Improving Language Skills Through Linguistic Intelligence Learning Design

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IMPROVING LANGUAGE SKILLS THROUGH LINGUISTIC INTELLIGENCE LEARNING DESIGN

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Abstract

This research aimed to determine the difference in students' language skills levels before and after using a verbal-linguistic intelligence-based learning design. This research was conducted in an elementary school in Garut Regency, Indonesia, using a pre-experimental design with a one-group pretest-posttest design. The participants were 22 sixth-grade elementary school students. The data were obtained by test. The test instrument was tested for validity and reliability. Then, the data were analyzed by inferential and descriptive tests. The inferential test was done through normality and homogeneity tests. Furthermore, the data were tested for the mean difference using SPSS 22 software. The results prove differences in students' language skills before and after applying the verbal-linguistic intelligence-based learning design. The acquisition sees the difference in scores of the average score of each skill after treatment increases with an n-gain score of 68.75. This proves that verbal-linguistic intelligence-based learning design can improve each student's language skills. The findings can be an insight for future researchers conducting research on learning design based on verbal-linguistic intelligence or language skills.

Keywords: Language Skills; Verbal-Linguistic Intelligence; Elementary School.
A. Introduction

Education is a way to improve the quality of a nation. The progress of a nation cannot be separated from the progress of its education. The higher quality of education determines the progress of a country. The quality of education in Indonesia is classified as low based on UNESCO data on the Human Development Index, the Organization for Economic Development Cooperation (OECD, 2019) by BCC, and the Financial Times, stating that Indonesia ranks the 69th out of 76 countries or the 8th lowest.

One way to improve the quality of education is with advanced language skills because language serves many purposes. The absence of language will only lead to scarcity in communication. Therefore, it has an enormous role (Rao, 2019b). Identified as current needs, the four language skills, namely reading, writing, listening, and speaking, play an essential role in every learning effort. These skills are separate yet bound together by an inseparable bond (Darancik, 2018; Sadiku, 2015).

The emphasis on language learning still lies in reading and writing skills. Learning to read and write is a fundamental skill that, unfortunately, not all children in the world learn sufficiently (Genlott & Grönlund, 2013). Research on reading and writing skills has been carried out using various constructs and theoretical perspectives (M. M. Ali & Saiden, 2015; Genlott & Grönlund, 2013; Jones et al., 2010; Julius et al., 2016). Research on early literacy theory is often characterized by a cognitive focus and in a technology-deterministic perspective where the main idea is that writing technology directly determines one's thinking (Oliver, 2011).

Reading difficulties are the most common learning problems among students and the main reason for scholastic decline (Evans et al., 2018). Ignoring children's reading ability in early life will negatively impact their scholastic achievement. They will find it difficult to motivate themselves in reading various scholastic disciplines (Amutha & Philomina, 2015).

In addition to reading skills, another problem in the language is writing skills. Writing has been identified as one of the essential skills because the world has become so text-oriented (Cole & Feng, 2015). Students
identify that writing skills are more complex than listening and reading (Berman & Cheng, 2010). When a child writes, their thoughts and knowledge mix creating a unique meaning (Jones et al., 2010).

The speaking skills of elementary school students are at a low level. They have a limited choice of words, ineffective sentences, ambiguous speech structure, and non-communicative language. Quick observation results show that only 2–5% of students are skilled at speaking in a formal class. The five indicators used to measure students' speaking skills are (1) fluency, (2) accuracy of word choice (diction), (3) sentence structure, (4) logic (reasoning), and (5) communicativeness/eye contact (Hussain, 2017). Low speaking skills can hinder students' ability to be intelligent and creative (Mart, 2012).

As widely stated theoretically and empirically, an appropriate learning design must be used to improve students' language skills and verbal-linguistic intelligence. One of the alternative designs is a scientific approach. As determined by the Government, the 2013 curriculum requires teachers to implement a scientific approach in schools (Zaim, 2017), including elementary schools. A scientific approach is a learning approach that prioritizes student activity during the learning process (Zainudin & Istiyono, 2019). Through this approach, students will start learning by observing objects. Students' language skills will also be improved through observation. The observation stage is in line with students' listening skills because students not only listen to others speaking but also observe.

Then, they will ask questions about the objects observed. The questioning stage is also in line with speaking skills in the language. When students ask questions, they will learn to speak (Sedova et al., 2019). Then, they experiment in the experimenting stage. This stage can be done by reading. It is also to maximize students' reading skills. Students will learn to reason. The reasoning process can be done with several activities, such as reading and writing. This stage is alternative learning so that students can improve their writing skills. In academic writing activities, students can develop good reasoning skills (Ebadi & Rahimi, 2018). Finally, they will learn to communicate their learning outcomes. This communication stage is in line
with speaking skills. Students will learn to express their ideas and discuss results independently.

Research on verbal-linguistic intelligence has proven that there are five components in learning models based on verbal-linguistic intelligence, namely definitions, characteristics, teaching strategies, learning outcomes, and numbers (Halil, 2017). In addition, research reveals the effect of multiple linguistics in second language learning (Stella Obianuju et al., 2015). Parsa et al. (2013) show that verbal-linguistic intelligence plays a vital role in communication.

Based on this background, this research seeks to determine how students develop their language skills through verbal-linguistic intelligence-based learning design.

B. Review of Literature

1. Language Skills

   The dominant language allows people to communicate with others in the same region or country (Grenier & Zhang, 2021; Yoestara & Putri, 2020). There are four skills in language teaching: listening, speaking, reading, and writing (Darancik, 2018; Greeno & Engeström, 2013; Hasanudin & Fitrianingsih, 2020; Yuliyanto et al., 2020). Speaking and writing skills are expressive or productive since they provide information, while listening and reading are receptive to receiving information (Lactic & Teo, 2020; Trihardini & Wikarti, 2022). Ivanova et al. (2020) stated that language skills benefit from expressing thoughts, feelings, wills, and reporting facts. On the other hand, language skills serve to understand the thoughts, feelings, ideas, and facts that others convey to us (Putra et al., 2017). Thus, it concludes that language skills consist of four aspects: listening, speaking, reading, and writing. These four aspects are interrelated and serve as means of communication in society.

2. Listening Skill

   Listening skills are one of the essential competencies in language skills because students spend most of their time listening. Listening is
necessary for language skills, including in learning activities, because a good learning process means that students listen as well as possible. Students' good or bad learning outcomes cannot be separated from how much listening activity is successfully carried out (Madani & Kheirzadeh, 2022; Tuzcu & Dilidüzgün, 2014).

Listening is a receptive spoken language comprehension skill (Djabborova, 2020). Listening skills are not just listening to the sounds of language through the hearing device, but at the same time, those are understanding its meaning. Listening is different from hearing, although they use the same hearing device. Hearing is accidental, involuntary, and effortless. While listening is voluntary, which needs attention and concentration to understand adequately.

Listening is the process of deep listening and focusing on an object. The ability to listen has the following indicators, namely: (a) being able to retell the content of the story, (b) being able to understand the meaning (content) of the story, (c) being able to demonstrate/imitate the story, (d) being able to improve knowledge, and (e) being able to take lessons (wisdom) from the stories (Putri & Dharmawan, 2022).

3. Speaking Skill

Speaking, in general, can be interpreted as the delivery of one's intentions (ideas, thoughts, heart) to others using spoken language so that the intention can be understood by others (Grosz, 2018). Menurut Torky (2006) argues that speaking is the ability to express articulated sounds or words to express thoughts in the form of ideas, opinions, desires, or feelings to speech partners.

Speaking skills are related to the ability to appropriately choose language sounds (in the form of words, sentences, as well as emphasis and tone) and to transform them appropriately to convey thoughts, feelings, ideas, facts, and actions in a particular communication context. People can acquire or improve their language skills by studying the language at school, talking to others, and so on (Grenier & Zhang, 2021).
Darancik (2018) expresses that the ability to speak and understand a language is the ability of students to master certain situations in speaking and react appropriately to the cultural perception of the foreign language they learn as well as their own culture and efforts to understand. It is the ability to communicate with a communicative approach, foreign language teaching methods, and in a suitable environment to meet language communication needs (Mancil & Pearl, 2008). This ability can only be formed individually, in a foreign culture, society, etc., and through a change in perspective.

The general purpose of speaking is to communicate. According to Isda et al. (2021); Sundari & Marini (2022) states that speaking has three intentions, namely: (1) notify and report, (2) treat and entertain, and (3) persuade, invite, urge, and convince. Ali (2018) said that five components are generally arranged in the analysis of the speaking process, namely: pronunciation, grammar, vocabulary, fluency, and understanding Bohari (2019) said that the aspects involved in speaking are vocabulary, grammar, pronunciation, and content.

4. Reading Skills

Reading is defined as a process that involves the interpretation of code and understanding. Reading is complex, not only reciting but also involving visual activities such as translating written symbols into spoken words and the thought process of knowing and understanding the meaning of words (Nation, 2019). It concludes that reading is the activity of looking at the text and understanding the content of the text.

Reading skill is an active receptive language skill to get the message from the writer in written variety (Saefuddin et al., 2019). Gilakjani & Ahmadi (2011) explain that the primary purpose of reading is to get the right message from the text so the reader can understand it. It can be concluded that reading is a way of translating letters combined with words to convey the author's message. There is an indirect interaction between the reader and the writer through the written text. A person has good reading skills if s/he can: (a) determine the main sentence, (b) make questions based on the content of the text, (c) answer questions or details based on the
content of the text, and (d) make conclusions based on the content of the text (Dewayani et al., 2020).

5. Writing Skills

Writing is an essential communication tool for developing one's identity by contributing to developing other language skills (Vadivel et al., 2021). This may be due to technological advances, which harm students' writing skills due to the availability of ready-made assignments. Teachers also believe writing is a kind of communication, making them focus on the subject and ignoring the wrong writing style.

A good writer must have an excellent ability to use words (Hasanudin & Fitrianingsih, 2020). This ability can be developed through reading. Akyol and Boyaci-Altinay, (2019) mention that reading as an individual skill is acquired through education and will develop over time. Someone with good reading skills has good verbal skills (Hasanudin & Fitrianingsih, 2020). In addition, reading is part of the content of the theory of verbal-linguistic intelligence.

6. Verbal-linguistic Intelligence

Linguistic verbal intelligence is one of the nine multiple intelligences developed by Gardner in 1983. This intelligence allows people to communicate through language. Verbal-linguistic intelligence is the ability to be creative using spoken or written language (Yaumi et al., 2018). This is related to the ability to master the mother tongue or other spoken and written languages to communicate and express one's thoughts.

Someone with this intelligence understands the ability to manipulate the language's syntax, phonetics, pragmatics, and semantics (Halil, 2017). This intelligence should have been developed from an early age. The development process is obtained by providing stimulation to the five senses. This intelligence emerges when a person is arguing, convincing, entertaining, or teaching effectively through spoken words. Linguistic intelligence also appears when individuals compose sentences from some
vocabulary and convey their thoughts or feelings from those sentences. It is one of the most studied intelligence, along with mathematical logic intelligence, and is considered a universal intelligence because almost all of the world's population can speak, and most of them can read and write (Bartolomei-Torres, 2020).

In maximizing verbal-linguistic intelligence, educators can use a variety of strategies. According to Amstrong (2013), learning strategies based on verbal-linguistic intelligence are implemented by telling stories, brainstorming, recording, and writing journals. First, storytelling is a means to develop student's knowledge, concepts, and ideas. Furthermore, students can develop their communication skills. Second, brainstorming develops students' critical thinking patterns through the original ideas. Third, recording is a linguistic intelligence learning strategy since it helps students communicate, solve problems, and develop ideas. Fourth, writing a journal can be applied by creating a personal journal. Thus, students can practice the ability to make written notes and illustrated notes.

Linguistic verbal intelligence includes speaking, articulating, expressing, and conveying one's thoughts and feelings to the outside world in one or several languages orally and in written form (Yuliyanto et al., 2020). It also includes listening to and understanding others (Hoekstra & De Roos, 2014). People with verbal-linguistic intelligence are sensitive to patterns, arranged, systematic, good at debating, like to listen, like reading and writing, are easy to spell, like playing with words, have good memories about trivial things, and are reliable public speakers and debaters (Halil, 2017; Izzaty et al., 2018).

Individuals who have verbal-linguistic intelligence will show four aspects in themselves. The four aspects are rhetoric, mnemonics, explanation, and metalinguistic (Armstrong, 2009; Gardner, 2011). Linguistic intelligence is also seen in the ability to manipulate structure (syntax), sound (phonology), meaning (semantics), and practical use of language (pragmatics) (Hasanudin & Fitrianingsih, 2020). Children with high linguistic intelligence can be easily recognized. First of all, they usually enjoy talking, reading, and writing. Halil (2017) further explained that people with verbal-linguistic intelligence are
sensitive, systematic, and good at arguing. They love to listen, read and write, are easy to spell, play with words, remember things beautifully, even on trivial matters, and make excellent public speakers and debaters.

C. Method

In line with the objectives of this research, the researcher used a pre-experiment (Knapp, 2016; Marsden & Torgerson, 2012) with a one-group pretest-posttest design (Ma et al., 2019). One group pretest-posttest design is experimental research conducted on one group selected randomly, and the stability and clarity are not tested before being treated (Creswell, 2013). Through this design, the researcher wanted to determine the differences in the levels of language skills (speaking, writing, reading, and listening) of higher-grade students before and after treatment with a verbal-linguistic intelligence-based learning design.

Table 1: Research Design

| Subjek                  | Pretest | Treatment | Post-test |
|-------------------------|---------|-----------|-----------|
| Sixth-grade elementary school students | T₁     | X         | T₂        |

Remark:

T₁ : Pretest to determine the higher-grade students' language skills (speaking, writing, reading, and listening) before the treatment.
X : Treatment, teaching using verbal-linguistic intelligence-based learning design.
T₂ : Post-test, test after the treatment to see the results of its development.

The population was sixth-grade students at an elementary school in Garut regency who can represent elementary schools in Garut regency with poor education quality. A purposive sampling technique was used. The sample criteria for this study included students who: we are in the population group, were 11-13 years old, had taken the pretest of verbal-linguistic intelligence, and could read and write fluently. The samples had to take pretest and posttest. A total of 22 sample students were selected.
Data were collected through the distribution of test instruments to the students. The following procedures carried out data collection. First, the researchers conducted literature studies on language skills and verbal-linguistic intelligence. Second, the researchers arranged outlines of questions and instruments for the test based on the language skills theory. After the instrument was arranged, the researcher conducted a validity and reliability test on the expert. In addition, researchers also conducted field trials with sixth graders in the study population area (outside the research sample). It aimed to examine the validity of the content and its reliability.

The instrument was tested to measure language skills (listening, speaking, reading, and writing). Each language skill was measured using an assessment rubric based on its relevant indicators. Before being distributed to the sample, the test instrument was tested for validity and reliability. The score was 0.35, so the instrument was valid. This result is as stated by Anggrawan and Jihadil (2018) that if the validity score is more significant than 0.3, the item can be said to be valid. The reliability score was 0.7, which means that the instrument is reliable with a good category. This is as stated by Roux et al. (2021) that, if Cronbach's Alpha value is > 0.60, the questionnaire is reliable or consistent.

When the validity and reliability testing had been completed, the researcher distributed the test instrument to all students (research samples). It was called a pretest. This test was conducted before the students got learning based on verbal-linguistic intelligence. After pretests, the researchers applied to learn based on verbal-linguistic intelligence in sample classes during several meetings. Then, the researchers conducted a posttest at the end of the meeting. The researchers made eight meetings since the eighth meeting completed the learning materials. Treatment activities were related to the stages of learning based on verbal-linguistic intelligence.

The pretest and posttest results were assessed using a rubric for each indicator on a scale of 1 to 5 and then converted to a value of 100 with four categories: poor, enough, reasonable, and very good. Data analysis was carried out on pretest and posttest data, including normality, homogeneity,
and mean difference tests using SPSS 22 software. A normalized gain test was carried out to find out the increase in language skills.

Data analysis was carried out on pretest and posttest data, including normality test and mean difference test, as well as normalized gain to determine the improvement of students' language skills. The basis for decision-making in the data normality test is if the significance value is more significant than 0.05, the data are typically distributed. However, if it is less than 0.05, the data are not normally distributed. From the normality test results, the significance value is 0.079, so the group's data are typically distributed. The normalized gain test was conducted to improve language skills training using a verbal-linguistic intelligence learning design. The categorization of the acquisition of the N-gain score is determined by the N-gain score and the N-gain score in the form of a percentage (%). The division of categories of N-gain values is shown in Table 1 below.

| N-Gain Score | Category  |
|--------------|-----------|
| g > 0.7      | High      |
| 0.3 ≤ g ≤ 0.7| Medium    |
| g > 0.3      | Low       |

D. Result and Discussion

This research carried out learning five times for approximately one month and two weeks. Previously, the students were given a pretest to determine their initial ability. The pretest results obtained the average language skills (listening, speaking, reading, and writing) as follows.
Figure 1 shows the average pretest scores, which include the following four skills: listening (68), speaking (69), reading (70), and writing (68). These results show that the skills with low scores are listening, speaking, and writing. Overall, the average score of the student's language skills was 69. This is because the learning process is still classical, resulting in students being less active and affecting their language skills. This is in line with the opinion of Kessler (2018) that the ability to produce language products will be significantly influenced by student activity in the learning process. Besides being influenced by activity, the increase in language skills is also influenced by the model set by the teacher. The classical model applied is a factor that influences the low score of student skills. It is as found by Asmar & Delyana (2020) that 75.76% of students did not maximally follow the classical learning model. Students think new and unique strategies are needed to maximize learning with the classical model. Another finding is evidenced by Winarni & Lutan (2020) that classical learning is not more effective than cooperative learning. This results in the student's cognitive scores not being maximized and students' skills not increasing.

In addition to the pretest scores, posttest scores were also obtained. Students in the sample class carried out posttest activities. This activity was carried out after learning with a verbal-linguistic intelligence-based learning design. The average posttest scores are as follows.

![Average Posttest Scores of Language Skills](image-url)
Figure 2 shows the increasing scores of the four language skills after applying the verbal intelligence linguistic learning design. Based on the data, the average scores of language skills have improved. The listening, speaking, reading, and writing scores are 84, 81, 84, and 84, respectively.

The results confirm that teaching with verbal-linguistic intelligence influences student learning outcomes. This influence is also based on the theory of verbal-linguistic intelligence. This is the theory stated by Gardner (2011) that verbal-linguistic intelligence is intelligence to process words and is the universal intelligence of other intelligence. This intelligence involves word processing, both spoken and written. Thus, it is not surprising that learning design based on verbal-linguistic intelligence can maximize students' language skills because this design can bridge students to understand phonology, syntax, and semantics, convince them to follow the stages of learning, help them remember information, enable them to explain and communicate knowledge and help them reflect language material. Armstrong (2009). Verbal-linguistic intelligence-based learning strategy focuses on improving language skills (Lwin, 2008). This strategy can be implemented in storytelling learning, exchanging ideas through writing, expressing opinions (speaking), and listening.

The comparison of language skills before and after applying the verbal intelligence linguistic learning design can be seen in Table 2 below:

| Language Skills | Student Frequency | Pretest | Posttest |
|-----------------|-------------------|---------|----------|
| Listening       | 68                | 84      |
| Speaking        | 69                | 81      |
| Reading         | 70                | 84      |
| Writing         | 69                | 84      |

Table 2 above shows that the average scores of students' four language skills have increased. Reading skills improve with the most significant difference. It has four indicators: understanding a simple definition, understanding meaning, evaluation, and reading speed. The improvement is
in line with the finding of Makransky et al. (2019) that students' reading activities have increased faster because every time they learn, they are required to read the subject matter, either individually or in groups. In other words, the frequency of students' reading activities is more than that of other language skills (Muhid et al., 2020). In addition, other language skills (writing and speaking) are also obtained after students finish reading (Namaziandost et al., 2019). Reading activities will stimulate student participation in groups and individually.

Furthermore, the gain test was carried out on the pretest and posttest results through the paired sample t-test. The test is carried out when there is a significant difference between the average pretest and posttest scores. The results of the analysis calculations can be seen in Table 3 below.

| N | Gain Test on Students' Language Skills |
|---|--------------------------------------|
| **ean** | **N-gain** | **Category** |
| Before treatment | 69 | 0.44 | Medium |
| After treatment | 83.25 | |

Table 3 above shows that the average score has increased with a normalized gain test of 0.44 in the medium category. Based on this result, it can be concluded that there is an increase in students' language skills by applying the verbal intelligence linguistic learning design. The improvement of language skills includes listening, speaking, reading, and writing skills. These four aspects affect each other. This statement is in line with the opinion of Rao (2019) that language skills develop each other.

From the results of the research, learning design based on verbal-linguistic intelligence can improve students' language skills. In this learning design, the scores in every aspect of language skills were significantly increased. The optimal learning design applied influences an increase in every aspect. It is well known that, with verbal-linguistic intelligence, students can express themselves orally and in writing and master foreign languages. In line with that, Arulselvi (2018) explains that verbal-linguistic intelligence shows students' strengths in the language (speaking, writing, reading, and listening).
Verbal-linguistic intelligence-based learning design suits today's needs, especially language learning. The development of learning based on verbal-linguistic intelligence has proven to be effective in teaching mathematics (Tebe et al., 2019). In its development, the verbal-linguistic intelligence in multiple intelligences-based learning includes the aspects of reading, telling stories, writing, listening, reporting, presentations, storytelling, writing, and others (Alliou & Zorig, 2021). Furthermore, learning strategies based on verbal-linguistic intelligence are essential to improving students' language skills.

As we know, students' language skills are greatly influenced by the development of the times in the current era. Language development is an integral part of personality. It is not just a skill that can be taught but is based on life experience. One cannot speak of what has never been experienced. Children want to touch, smell, taste, and see. They use their senses to get many impressions. Adults automatically match a child's activity with the appropriate words. A child with little touch and contact usually has little vocabulary (Hoekstra & De Roos, 2014).

The ability to speak and express ourselves is an element that distinguishes us as humans. From childhood, we listen and observe the relationship of sound to its meaning. Today, verbal and linguistic skills are continuously evaluated in schools. However, little is known about the possibilities of stimulation and its development. Like interpersonal intelligence, verbal-linguistic intelligence is based on one of the pillars of human adaptation, social interaction. Its development depends on listening, speaking, reading, and writing (Bartolomei-Torres, 2020).

The development of verbal-linguistic intelligence has been significant in the formation of humans since childhood. We live in a globalized world where the ability to communicate and listen has become an essential skill for success in both personal and work settings. These skills can be developed in the classroom and at home from childhood. The more open we are to reading, socializing, and listening, the more capable we can use language to solve problems. When we develop this intelligence, we will have better communication skills and relationships with others (Bartolomei-Torres, 2020).
In line with the results of this research, previous studies found that linguistic intelligence was the most dominant compared to others and correlated significantly with all language skills (Ahmadian et al., 2012; Desvitasari, 2015; Ghafarian & Amiri, 2016; Naseri & Ansari, 2013; Rahimi, Sadighi, & Hosseini, 2011; Wijaya, 2014). Then, linguistic intelligence has a positive relationship with linguistic competence, such as awareness of affixation, remembering lexical items, and students' lexicon knowledge (Al-Mekhlafi, 2015; Parsa et al., 2013; Shakouri et al., 2016). In addition, linguistic intelligence was found to be one of the dominant intelligence influenced by several internal and external factors, such as physical and emotional conditions, learning styles, teachers, teaching media used, and school programs, and there was no difference in the linguistic intelligence between men and women.

E. Conclusion

It was found that there were differences in the levels of students' language skills before and after applying the verbal-linguistic intelligence learning design. The difference in improvement is also evidenced by the N-gain value of 0.44 (medium category), meaning that the verbal-linguistic intelligence learning design has improved students' language skills. This finding can be used as literature for several experts or teachers digging for information about the design of verbal-linguistic intelligence learning. In addition, this finding can also be a reference for teachers or lecturers to apply verbal-linguistic intelligence designs to language learning in the classroom, whether at the elementary school, high school, or college level. From the results and implications obtained in this research, it is suggested that future researchers conduct broader research, such as developing learning designs based on verbal-linguistic intelligence to improve critical, creative, or communicative thinking skills. They can also conduct research with this analytical approach where the data are analyzed qualitatively to obtain rich data.
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