & Wahyudi, 2021). For example, the future and welfare of a person's life are the main impacts caused by reading. This is in line with his opinion (Tedjo et al., 2022) that in the world of education, the functions of reading behavior and habits include accessing knowledge, synthesizing information, evaluating arguments, and learning new subjects. This behavior and habit is something that needs to be taught since childhood through family, school, and the environment so that it can be made into a culture. Research ( Wahyuni et al., 2018) shows that everyone who does not learn to read from an early age will not easily master other skills and knowledge. However, currently, reading behavior is not fully in line with expectations (Sukma & Sekarwidi, 2021) and even this reading behavior is still below the average international score (Finarsih, 2019).

This is supported by research on the Human Development Index (HDI), Indonesia is in position 107 out of 189 countries in 2020, which shows that Indonesia is far below ASEAN
countries. This data is also reinforced by a literacy survey conducted by Central Connecticut State University (2020), which states that Indonesia's literacy is ranked 60 out of 61 countries. In addition, the OECD (Organization for Economic Cooperative and Development) developed an international student assessment program known as PISA (Programme for International Student Assessment) (Arnawa, 2022). The results of the Program for International Students Assessment (PISA) survey stated that Indonesia's position was 73 out of 78 countries (2018) (Hidayah, 2017; Hewi & Shaleh, 2020; OECD, 2019).

Furthermore, the Indonesia National Assessment Program (INAP) states that the ability of students in the deficient category in mathematics skills is 77, 13%; science skills are 73, 61%; and reading skills are 46, 83% (Center for Educational Assessment, Balitbang Kemendikbud, 2016). In addition, based on UNESCO data, Indonesia ranks second from the bottom in the world's literacy level, meaning that Indonesian people's interest in reading is very low, namely 0.001% (Lestari et al., 2020; Saputra, 2020; Wahyuni, 2010). So it can be concluded that the level of interest in reading and literacy among students in Indonesia is at an alarming level and requires a very serious solution.

But the results of questionnaires, interviews, and observations done on the reading skills of deaf students in class XI SMALB show that they haven't fully used what they've learned, especially when it comes to English reading learning materials. In the Indonesian academic context, Indonesian is the language of instruction, but English is also used due to its dominance in international knowledge transfer. This means learners need to master both languages to optimize success in their studies (Dardjito, 2019; Sukma & Sekarwidi, 2021). The results of the questionnaire analysis show that 100% of respondents stated that reading skills are very necessary for deaf students in learning English and that they want reading learning topics and materials related to the environment around them, especially local wisdom in Riau province. They also want reading learning topics related to daily life and want to explain English learning to students verbally (in Indonesian and English) and nonverbally (in Indonesian sign language).

Furthermore, 100% of respondents encountered difficulties in learning to read when using English terms in sign language and strongly agreed that the topic of local wisdom of Riau province was compiled for learning English reading skills using Indonesian sign language (bisindo) and English sign language (ASL) in English learning. The results of the questionnaire analysis showed that 50% of respondents thought that the objectives of English language learning had been achieved. Respondents stated that students could use their English outside of class through chat, email, YouTube, and other social media. The result of the questionnaire analysis shows that 100% of respondents think that reading is the most difficult skill for students to learn and state that English learning resources are sufficient criteria.

The results of the questionnaire analysis show that 100% of respondents stated that students like discussions in reading learning activities, students are motivated to learn English if the delivery of learning materials is interesting, and there is a desire for students to continue their education abroad. They also stated that learning materials need to be simplified by using L1 (Indonesian) and L2 (English). It shows that 75% of respondents use lectures, questions and answers, discussions, and independent assignments in the implementation of learning methods. It shows that 50% of respondents use learning methods that utilize audio-visual media. The results from the questionnaire analysis show that 100% of the respondents stated the adequacy of English teachers in the school, the learning techniques that use lectures in learning, and the adequacy of English learning facilities.

Based on the explanation above, it can be concluded that a teaching material is needed that can implement the 2013 curriculum for special education by emphasizing and improving affective, cognitive, and psychomotor skills. Teaching materials are one of the important learning components to be developed by educators so that teaching and learning activities
remain effective and productive (Sagitari et al., 2021; Indrianto & Kurniawati, 2020) which displays a complete figure of the competencies that students will master (Fajri, 2018). Lu Feikui, a modern Chinese educator, clearly pointed out in the article "Declaration of Zhonghua Book Company" that the foundation of a nation is education, while the foundation of education is teaching materials (Yao et al., 2022). The development of teaching materials is also expected to foster love for the country in the form of local wisdom among students. This is in accordance with research conducted by (Lavrenteva & Orland-Barak, 2023) that pragmatically, this research offers educators the opportunity to explore and exploit cultural representations evoked through textual and visual materials. One of the things that can be developed to develop reading teaching materials is audio-visually assisted local wisdom-based English learning using American Sign Language (ASL). This is similar to the research conducted by (Rokhman & Yulisti, 2010) that the conception guidelines for the development of teaching materials by integrating multicultural concepts become a basic reference that is built with an emphasis on Indonesian students in the hope of creating students who are cognitively intelligent and behave culturally.

The number of students based on types of disabilities in Indonesia includes intellectual disabilities (tunagrahita) totaling 71.4 thousand students, hearing disabilities (deaf) totaling 25.5 thousand students, multiple disabilities totaling 21 thousand students, motor development disabilities (tunadaksa) totaling 6 thousand students, visual disabilities (blind) totaling 3.8 thousand students, and autism totaling 753 students (Kemendikbud, 2018). This contrasts with the number of special education units consisting of SLB A, SLB B, SLB C, SLB D, SLB E, SLB G, SDLB, SMPLB, and SMALB in Riau province, which only has 46 school units and is ranked twelfth in Indonesia (Kemendikbud, 2018). Based on the data that has been presented, it can be concluded that Riau province is in a worrying position in the context of special education, especially in terms of intellectual barriers (tunagrahita) and hearing barriers (deaf).

The distribution of student reading literacy in Riau province at the national level is divided into three categories with the following data: The deficient category is 33, 41% of 46, 83%; the sufficient category is 59, 2% of 47, 11%; and the good category is 7, 39% of 6, 6% (Center for Educational Assessment, Balitbang Kemendikbud, 2016). So that student reading literacy in Riau province is still in the poor category. Exploring the potential of students, especially students with special needs in Riau province, needs to be done. This is because Riau province is ranked first out of all provinces in Indonesia with the largest number of students with disabilities.

Based on the pre-observation results, it was found that most deaf students have difficulty understanding factual and conceptual knowledge by observing, questioning, and trying based on curiosity about themselves in clear, systematic, logical, and critical language. For example, related to the awareness of learning English for themselves and the environment where students are Whereas English is one of the lessons taught to students from the elementary level to college (Maduwu, 2016). There are still many students who do not know the social functions, text structures, and linguistic elements related to activities carried out by themselves and others in accordance with the context of use. This shows that what students get from the English learning process has not been fully implemented in their daily lives. This is in accordance with the statement of the teacher of SMALB deaf students in the results of interviews. In preliminary observations, it was stated that it is still difficult to implement English language learning, especially reading on cognitive and psychomotor-related activities carried out by oneself and others in accordance with the context of use, so that transactional interaction texts, recount texts, and personal letters are needed for deaf students in class XI SMALB. Therefore, researchers want to examine research related to the effectiveness of local
wisdom-based English reading teaching materials in improving the reading literacy of deaf students in schools.

**RESEARCH METHOD**

In this study, the research method used was pre-experimental design. This research was conducted on one group, namely the experimental group, who received instruction using English reading materials based on local wisdom.

**Research Design**

The design used is One Group Pretest-Posttest, which is a design that is carried out four times, namely before the experiment and after the experiment. The chart can be described as follows:

**Table 1. Research Design One Group Pretest and Posttest Design**

<table>
<thead>
<tr>
<th>Kelompok Eksperimen</th>
<th>Pretest</th>
<th>Perlakuan</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1</td>
<td>X</td>
<td>T2</td>
<td></td>
</tr>
</tbody>
</table>

Description:

T1 = initial test (pretest)

T2 = final test (posttest)

X = Learning by using English reading teaching materials based on local wisdom

**Research Population and Sample**

The population in this study were all students in grade XI SMALB. The population members in this study were all students of class XI SMALB, which amounted to 2 classes with a total of 56 students. Then the sample in this study was taken by sampling using the purposive sampling technique, which is a sampling technique based on the researcher's consideration. The sample in this study was 25 people, namely the experimental class. The class designated as the experimental class is class XI SMALB 1. This class is taken based on the class average score in the previous semester, which was higher than the other classes, so that it will facilitate research.

**Instruments**

Research instruments are tools or facilities used by researchers in collecting data so that their work is easier and the results are better, in the sense that they are more careful, complete, and systematic so that they are easier to process. The instrument used in this study was a 10-item written test. The question was used in the pre-test and post-test. The purpose of using the same questions in the pre-test and post-test is to find out the increase in reading literacy, especially after getting treatment.

**Data Analysis**

Hypothesis testing conducted in this study used inferential statistics. The research hypothesis test was carried out based on data on reading literacy improvement, namely data on the difference between pre-test and post-test scores. In this study, we used a paired sample t test. In conducting the t-test, the data must be normally distributed and homogeneous. After the hypothesis test is conducted, the next step is to calculate the N-Gain. N-Gain is the normalization of the gain obtained and the results of the pre-test and post-test. The calculation of the average value of N-Gain is done to see the increase in student learning outcomes. From the N-Gain value, it will be seen the effectiveness of using local wisdom-based English reading teaching materials in improving students' reading literacy.
RESEARCH FINDINGS AND DISCUSSION

Research Findings

This research was conducted at SMALB. In this study there are 2 variables, namely:
(1) independent variable (X) English reading teaching materials based on local wisdom and
(2) dependent variable (Y) reading literacy skills for deaf students in grade XI SMALB. This
research is quantitative with a one-group pretest-posttest design. This research data consists of
pretest and posttest data. The pretest result value is a measure of students' initial ability, and
the posttest result value is taken from the results of students working on questions after
learning with local wisdom-based English reading teaching materials. To determine the
research instrument, it is necessary to test the instrument for pretest and posttest. The
instrument trials in this study amounted to 20 items. After testing the instrument, then the
results of the instrument trial were tested with validity, reliability, difficulty level, and
differentiating power tests. From the test results, 10 valid questions were obtained, so the
number of questions used was 10. Furthermore, a descriptive summary of student pretest and
posttest data can be seen in Table 2 below:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Pretest</th>
<th>Posttest</th>
<th>N (Total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average (Mean)</td>
<td>61.80</td>
<td>89.60</td>
<td>25</td>
</tr>
<tr>
<td>Minimum Score</td>
<td>45</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td>Maximum Score</td>
<td>80</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>9.670</td>
<td>7.205</td>
<td></td>
</tr>
<tr>
<td>Median</td>
<td>65</td>
<td>90</td>
<td></td>
</tr>
</tbody>
</table>

Based on Table 2 above, the average score followed by 25 students after being taught
with local wisdom-based English reading teaching materials previously, students were first
given a pretest, which was intended to determine their reading literacy. The pretest results for
students' reading literacy obtained an average score of 61.80, and the posttest results for
students' reading literacy obtained an average score of 89.60.

The results shown in the pretest and posttest reading literacy showed a difference: the
posttest was better than the pretest. However, this basic assumption cannot be proven if
hypothesis testing and N-Gain have not been carried out. A clearer picture of the average
value of reading literacy on the pretest and posttest can be seen in the following graphic image:

![Figure 1. Comparison of pretest and posttest scores](image-url)
Based on the length of the interval class, it can be used to determine the frequency distribution list as shown in the following table:

**Table 3**
Frequency Distribution of Pretest Score

<table>
<thead>
<tr>
<th>Value</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>45</td>
<td>3</td>
<td>12%</td>
</tr>
<tr>
<td>55</td>
<td>7</td>
<td>28%</td>
</tr>
<tr>
<td>60</td>
<td>2</td>
<td>8%</td>
</tr>
<tr>
<td>65</td>
<td>5</td>
<td>20%</td>
</tr>
<tr>
<td>70</td>
<td>5</td>
<td>20%</td>
</tr>
<tr>
<td>75</td>
<td>2</td>
<td>8%</td>
</tr>
<tr>
<td>80</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>25</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Based on Table 3, it can be seen that the frequency of pretest results that obtained a score of 45 was 3 students or 12%, a score of 55 was 7 students or 28%, a score of 60 was 2 students or 8%, a score of 65 was 5 students or 20%, a score of 70 was 5 students or 20%, a score of 75 was 2 or 8%, and those who got a score of 80 were 1 student or 4%.

The data used in the initial normality test is the pretest result data. Based on the results of the initial normality calculation, the data obtained are as follows:

**Table 4**
Normality Test of Pretest Score

<table>
<thead>
<tr>
<th>Type</th>
<th>N</th>
<th>Significance</th>
<th>alpha</th>
<th>Description</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>25</td>
<td>0.151</td>
<td>0.05</td>
<td>0.151 &gt; 0.05</td>
<td>Normally Distributed</td>
</tr>
</tbody>
</table>

Based on pretest data calculated using the Shapiro-Wilk normality test, the data obtained Sig = 0.151 and alpha = 0.05. Because Sig > 0.05, Ho is accepted. This means that the initial value data comes from a normally distributed population.

After determining the class length value, it can be used as a guide to determine the frequency distribution list. The following is a frequency list of posttest scores, as seen in the following table:

**Table 5**
Frequency Distribution of Posttest Score

<table>
<thead>
<tr>
<th>Value</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>75</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>80</td>
<td>3</td>
<td>12%</td>
</tr>
<tr>
<td>85</td>
<td>6</td>
<td>24%</td>
</tr>
<tr>
<td>90</td>
<td>7</td>
<td>28%</td>
</tr>
<tr>
<td>95</td>
<td>3</td>
<td>12%</td>
</tr>
<tr>
<td>100</td>
<td>5</td>
<td>20%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>25</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Based on Table 5, it can be seen that the frequency of pretest results that obtained a score of 75 was 1 student, or 4%; a score of 80 was 3 students, or 12%; a score of 85 was 6 students, or 24%; a score of 90 was 7 students, or 28%; a score of 95 was 3 students, or 12%; and those who got a score of 100 were 5 students, or 20%.

The data used in the initial normality test is the posttest result data. Based on the results of the initial normality calculation, the data obtained are as follows:

**Table 6**
Based on the pretest data calculated using the Shapiro-Wilk normality test, the data obtained $\text{Sig} = 0.074$ and $\alpha = 0.05$. Because $\text{Sig} > 0.05$, $\text{Ho}$ is accepted. That is, the student value data comes from a normally distributed population.

To determine the effectiveness of local wisdom-based English reading teaching materials on improving the reading literacy of grade XI SMALB students, this study formulated the following hypothesis:

$\text{Ha} : \text{There is an increase in reading literacy among grade XI SMALB students with English reading teaching materials based on local wisdom}$

$\text{Ho} : \text{There is no improvement in the reading literacy of students in grade XI SMALB with English reading teaching materials based on local wisdom}$

Or with the statistical hypothesis, namely:

$\text{Ho: } \mu_1 \leq \mu_2 = t \text{ count } < t \text{ table or } \text{sig } > 0.05$

$\text{Ha: } \mu_1 > \mu_2 = t \text{ count } > t \text{ table or } \text{sig } < 0.05$

Testing the hypothesis of this study using the $t$ test on paired samples is necessary because in this study the samples used with the same number and normality data are normally distributed. The test results on the paired sample test are:

<table>
<thead>
<tr>
<th>Paired Differences</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
<th>95% Confidence Interval of the Difference</th>
<th>$t$</th>
<th>$df$</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest - Posttest</td>
<td>-27.8000</td>
<td>12.67215</td>
<td>2.53443</td>
<td>-33.03081 - 22.56919</td>
<td>-10.969</td>
<td>24</td>
<td>.000</td>
</tr>
</tbody>
</table>

Based on the table above, the statistical test was obtained with $t \text{ count } = 10.969$ and $p (\text{sig}) = 0.000$. Because $p (\text{sig}) < 0.05$, namely $(0.000 < 0.05)$, researchers can conclude that there are differences in reading literacy skills before and after the use of local wisdom-based English reading teaching materials. So it means that $\text{Ho}$ is rejected and $\text{Ha}$ is accepted, which means that there is an increase in the reading literacy skills of deaf students in class XI SMALB with the use of English reading teaching materials based on local wisdom.

Furthermore, the N-Gain test was conducted to see the level of effectiveness of using local wisdom-based English reading teaching materials in improving the reading literacy skills of deaf students in grade XI SMALB. The results of the N-Gain test can be seen in the following table:

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>N-Gain</th>
<th>Percentage N-Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>61.80</td>
<td>0.76</td>
<td>76%</td>
</tr>
<tr>
<td>Posttest</td>
<td>89.60</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Category Description | High | Effective |

<table>
<thead>
<tr>
<th>Normality Test of Posttest Values</th>
<th>Type</th>
<th>N</th>
<th>Significance</th>
<th>alpha</th>
<th>Description</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Posttest</td>
<td>25</td>
<td>0.074</td>
<td>0.05</td>
<td>0.074 &gt; 0.05</td>
<td>Normally Distributed</td>
<td></td>
</tr>
</tbody>
</table>
Based on these data, the results of the gain calculation on the reading literacy ability data of deaf students obtained a pretest average of 61.80 and a posttest average of 89.60. So that the N-gain is 0.76. This means that the increase in reading literacy skills with the use of local wisdom-based English reading teaching materials is high because 0.76 is at a value between $g \geq 0.76$.

Furthermore, the effective interpretation of local wisdom-based English reading teaching materials on improving the reading literacy of deaf students can be known from the percentage value of N-Gain, which reaches 76% in the effective category. This means that the application of English reading teaching materials based on local wisdom effectively improves the reading literacy skills of deaf students in class XI of SMALB.

**Discussion**

This research includes quantitative research. The design used was a one-group pretest-posttest design. This research uses local wisdom-based English reading teaching materials. Before the implementation of the posttest, a pretest was first carried out. This pretest process aims to assess the value of students' reading literacy skills before they are given local wisdom-based English reading teaching materials. After the pretest, the posttest is carried out, and the purpose of the posttest is to determine the final score after treatment. To find out whether or not there is an effect on the reading literacy skills of deaf students by using local wisdom-based English reading teaching materials, a step is needed, namely hypothesis testing.

Based on the research results, the pretest results were obtained with an average of 61.80. After carrying out experiments with the application of local wisdom-based English reading teaching materials for four meetings, the next stage was the posttest. From the posttest results, the average score was 89.60. Furthermore, this test uses a two-party correlated t-test. To make a decision about whether the increase is significant or not, the sig value needs to be compared with the 5% error rate. Furthermore, $t = 10.969$ and $p = 0.000$ were obtained. Because $p < 0.05$, namely $(0.000 < 0.05)$, researchers can conclude that there are differences in reading literacy skills before and after the use of local wisdom-based English reading teaching materials. Furthermore, the improvement of reading literacy skills of deaf students in class XI SMALB with local wisdom-based English reading teaching materials is in the high category because the N-Gain value indicates that it is at a value of 0.76, which means it is in the criteria between $G > 0.70$. While the interpretation of its effectiveness shows that local wisdom-based English reading teaching materials are effective in improving reading literacy, the value shown is 76%, between 76%-100%.

These results are in accordance with the research journal conducted by (Setyawan et al., 2023) that the development of local wisdom-based teaching materials can help students develop their reading literacy skills. By applying learning using these teaching materials, you can teach children to read, can pronounce reading well, and can be understood because it is done repeatedly in the learning process. It also really helps children understand the meaning of words because it is accompanied by images followed by words and sentences. Deaf children are children who experience deficiencies or loss of hearing ability either partially or completely as a result of a partial or complete malfunction of the hearing device that inhibits the development of intelligence, language, emotions, and social skills (Wibowo, 2014). The definition of deaf children has been widely stated by experts, all of which basically contain the same meaning (Agustin, 2020). Such as deaf children who experience obstacles or an inability to receive information through their hearing due to a malfunction of their hearing, either partially or completely, so that they need special guidance in learning at school. The result of deafness can be the delayed development of language, personality, social skills, and intelligence (Kurniawati, 2017)
Many do not realize that deaf people not only experience weaknesses in spoken language but also have difficulties when it comes to written language or reading. Reading ability is considered very important because it is the best means for deaf people to gain complete access to the world of language compared to other means, such as speech reading, residual hearing utilization, and sign reading due to limited vocabulary (Bintoro, 2010). In line with (Suryanti, 2015) which explains that reading is needed by deaf people as a medium or introduction to communication, Reading and writing are needed by deaf people as a medium or introduction to communication when they cannot express what is in their minds through speech because they experience hearing loss, which results in their inability to speak. Supported by the view (Rofiah, 2016) that it is very influential in optimizing the language development of deaf children as a whole in everyday life. In essence, if a learning activity is prepared in advance, the purpose of the activity will be more directed and successful in achieving the goal (Kusuma, 2017). In line with his opinion (Irvan, 2020) teaching deaf students requires teachers to deliver learning materials. Furthermore, (Sholihah et al., 2015) also added that teaching materials are needed by deaf students in the learning process because most teachers who teach deaf students still use the same teaching materials as those used in general schools. This is because there are no teaching materials specially prepared for deaf students, so teachers must be creative in making visualizations when delivering material and adapt it to the curriculum for deaf students.

In South Africa, data shows that deaf school graduates still exit the school system with literacy and numeracy levels far below their normal hearing peers, based on academic analysis from across the country based on DeafSA in 2017 (Supena & Muskania, 2020). Therefore, in the process of learning English, deaf students really need learning topics related to daily life and in the environment around them (Riau Province) with learning materials including transactional interaction texts (experiences of self and others in the past), recount texts, transactional interaction texts (activities carried out by self and others), and special texts in the form of personal letters (activities of self and others) using sign language in spoken and written language varieties. It is even emphasized by Piaget, who emphasizes that learning must be oriented to the needs and development of the learners, as Piaget said: "The conceptual connection between the students' subjects will form the scheme, so that they will acquire the integrity and unity of the knowledge they have learned."

In order for deaf children to understand what they are learning, it should be concrete (Zakia et al., 2016). This is in line with the view (Leton et al., 2021) that deaf students generally have limitations in terms of hearing, so the messages and materials conveyed to them need to be made visual-based and provide concrete examples that are close to their daily lives (realistic). Thus, teachers as educators must be able to process learning activities interactively (Rosita, 2019), one of which is by using local wisdom-based English reading teaching materials. Local content is given in accordance with local wisdom owned by an area with the aim that students have knowledge and skills and are able to apply them in everyday life (Ulya, 2018). Supported by the opinion (Asmorowati et al., 2021) that the application of material that is in accordance with the circumstances, culture, and customs of the students' region will make it easier for students to understand the material.

CONCLUSION

Based on the results of the study, it can be concluded that there is a positive increase in local wisdom-based English reading teaching materials on the reading literacy skills of deaf students. This has been proven from the acquisition of a sig value of 0.000 < 0.05 and the N-Gain value showing a value of 0.76 in the high category. The results of this study can be used to discussion that English reading teaching materials based on local wisdom are effective in improving the reading literacy skills of deaf students in class XI SMALB.
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