

THE RELATIONSHIP BETWEEN LINGUISTIC INTELLIGENCE AND STUDENTS' COGNITIVE ABILITIES IN THE SUB-CONCEPTS OF DISASTER RESPONSE ACTIONS

Rifqy Kiara Cahyaningrum ¹, Partaya ², Aditya Marianti ³

^{1,2,3} Program Studi Pendidikan IPA, Fakultas Pascasarjana, Universitas Negeri Semarang
Semarang, 50237, Center Java – Indonesia
rifqykiara@students.unnes.ac.id

Accepted: April 10, 2022

Published: April 30, 2022

DOI: 10.21107/jps.v9i1.12866

ABSTRACT

This research is a correlational study that develops quantitative descriptive research. This study aims to obtain information about the relationship between linguistic intelligence and cognitive abilities in the sub-concepts of disaster response actions and other factors that influence it besides linguistic intelligence. This research was conducted in September 2019. The population of this study was MTS Darul Irfan students of Serang City in the academic year 2019/2020. The sampling technique uses simple random sampling. The sample was 24 students of class VII-A. The data collection method is done by tests, documentation, student worksheets, and observations. Based on the regression and linearity test results, it can be concluded that the simple regression analysis with the equation $Y=37.986+0.038X$ is linear. Based on the result of quantitative research, the correlation coefficient between linguistic intelligence and cognitive abilities is 0,0030. This correlation coefficient value indicates that H_0 is rejected and H_1 is accepted, meaning linguistic intelligence weakens student cognitive abilities. In this study, other factors affect student cognitive abilities, among others, strategies and learning methods, development of learning media in schools, and environmental factor of students.

Keywords: *Linguistic Intelligence, Students' Cognitive Abilities, Sub Concepts of Disaster Response Actions.*

¹ Corresponding Author

Introduction

Education in Law No. 20 of 2003 concerning the National Education System is a conscious and planned effort to create a learning atmosphere and learning process. Students actively develop their potential to have religious, spiritual strength, self-control, personality, intelligence, noble character, and the necessary skills: themselves, society, nation, and state. One of the attitudes that students must develop in developing their potential is being able to communicate ideas or problems solving. It follows the Graduate Competency Standards (SKL) for SMP/MTs in the 2013 curriculum, which includes the dimensions of attitudes, dimensions of knowledge, and dimensions of skills. In the dimension of skill qualification, the abilities that junior high school graduates must possess are to have the ability to think and act: creative, productive, critical, independent, collaborative, and communicative through a scientific approach following what is learned in academic units and other sources independently.

In the current 2013 curriculum, learning is no longer emphasized on language knowledge but language skills. The language skills in question include listening, speaking, reading, and writing skills. In this case, the teacher's role needs to be prepared to present teaching materials or materials, determining what activities are carried out with their students. Confidence in communicating and expressing oneself both orally and in writing is one of the characteristics of someone who has linguistic intelligence.

All students from birth have all types of intelligence, but only one or two kinds of intelligence develop better. Genetic and environmental factors can influence the development of students' intelligence, so each student has a different intelligence. It follows the opinion of Gardner (2013), who states that intelligence is classified in to nine types, each of which complements the other. This intelligence includes linguistic, mathematical, visual/spatial, intrapersonal, emotional, interpersonal, naturalist, kinesthetic, and musical.

Intelligence in science learning focuses on logical-mathematical, visual and spatial, kinesthetic, and naturalist intelligence. It also requires good linguistic intelligence for students. Linguistic intelligence is the ability to use words effectively, both orally and in writing. Linguistic intelligence in science learning can be seen in how students communicate the results of an experiment or project either through writing in a practicum

report or orally or through a presentation. Individuals with high linguistic intelligence can express well what is in their minds so that their interlocutors can capture them. Linguistic intelligence needs to be stimulated in students by providing a series of activities that require students to actively communicate both in groups and individually in front of the class.

Linguistic intelligence is universal and must be owned by everyone. It is in line with research that there is no effect of gender differences on the linguistic intelligence of students (Irvaniyah, 2014). It means that linguistic intelligence is indeed found in everyone. Gardner (Munif, 2012) says, "linguistic intelligence has a core component of sensitivity to the sound, structure, meaning, function of words. The linguistic intelligence brain area is located in the left temporal lobe and frontal lobe (Simanjuntak, 2008). If this area is given the appropriate stimulus, the competence to read, write, discuss, argue, and debate will emerge. Linguistic intelligence affects language skills.

The reality is that in schools, students are only required to complete education following the predetermined KKM (minimum completeness criteria). The essential competencies required are only students can understand, so students' ability tends to be limited to the knowledge dimension, especially in the sub-concept of disaster risk reduction. Whereas in the basic competency dimensions of skills, students are required to be able to communicate efforts to reduce the risk and impact of natural disasters and self-rescue actions in the event of a disaster. Abstract sub-concepts of disaster risk reduction for students who have never experienced a disaster are discussed in learning materials, causing students to be fixated on the material in the book. Students cannot construct their thoughts and their ability to express opinions about what to do. To prevent or overcome disasters. Linguistic intelligence emphasizes four language skills: listening, speaking, reading, and writing. In addition, according to previous research that has been done, it can be concluded that there is a significant relationship between students' linguistic intelligence and their writing learning outcomes. Namely, the more excellent the linguistic intelligence students possess, the more fantastic the opportunity for their writing results (Wiwitan, 2013).

Using media as teaching materials using worksheets, school textbooks, and powerpoints made by teachers has not increased students' cognitive abilities. The burden of much material with a limited time allocation makes it difficult for teachers to apply it in class. The impact is that the

The Relationship Between Linguistic Intelligence and Students' Cognitive Abilities

ability of students to build concepts is lacking, long-term memory is low, and student learning outcomes are not optimal. In addition, based on interviews with science teachers and based on observations during PPLK activities in schools, it is known that there are still some misconceptions made by teachers in designing learning when the basic competence required is that students can communicate. However, the learning process designed by the teacher is not relevant or not in line with the basic competencies required. Teachers only instill concepts in students without designing learning that facilitates students to communicate or express their ideas as requested in basic competencies. Therefore, this research focuses on students' cognitive development in terms of their linguistic intelligence. Based on the background of the problem expressed, it is expected to be able to find out whether or not there is a relationship between linguistic intelligence and the cognitive abilities of students in the sub-concept of disaster risk reduction actions.

Research Methods

The research method used in this study is quantitative. Data collection using research instruments and data analysis is quantitative/statistical to test the established hypothesis (Sugiyono, 2012). This type of research is correlational research, which develops quantitative descriptive research. This correlation research was conducted to determine the relationship between the independent variable, namely linguistic intelligence, the X variable, and the dependent variable, namely the students' cognitive abilities, which is the Y variable. The two group data were then processed to determine the relationship between the X and Y variables.

This research was conducted at MTS Darul Irfan, Serang City, Serang City for the 2019/2020 academic year from September 21, 2019, to September 28, 2019. The research subjects in this study were class VII students, and the sampling technique in this study was simple probability sampling. Random sampling uses one class selected randomly without any specific criteria. The class contains 24 students.

Data collection techniques used in this study were tests and non-tests. Assessment of students' cognitive abilities uses question instruments and a testing technique, namely an objective test in multiple choices, totaling 27 questions. In the cognitive ability variable, indicators are made and then described in the form of cognitive questions at

the levels of C1 (remembering), C2 (understanding), C3 (applying), and C4 (analyzing). This test is given at the end of learning (posttest), which aims to determine students' cognitive abilities.

The test instrument that has been tested is then analyzed for the instrument, including validity, reliability, level of difficulty, and discriminatory power. The validity of each item is known by using SPSS version 20 software. The results of valid cognitive questions are 27 questions out of a total of 50 questions. Each multiple-choice question is used to determine its reliability using SPSS version 20 software. The results of cognitive questions have a reliability value of 0.773 which means that the reliability of the questions is high. The level of difficulty of each question is known with Microsoft Excel software. After being tested and measured with Microsoft Excel, the results of good cognitive questions were 27 questions with the characteristics of 3 easy questions, 17 medium questions, and seven difficult questions. The discriminating power of questions can be known by using Microsoft Excel software. After being tested and measured with Microsoft Excel, the results of good cognitive questions were 27 questions in the form of 15 good questions, two wrong questions, eight outstanding questions, and two medium questions.

They collect non-test data using an observation sheet, namely a linguistic intelligence assessment sheet with a rating scale. The rating scale used is a Likert scale with a range of 1-3, which refers to the rubric of linguistic intelligence observation. Assessment is carried out during learning, and compelling reading and writing indicators are taken when students fill out student worksheets. Indicators of listening, imitating, and speaking effectiveness were taken when the simulation activity. The instrument of the observation sheet for the assessment of linguistic intelligence was first carried out by an expert test (judgment). The result of the expert test is that the linguistic intelligence assessment observation sheet is valid, with suggestions for adding an explanation to the assessment indicators.

The value of cognitive abilities obtained by each student at the end of the lesson is then scored. The scoring used in the objective test (multiple choice questions) is that the correct answer is given a score of 1, while the wrong answer is given a score of 0. The total score obtained by the students is then processed to obtain the value of their cognitive abilities of the students. The value obtained is then converted into the criteria for cognitive abilities.

The assessment of students' linguistic intelligence in this study used an observation sheet containing five indicators of linguistic intelligence, which were assessed using a Likert scale with a range of 1 to 3 depending on the number of indicators that appeared to students. The results of the linguistic intelligence score will be interpreted into the category of students' linguistic intelligence.

Result and Discussion

The results obtained in the normality test for the linguistic intelligence variable are 0.123 and for cognitive abilities are 0.444, which means the data is usually distributed because the value exceeds the significance level of 0.05. The homogeneity test results obtained are 0.124, which means that the variance of the two data groups is the same or

homogeneous because the value exceeds the 0.05 significance. The result of the correlation test between linguistic intelligence and cognitive ability is 0.060, which means that there is no correlation between the two variables. In contrast, the significance obtained in the Pearson Product Moment correlation test is 0.780, which means that the significance value is more significant than 0.05. This value can be interpreted as no relationship between linguistic intelligence and students' cognitive abilities in the sub-concept of disaster risk reduction actions. The coefficient of determination obtained is 0.3627, so it is interpreted that the X variable has a 36% contribution effect on the Y variable, which means that linguistic intelligence has a small contribution to cognitive ability (see Figure 1).

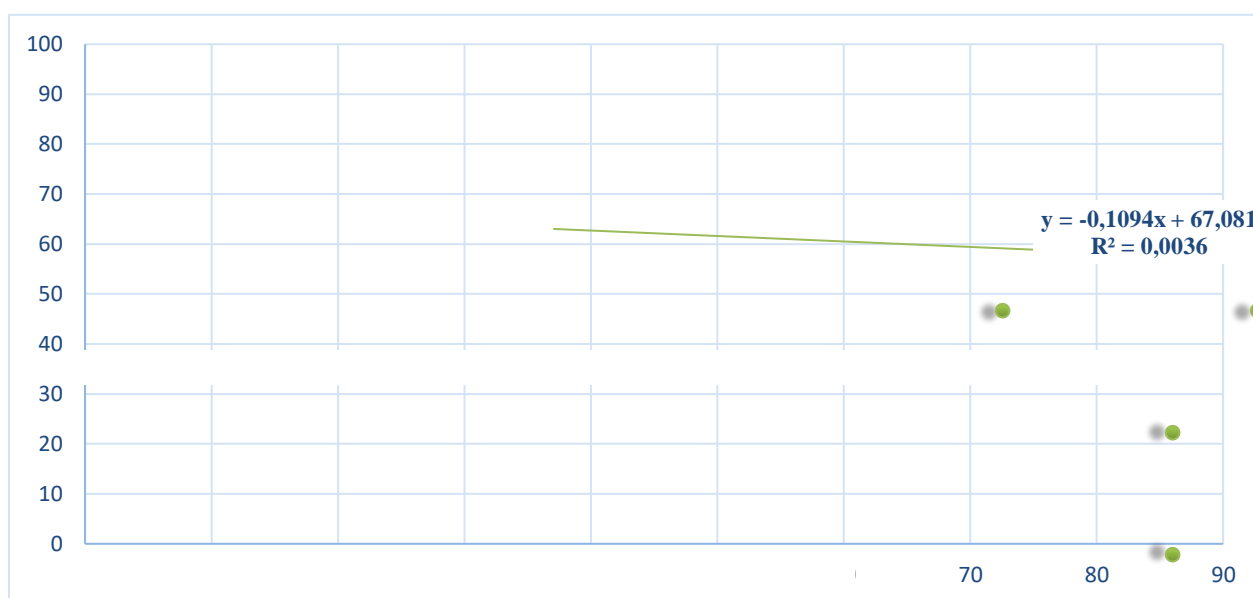


Figure 1. Graph of Regression Equation

The simple regression coefficient calculation results in Figure 1 show that the constant-coefficient value is 59,113. The coefficient of linguistic intelligence (X) is -0.033. The regression equation obtained is $Y=59.133-0.033X$. The negative value (0.033) contained in the coefficient of the independent variable describes the direction of the relationship between linguistic intelligence and cognitive ability. It means that linguistic intelligence is negatively related to cognitive ability, which means that if the linguistic value increases by 1%, the cognitive value will decrease by 0.033. It is because the effect of cognitive ability with linguistic intelligence is negative. Hence, the relationship between the variables reverses direction.

Linguistic Intelligence in Learning

Linguistic intelligence is one intelligence that everyone must possess, even though the level is different. The development of one's potential in arguing both orally and in writing can be seen from the level of linguistic intelligence. Linguistic intelligence can be measured based on the indicators described in the linguistic intelligence assessment scores rubric. These indicators include effectively listening, imitating, reading, speaking, and writing. Each of these indicators is described in the scoring rubric. Overall, students' linguistic intelligence category results can be seen in Figure 2.

The Relationship Between Linguistic Intelligence and Students' Cognitive Abilities

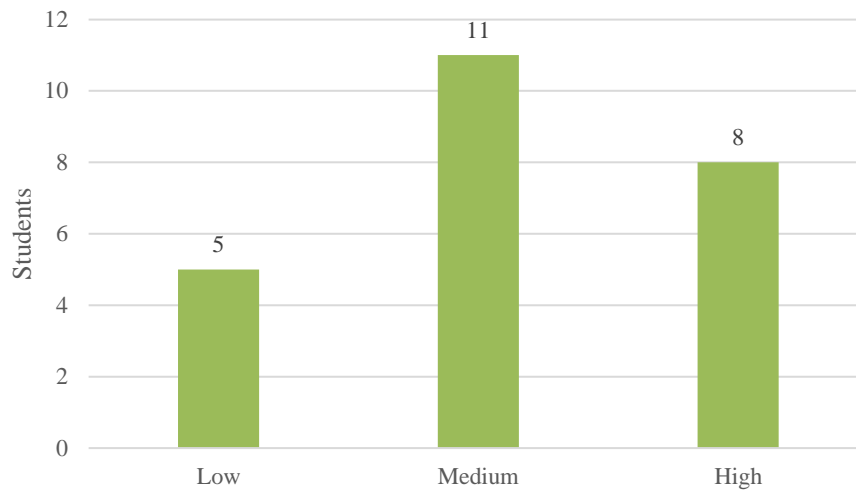


Figure 2. Categories of Students' Linguistic Intelligence

Students always respond when given directions during the learning process, reflecting that linguistic intelligence has grown in students, where one of the indicators of linguistic intelligence is listening. In the learning process, students explore their knowledge of the sub-material of disaster risk reduction actions, ranging from causes, mechanisms, and impacts to what actions should be taken when a disaster occurs. Students in groups carry out information mining. The problems presented in learning show the ability of students to express their opinions both in writing and orally. Simanjuntak (2008) reinforces this opinion, stating that if the appropriate stimulus is given, it will bring up the competence to read, write, discuss, argue, and debate. When students can express their opinions through an effective reading process, the learning process has integrated the existence of linguistic intelligence into the sub-concept of disaster risk reduction actions.

Based on Figure 2, students have different categories of linguistic intelligence. The average category of students' linguistic intelligence is in the medium category, namely 11 people in the medium category, five in the low category, and eight in the high category. It can be interpreted that the students in the class have moderate linguistic intelligence because almost half of the students in the class have moderate linguistic intelligence. Based on the calculation of scores per indicator, the indicators of speaking effectively, writing effectively, and reading effectiveness are a reason students get linguistic intelligence in the medium category. Some students can get a maximum score in the assessment range, which is a score of 3.

Effective speaking is assessed when students present their findings and when simulation activities

occur. Learning activities that use the simulation method facilitate students to express their opinions because, in simulation activities, students exchange ideas with their groups. According to Armstrong (2013), this is following the opinion about the development of linguistic intelligence, one of which can be done by exchanging ideas/brainstorming (children can express verbal thoughts that can be collected and written on paper, blackboard, or other media). This strategy makes all the children come up with their ideas. In the simulation activities, students have been distributed each role that must be done. So the assessment of speaking effectively when the simulation activities are active, students who play an active role in simulation activities will get the maximum score if they meet the aspects requested in the rubric.

In the listening indicator, all students have not achieved the maximum score because of understanding, interpreting, and remembering what has been said well. Almost all students can only master or show one to two aspects, namely the aspect of understanding and remembering what has been well said. Students get a score of one because, in general, they can remember what has been said well but do not understand what the teacher said. Understanding themselves is catching or understanding what the teacher or friend means. The most challenging aspect for students to achieve in the listening indicator is interpreting. Interpreting is if students can give meaning or explain what the teacher means.

The imitation indicator is assessed during the simulation. Students have worked on student worksheets containing what disaster risk reduction actions should be taken before, during, and after a disaster. All students have not achieved the maximum score because the aspect showing the

ability to learn a language, reading and writing from other people well, students can only master or show one to two aspects, namely the ability to learn reading writing from other people. Learning to read is when students can simulate according to what has been written in student worksheets while studying writing when students can transfer information in the source texts obtained according to what is needed in student worksheets. Learning other people's language well has not been able to appear to students because there are still students' perceptions of students during the simulation, so the teacher's direction is still needed to adjust to the correct concept.

Effective reading indicators are assessed when students have worked on student worksheets. Before the simulation starts, students have reviewed what has been written on student worksheets again. Aspects of understanding, summarizing, interpreting, or explaining and remembering what has been read well are given a maximum score if students can explain what is written in student worksheets.

Indicators of writing are effectively assessed on the student worksheets students have done. Aspects of understanding and applying the rules of

grammar, pronunciation, punctuation, and using vocabulary effectively are given a maximum score if students can fill out student worksheets according to the requested aspects. The score is given equally to each group member because the student worksheets are done with the group outside of class hours.

Cognitive Ability of Students in Learning with Linguistic Intelligence

Cognitive ability in this study is the ability of students in the cognitive domain, which can be measured based on the indicators of their emergence. This ability is used to measure the cognition of students. Cognitive ability can be measured through objective tests in multiple-choice, totaling 27 questions with levels C1 (remembering) to C4 (analyzing) given after learning is complete. The results of each child's cognitive abilities are different; some get scores in the very low to high category. Differences in cognitive ability scores that have been tested through multiple-choice objective tests of 27 questions are described in the cognitive ability criteria. The criteria for students' cognitive abilities can be seen in Figure 3.

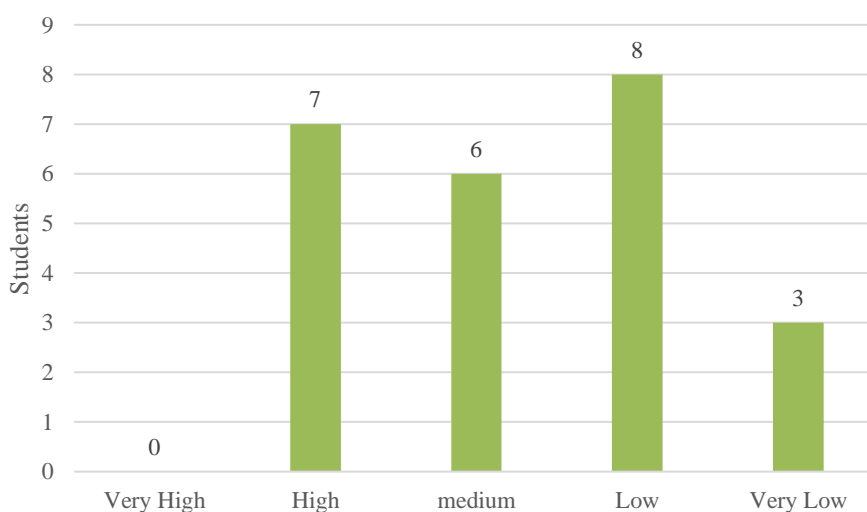


Figure 3. Criteria for Students' Cognitive Ability

The research results on students' cognitive abilities in Figure 3 show that the cognitive abilities of students in that class are in a low category because only one student can achieve the minimum completeness criteria value. It shows that the seventh-grade students of MTS Darul Irfan Serang City have low science cognitive abilities. Based on Figure 1.2, it can be seen that the students who got very low to low scores were 11 people (scores <45-55), the average scores were six people (56-65

scores), and the high scores were seven people (66-79 scores).

This study uses six indicators in the learning process with cognitive levels C1-C4. Each question has a different level with the same weight, that is if the correct answer gets a score of one if the wrong one gets a score of 0. Level C1 is ten questions, level C2 is eight questions, level C3 is five questions, and level C4 is four questions. Based on the distribution of cognitive levels in the questions, the C4 cognitive

The Relationship Between Linguistic Intelligence and Students' Cognitive Abilities

level with questions regarding risk reduction actions before, during, and after the tsunami got the highest average of 0.68. The C2 cognitive level with questions about explaining the tsunami mechanism and analyzing risk reduction actions before, during, and after the earthquake got an average of 0.57. The C1 cognitive level with questions about describing the mechanism of earthquakes and understanding the mechanism of volcanic eruptions got an average of 0.54. While the cognitive level C3 by analyzing risk reduction measures before, during, and after the volcanic eruption, gets an average of 0.49.

The learning activities carried out were in the indicators describing the earthquake mechanism, understanding the mechanism of volcanic eruptions, and explaining the tsunami mechanism. Students were asked to work on student worksheets by discussing during the learning process. Then student representatives presented the results of their group findings. Discussion activities are also inseparable from the role of the teacher in it, who must provide direction to students during discussions so that there is an interaction between teachers and students and the teaching and learning process can run well.

The indicators analyze risk reduction actions before, during, and after the earthquake, analyze risk reduction actions before, during, and after volcanic eruptions, and risk reduction actions before, during, and post-tsunami activities carried out are students fill out worksheets of students with their groups outside the hours of teaching and learning activities in class, besides that students simulate and present their findings. Learning activities are made varied to facilitate students to create learning experiences and increase student learning outcomes.

This difference in cognitive ability cannot be separated from several factors. Susanto (2011) states that factors affect cognitive abilities, among others, heredity factors, environmental factors, maturity, formation, interests and talents, and freedom. In this study, one of the factors that influence the environment. Based on the results of interviews with the science subject teacher who happens to be the homeroom teacher of the respondents, information is obtained that social and environmental factors play a role in students' cognitive abilities. The teacher's social and environmental factors are biased by family, peers, and the school environment. It is in line with the statement according to Slameto (2013) that the factors that influence the success of students' cognitive learning include environmental factors. The environmental factors in question include the family environment (home atmosphere,

relationships between family members, and the way parents educate), the school environment (teaching methods, student-student relationships, student-teacher relations, building conditions, and learning tools), environmental factors the community environment (student activities in the community and friends to hang out with).

In addition, the learning tools used should also consider the characteristics of students both as individuals and in groups so that learning programs in schools will be effective if they follow the characteristics of students who are learning. It is reinforced by the opinion of Chaerunnisa (2017), who states that learning tools should be arranged according to the characteristics of students so that they can provide opportunities for students to develop their potential.

Analysis of the Relationship of Linguistic Intelligence with Students' Cognitive Ability

The relationship between class VII students' linguistic intelligence and cognitive abilities in the sub-concept of disaster risk reduction actions at MTS Darul Irfan Serang City can be known using prerequisite test analysis. The next stage is a simple linear regression test and a correlation test using the Pearson Product Moment test technique.

The correlation results obtained by linguistic intelligence do not correlate with cognitive abilities. It can be seen from how significant the contribution of numbers is to the coefficient of determination. The coefficient of determination is needed to explain the dependent variable by the independent variable of r^2 , and the rest is explained by other variables (Robert, 2016). The determination coefficient data show the number 0.3627, which means that linguistic intelligence makes a small contribution, 36%, to students' cognitive abilities. Other factors influence the rest. It is also following the research results conducted by Wiwitan (2013) on the influence of linguistic intelligence on students' narrative essay writing learning outcomes. Linguistic intelligence does not provide a different effect on the progress of students' writing learning outcomes.

In this study, the correlation between linguistic intelligence and students' cognitive abilities was 0.060, meaning no relationship between the two variables. It is supported by the small contribution value of only 36%, and several factors influence the rest. Factors that influence the contribution of linguistic intelligence, namely, the first factor is learning strategies and methods. Kumojoyo (2011) states that six factors influence multiple intelligences: teachers, parents, subject

matter, teaching methods, environment, and children. Teachers who more often only use strategies and lecture methods do not facilitate students to be able to develop their linguistic intelligence. Therefore, learning strategies and methods should be made in multi-directional communication to facilitate student's develop their linguistic intelligence. According to Handayani (2014), this is reinforced that the suitable methods and teaching can help improve the performance of high-level domains from the start. Based on the data that has been processed, it is found that the C3 cognitive level has the lowest percentage. It is inversely proportional to the C4 cognitive level. The learning indicators analyzing tsunami risk reduction actions are integrated with learning indicators analyzing volcanic eruption risk reduction actions. Students play an active role in simulating volcanic eruption and tsunami risk reduction actions in learning activities. Different learning experiences cause students to be able to remember the learning material that has been given because learning is student-centered. Students find the activities that students should do, and students simulate the activities that students find for risk reduction actions for volcanic eruptions and tsunamis.

The learning indicator simulating the C3 cognitive level gets the lowest percentage because students only discuss and fill out student worksheets at the beginning of learning. In contrast, at the time of simulating, students are required to be able to plan what will be done by looking for valuable reference sources. At first, students are not used to looking for good sources and planning activities that students will do. Thus, learning activities that require students make it difficult to develop their mindset because students only focus on finding information for risk reduction actions for volcanic eruptions. The questions given at the C3 level are based on the validation results and categorized as moderate to complex questions.

Meanwhile, the learning indicator related to the C3 level is the second indicator with the C2 level, which in the learning activity, the learning indicator has an active verb to explain. Students only do activities to fill out student worksheets. These activities should be the basis so that the indicators of simulating the information obtained by students become strong to improve students' cognitive abilities from simulation activities.

All materials in science lessons require good linguistic intelligence in students. Linguistic intelligence is closely related to how students describe, understand, describe, analyze and re-explain the concepts they have received, both in written form, which can be in practicum reports, or

oral form during discussions. Therefore, to optimize students' linguistic intelligence, it must be grown through appropriate strategies and learning methods and follow the material so that linguistic intelligence can be optimal. Linguistic intelligence plays an essential role in all subjects. The main subject of linguistic intelligence is communication through reading, writing, listening, and speaking.

In addition, learning media also plays a role in improving student achievement. It is reinforced by Ekayani (2017) that learning media can function to accelerate the learning process. This function means that with learning media, students can capture objectives and materials more efficiently and faster to improve the quality of the teaching and learning process. The teacher has used student worksheets at school, but these worksheets are just like short questions with closed answers. Student worksheets that are not open do not provoke students to hone their linguistic intelligence and cognitive abilities because the expected answer is specific. However, learning media or methods are not the most determining factors for learning achievement and students' language skills. It is reinforced by Kapoh (2010), who says that the method is not the most decisive factor in the success of language skills but is only one factor among several factors. Various factors influencing one's language acquisition include age, talent, motivation, inter and linguistic difficulties, and intelligence.

In this study, five students had low linguistic intelligence with three high cognitive categories and two moderate cognitive categories. Students with moderate linguistics and high cognitive category as many as one person, medium cognitive category as many as three people, low cognitive category as many as five people, and very low cognitive category as many as two people. Students with high linguistics with very low cognitive categories are one person. The low cognitive category is three people, the moderate cognitive category is one person, and the high cognitive category is three people. It can be influenced by several factors, one of which is the characteristics of students.

Some students find it easy to express their opinions orally, but some are more comfortable with writing. In addition, the learning styles of students also vary. When given a question or question, some students immediately do it. Some are playing or taking a walk, so the teacher needs assistance during the learning process. Some students must be demonstrated or given examples in everyday life before they can understand the meaning of the questions given by the teacher. The students who got the high linguistic category in the sample class were women based on the data obtained. It is easier

The Relationship Between Linguistic Intelligence and Students' Cognitive Abilities

for female students to express what they want to say in written and oral forms than male students. Female students pay more attention and focus on learning to understand what the teacher is asking for better than male students. Kapoh (2010) stated that several research results have determined that language growth in girls is faster than in boys. It can be found in the vocabulary, the length of sentences, and understanding.

The social environment factors have little effect on students' linguistic intelligence and cognitive abilities. Based on interviews that have been conducted with homeroom teachers, this can happen because students of class VII odd semesters are still experiencing a transition period from elementary to junior high school. The influence of peers is powerful because students usually trust their peers more and underestimate older people because of maturity. Mentally not good, so they still can not respect older people. For example, when students are given assignments for group work, there are still students whose concentration is disturbed because they are invited to play by friends from other groups. It is in line with the statement according to Slameto (2013) that the factors that influence the success of students' cognitive learning include environmental factors. The environmental factors in question include the family environment (home atmosphere, relationships between family members, and the way parents educate), the school environment (teaching methods, student-student relationships, student-teacher relations, building conditions, and learning tools), environmental factors the community environment (student activities in the community and friends to hang out with). This statement is also strengthened by the statement of Kapoh (2010), which states that children who grow up in a pleasant environment, equipped with entertainment tools, and in their educated families provide opportunities for children to acquire a large number of vocabulary supplies and form habits of using the correct language.

On the other hand, the student's main factor of linguistic intelligence already exists. This follows the statement put forward by Campbell (2002), which is one of the characteristics of people who have linguistic intelligence, namely being able to use writing skills effectively, understand and apply the rules of grammar, spelling, punctuation, and adequate vocabulary. When adequately facilitated and supported by the right environment, linguistic intelligence can increase this intelligence. This type of intelligence has an essential role in communication skills and is essential for expressing one's thoughts, desires, and education. This is reinforced by Slameto (2013) theory that interest is

a persistent tendency to show and remember some activities. Activities of interest to someone will be noticed continuously, accompanied by a sense of pleasure. The development of a child's intelligence depends on the experience, socializing, and interaction with parents, teachers, peers, or other people who arouse or hinder intelligence development (Kumojoyo, 2011).

Conclusion

Based on the study results, it can be concluded that there is no relationship between linguistic intelligence and the cognitive abilities of students at MTS Darul Irfan, Serang City. The results of this study illustrate a negative relationship between linguistic intelligence and students' cognitive abilities by obtaining a correlation coefficient of 0.060. It means that linguistic intelligence and cognitive ability are not correlated, or there is no relationship and a coefficient of determination of 0.3627, which means that linguistic contribution is only of slight value inability cognitive.

References

- Anderson, L.W. (2010). Kerangka landasan untuk pembelajaran, pengajaran, dan asesmen revisi taksonomi. Yogyakarta :Pustaka Pelajar.
- Arikunto, S. (2002). Prosedur penelitian: suatu pendekatan praktek. Jakarta: Rineka, (6th Ed.), 342.
- Arikunto, S. (2009). Dasar-dasar evaluasi pendidikan. PT. Bumi Aksara, Jakarta, (7th Ed.), 310.
- Arikunto, S. (2012). Prosedur penelitian suatu pendekatan praktik. Jakarta : Rineka Cipta
- Armstrong, T. (2009). Setiap anak cerdas! panduan membantu anak belajar dengan memanfaatkan multiple intelligencenya. (Alih Bahasa: Rina Buntaran). Jakarta: Gramedia Pustaka Utama.
- Asrori, M. (2007). Psikologi pembelajaran. Bandung: CV Wacana Proma.
- Cambell, L. (2006). Metode praktis pembelajaran berbasis multiple intelligences. Depok :Insuisi Press.

Cahyaningrum, Partaya, Marianti

- Chaerunnisa, V., S.G.S. Fitri & Ekanara, B. (2017). Pengembangan perangkat pembelajaran biologi berorientasi pengembangan kecerdasan majemuk siswa pada konsep sel kelas xi sma. *Biodidaktita*. 12 (1): 30 – 37.
- Dewi, A. (2015). Penerapan metode bermain berbantuan media flashcard untuk meningkatkan kemampuan berhitung permulaan pada anak. *FIB Universitas Pendidikan Ganesha*. 3 (1).
- Gardner, H. (2013). *Multiple intelligences*. (Alih Bahasa: Yelvi Andri Zaimur). Jakarta: Daras Books.
- Gunadi, T. (2010). *Optimalkan otak kanan-kiri otak tengah otak kecil*. Jakarta: Penebar Plus
- Handayani, L., P. R. Probowening & A. Sopyan. (2014). Pengembangan strategi pembelajaran fisika berdasarkan teori kecerdasan majemuk untuk meningkatkan motivasi dan hasil belajar siswa smp. *Physic Education Journal*. 3 (1): 67 – 71
- Hidayatullah, A. (2013). Hubungan antara kecerdasan linguistik dengan prestasi belajar pada siswa sekolah dasar. (Skripsi. Tidak diterbitkan). Universitas Muhammadiyah Surakarta, Indonesia.
- Hernowo. (2006). *Quantum writting*. Bandung: MLC
- Inaurrohmah, F. (2017). Pengembangan kecerdasan linguistik pada peserta didik dalam pembelajaran tematik kelas iii di ma'arif nu 1 pageraji cilongok banyumas. Skripsi: IAIN Purwokerto, Indonesia
- Irvaniyah, Iyan. & Oktaviana R.A. (2014). Analisis kecerdasan logis matematis dan kecerdasan linguistik pesertadidik berdasarkan jenis kelamin. *Eduma: Mathematics Education Learning and Teaching*. 3 (1), 135-156.
- Iskandar. (2012). *Psikologi pendidikan (sebuah orientasi baru)*. Jakarta : Referensi.
- Iskandar. (2009). *Psikologi pendidikan*. Ciputat: Gaung Persada (GP) Press.
- Jasmine, J. (2007). *Mengajar berbasis multiple intelligences*. Bandung: Nuansa
- Kapoh, R. J. (2010). Beberapa faktor yang berpengaruh dalam perolehan bahasa. *Interligua*. 4
- Kumojoyo, A. (2011). *Pengaruh pola asuh orangtua terhadap kecerdasan majemuk siswa SD*. (Skripsi Tidak diterbitkan). Universitas Islam Negeri Syarif Hidayatullah, Jakarta, Indonesia.
- Munif, C. (2012). *Sekolah anak-anak juara*. Bandung :Kaifa.
- Natanael, Y., & Sufren. (2013). *mahir menggunakan spss secara otodidak*. Jakarta: PT Elex Media Komputindo.
- Nazir. (2014). *metode penelitian*. Bogor :Ghalia Indonesia.
- Poerwanti, E. (2008). *Asesmen pembelajaran sd*. Jakarta : Depdiknas.
- Priyatno, D. (2010). *Paham analisis statistik data dengan spss*. Yogyakarta :maha peserta didik untuk umum.
- Purwanto. (2013). *Evaluasi hasil belajar*. Yogyakarta. Pustaka Pelajar.
- Riduwan. (2010). *Belajar mudah penelitian untuk guru, karyawan, dan peneliti pemula*. Alfabeta. Bandung: (10th, Ed) 244 .
- Ruseffendi, E. T. (2006). *Pengantar kepada membantu guru mengembangkan kompetensinya dalam pengajaran matematika untuk meningkatkan CBSA*. Bandung: Tarsito.
- Sadisun I.A. (2008). *Pemahaman karakteristik bencana, aspek fundamental dalam upaya mitigasi dan penanganan tanggap darurat bencana*. Paper. Bandung. Institut Teknologi Bandung.
- Sefrina, A. (2013). *Deteksi minat bakat anak*. Yogyakarta: Media Pressindo.
- Simanjuntak. (2008). *Mengantar. diktat linguistik. bahasa. pemerolehan bahasa dan gramatika generatif*. Program Studi Magister Linguistik USU.
- Slameto. (2013). *Belajar dan faktor-faktor yang mempengaruhinya*. PT. Rineka Cipta, Jakarta

The Relationship Between Linguistic Intelligence and Students' Cognitive Abilities

- Sudijono, A. (2013). Pengantar evaluasi pendidikan. Jakarta:PT Rajagrafindo Persada
- Sugiyono. (2012). Metode penelitian pendidikan pendekatan kuantitatif, kualitatif, dan r&d. Bandung: Alfabeta.
- Sukmadinata. (2007). Metode penelitian pendidikan. Bandung :Remaja Rosdakarya
- Sumaryanta. (2015). Pedoman Ppenskoran. Indonesian Digital Journal Of Mathematics And Education. 2(3). 2.
- Susanto, A. (2011). Perkembangan anak usia dini.Jakarta :Kencana. Prenada. Media Group.
- Susanto, A. (2011). Perkembangan anak usia dini pengantar dalam berbagai aspeknya.Jakarta :Kencana Perdana Media Group.
- Syah, M. (2009). Belajar dan pembelajaran. Jakarta :Rineka Cipta
- Wiwitan, A. K. (2013). Pengaruh tingkat kecerdasan linguistik terhadap hasil pembelajaran menulis karangan narasi pesertadidik kelas x smk negeri 12 bandung. Bahtera Bahasa: Antologi Pendidikan Bahasa dan Sastra Indonesia 1 (1).
- Yaumi, M & Ibrahim, N. (2013). Pembelajaran berbasis kecerdasan jamak (multiple intelligences) mengidentifikasi dan mengembangkan multitalenta anak. Jakarta :Prenada Media Grup
- Yunandys, O.(2019). Tes kecerdasan verbal linguistik. Dokumen. id.scribds.com (diakses pada 17 Juli 2019).
- Yuniarto, B. & Kurniawan, R. (2016). Analisis regresi dasar dan penerapannya dengan r. Jakarta : PT : Kharisma Putra Utama.