

The Effect of Discovery Learning Method and Motivation on the Writing Ability of Students in the Tenth Grade of SMA Negeri 20 Palembang

Suraidah¹, Tahrin¹, Hanny Yukamana¹

¹Universitas PGRI Palembang, South Sumatra, Indonesia

Corresponding author e-mail: idays1972@gmail.com

Abstract: The purpose of this research was to assess the effect of Discovery Learning Method and motivation of writing ability in descriptive text especially writing about pet animal at the tenth grade of SMAN 20 Palembang. As many as 72 students took the sample. The sampling technique was the tenth grade of students at the SMAN 20 Palembang, the data collection was done by distributing questionnaires on a 5-point likert scale with 15 statements. The analysis method used the normality test, homogeneity test and the two-way ANOVA. The researcher used the two-way ANOVA, to know the interaction effect between independent variable and dependent variable. The results showed that motivation between the experimental group and control group had a difference. The students wrote the descriptive text, they were taught using the discovery learning Method and had a significant increase on students' writing ability in traditional teaching.

Keywords: Descriptive Text, Discovery Learning, Motivation, Writing Skill

A. Introduction

Nowadays people want to get good at writing in English. They learn English, they try to write a short composition about their experiences or make a status on Whatsapp or Facebook. They do all this to increase their motivation to write. English is the second language in Indonesia and it is the international language of the world, so English is very useful if we want to learn it. We know that it is better for us if we want to improve our English language skills especially in writing and speaking, but other skills such as listening and reading are also important.

Writing requires a long time and a complex process and the fact that a person does not only produce words (Razaq, & Muzkiyah, 2022). Writing in a second language is a complex process that involves the ability to produce text that represents ideas in the second language. Writing In addition, the type of writing complicates language problems, physiological problems and cognitive challenges, which are often considered difficult skills to master (Razaq, & Muzkiyah, 2022).

Writing is the process of expressing thoughts, information, knowledge or experiences and understanding writing to provide information or knowledge to share and learn

(Bicknell-Holmes, & Seth Hoffman, 2000). Writing is one of the languages of students' skills because through writing, students can share their thoughts, ideas and feelings about their writing. Although one language skill, writing is not easy for everyone. Therefore, a writer must have his own ideas and thinking so that what the writer writes can convey all the ideas or their thoughts. thinking, understanding of language structure and vocabulary. Otherwise, writing skills are not acquired by themselves, but can be developed through skill and writing exercises (Bicknell-Holmes, & Seth Hoffman, 2000).

Writing cannot be separated from communication when learning English, so writing is an important skill to master. We know that communication can be oral and written. The importance of writing is also supported by (Elbow, 1998), according to which there are four reasons to teach writing. First, some students benefit greatly from seeing the language written instead of learning it orally. Second, the writing process helps students think and choose words and sentences to create a well-written text. The difference in students' learning styles is the third reason to teach writing, when writing students have more time to think and produce language more slowly to reflect what they have learned. Finally, writing is very important in learning activities because it can improve a student's skills. Therefore, the teacher plays an important role in making students confident in speaking and communicating with each other as well as in writing.

There are four language skills: listening, speaking, reading and writing. The main purpose of all receiving activities is to acquire information and knowledge. Students expect to gain knowledge and skills through the learning process. One of the ways of learning was writing (Mukharomah, 2015).

Writing is one of the four English skills that students must learn and master. Writing plays an important role and therefore it should be taught to students so that they know how to write a letter and how to make a statement, so that we know graduation, if they want to apply for a big company, they should speak and write in English, even if a little (Mukharomah, 2015).

In this study, the researcher not only wants to know the writing ability of the students, but also wants to know the motivation of the students. Motivating students is very beneficial for their learning. Some experts have defined motivation. According to (Lismiyati, et al., 2021), motivation is a type of internal stimulus that prompts someone to act. Students were strongly motivated by whatever was necessary to achieve their goals. Motivated language learners might perceive different goals. Motivation has been defined as a process that initiates, directs, and maintains goal-directed behavior.

The most important factor in learning is motivation (Filgona, et al., 2020). Students have low motivation and naturally dislike learning. Therefore, teachers must know

the student's motivation level to determine the appropriate steps to increase the student's motivation. One of them uses the best learning method (Odanga, 2018).

There were two types of learning motivation namely a) extrinsic motivation and b) intrinsic motivation. Extrinsic motivation was related to factors outside the classroom, while intrinsic motivation was related to what happened in the classroom (Firdaus, 2020). The internal and external factors that awakened people's desire and energy to be constantly interested and committed to learning a subject or striving for a goal were the means that significantly motivated people to continue their lives. Extrinsic motives were those that arose from outside the individual and often involved rewards such as prizes, money, social recognition, or praise. We can mention one more meaning, extrinsic motivation arises when we are motivated by behavior or action to earn a reward or avoid punishment. Examples of externally motivated behaviors include: (a) studying hard because you wanted to pass an exam with a good grade, (b) cleaning your room so you don't have to get scolded by parents, (c) playing sports to win a prize, and (d) competing to win a scholarship. In addition, intrinsic motivation includes engaging in a behavior because it was personally rewarding; Essentially doing the activity for its own sake, not wanting any external reward - the internal was ultimately what affected the students in the long run. This would encourage them to understand the learning process and apply what they learn and increase their interest in learning to read and write, speak and listen.

Discovery learning is effective to improve the students' ability in learning English skills. Discovery Learning Method is an effective method to teach writing (Prawerti, 2014), this discovery learning model can improve students' achievement in writing descriptive text (Mukharomah, 2015), and the Implementation of Discovery Learning is an appropriate method to teach speaking for junior high school students (Irmayanti, 2015).

Related to the detail of Discovery learning, Bruner (1986) stated some detail as follows: There are four components to the Discovery Learning Theory, 1) Curiosity and uncertainty, 2) Structure of knowledge, 3) Sequencing, and 4) Motivation. Many contend that the discovery learning versus expository debate continues a timeless debate as to how much a teacher should help a student and how much the student should help himself (Bruner, 1983).

According to Permendikbud (Ministry of Education and Culture Regulation) No. 65 on 2013 about the standard process, to realize the skill which will be taught, learning model which applies the discovery/inquiry learning model is needed. This is related to the suitability of the discovery learning model with listening learning model named three-phase listening. Three-phase listening is a method in learning the listening aspect that consist of 3 phases, those are pre-listening, while-listening, and post-listening (Hedge, 2003).

This research was conducted in the SMA Negeri 20 Palembang South Sumatra. In this research, the writer found the problems as the following below; a) The students still could not make the writing especially related to the descriptive text, b) Most of the students have a low interest in writing skills, c) the students did not know how to study by using the Discovery Learning Method, especially in writing, d) Most of the students have low motivation in Learning English, e) most of the students did not have good enough knowledge in writing skill, and the students thought that writing is very difficult for them.

B. Methods

Research is a process through which new information is discovered (Martínez, et al., 2018). The simplest purpose of research is to find a fact, answers to research questions and solutions to a problem. It is known that this study uses quantitative research by a researcher who wants to know the significant effect of discovery learning model and motivation on students' writing ability. Therefore, experimental research is the best quantitative design used to determine probable cause and effect. In this study. The researcher uses a Factorial Design.

The role of research design is to explain how we find answers to our research questions. According to (Fraenkel, et al., 2012). Factorial Designs are important modifications of either a post-test-only control group or a post-test control group design that allow the study of other independent variables. There are two types of research variables in this study. They are independent variable and dependent variable. An independent variable is an attribute or characteristic that affects the outcome or dependent variable, while a dependent variable is an attribute or characteristic that is dependent and affects the independent variable. In his study, the independent variable is discovery learning method X1 and motivation X2, while the dependent variable is writing skill Y.

In this study, the sample was 72 tenth grade students of SMA Negeri 20 Palembang. The researcher obtained the material by giving writing tests to the students. Data were obtained from the pretest and two raters rated or graded the posttest. The researcher used descriptive statistics to analyze the pre- and post-tests of the experimental and control group students. And the data was analyzed using SPSS 27 to find out the significance of the findings.

In this research, the data collection techniques were carried by using the questionnaire, pretest and posttest. The data collected used the Likert scale model in the questionnaire, and pre-test and posttest asked the students to make short paragraph about pet animal in descriptive text. The data analysis Techniques used the descriptive statistic, Interrater Reliability, Normality Test, Homogeneity Test,

Independent Sample t-test and Two-way ANOVA (Analysis of Variance). The data was analyzed by using SPSS 27.

C. Results and Discussion

The Effect of Students' Motivation in Writing descriptive text

To measure the motivation, the researcher gave the students the questionnaire. The questionnaire is 15 questions. And then the researcher analyzed the questionnaire by using the SPSS 27. From the analysis by using the SPSS 27, the researcher found that there were twenty-six students' high motivation and ten students' low motivation. To be clearly, we can see the table below.

Table 1. The Distribution of the Data Motivation in the Experimental-Group
The Data of Students' motivation in the Control-Group

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-------|-----------|---------|---------------|--------------------|
| Valid | Low | 14 | 38,9 | 38,9 | 38,9 |
| | High | 22 | 61,1 | 61,1 | 100,0 |
| | Total | 36 | 100,0 | 100,0 | |

From the calculation in SPSS 27, we can see that the students have low motivation is 14 students, and the high motivation is 22 students. From the questionnaires that were given to the experimental-group and control group, the researcher found that the low motivation is 24 students, and the high motivation is 48 students.

Besides that, in the pretest and posttest in the research, the researcher found that there has the difference significant from the writing descriptive text by using the Discovery learning Method and traditional teaching.

The effect of Discovery Learning Method and Traditional teaching in Writing Descriptive Text

To measure and know the effect of the Discovery Learning Method and Traditional teaching, the researcher used the test of normality and homogeneity test. A test of normality and homogeneity was required before performing perturbation statistics. In this way, it was determined whether the samples taken from the same population (population data distribution) are normal and whether the sample variance is the same or not. The normality test was used to find out whether the obtained pre-test data were normally distributed in the experimental and control groups or not. The author used SPSS 27 to analyze the normality of the data. If the normal distribution is $p > 0.05$, then it is normal. The statistical results of the test usually performed in the experimental and control group are shown in the table below:

Table 2. The Normality Test from Experimental and Control Group

| | Tests of Normality | | | | | |
|-----------------------------------|---------------------------------|----|------|--------------|----|------|
| | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
| | Statistic | df | Sig. | Statistic | df | Sig. |
| Writing Discovery Learning Method | ,151 | 36 | ,038 | ,944 | 36 | ,070 |
| Traditional teaching | ,130 | 36 | ,132 | ,973 | 36 | ,516 |

Lilliefors Significance Correction

From the statistical calculation with the Kolmogorov-Smirov test of normality, it was found that the significant value of the Discovery learning method was 0.038 and Traditional writing teaching was 132. It can be said that both scores were classified as normal. because p output was greater than $p > 0.05$. And then Shapiro-Wilk showed that the Discovery teaching method had a value of 0.070, while the value of traditional strategy-writing instruction had a value of 0.516. This means that both scores were also classified as normal because the p-output was greater at $p > 0.05$. Further calculation of the normality test can be seen in table above. The author used a test of homogeneity of variances to find out whether the samples were homogeneous or not. So, based on the calculation of Levene Statistics calculated by SPSS 27, the p-value is found to be 669. And we can conclude that the p-value is greater than $p > 0.05$. This means that the samples were taken from the experimental group and the control group was homogeneous. A further calculation of homogeneity of variance using Levene's statistic is given in table 3.

Table 3. Test of Homogeneity of Variance

| | | Levene | | | |
|-------|--------------------------------------|-----------|-----|--------|------|
| | | Statistic | df1 | df2 | Sig. |
| Score | Based on Mean | ,184 | 1 | 70 | ,669 |
| | Based on Median | ,108 | 1 | 70 | ,743 |
| | Based on Median and with adjusted df | ,108 | 1 | 69,584 | ,743 |
| | Based on trimmed mean | ,209 | 1 | 70 | ,649 |

The Effect of the Discovery Learning Method and the Students' Motivation in writing Descriptive Text

In measuring the effect of the Discovery Learning method and students' motivation in writing Descriptive text, the researcher used the SPSS 27. In the SPSS, the researcher used the two-way Anova.

Table 4. The Tests of Between-Subjects Effects

| Dependent Variable: Discovery Learning method | | | | | |
|---|-------------------------|----|-------------|-----------|-------|
| Source | Type III Sum of Squares | df | Mean Square | F | Sig. |
| Corrected Model | 3484,722 ^a | 3 | 1161,574 | 43,071 | ,000 |
| Intercept | 456649,389 | 1 | 456649,389 | 16932,410 | ,000 |
| Writing DLM | 722,000 | 1 | 722,000 | 26,772 | ,000 |
| Motivation | 2762,722 | 1 | 2762,722 | 102,441 | ,000 |
| Writing * Motivation | ,000 | 1 | ,000 | ,000 | 1,000 |
| Error | 1833,889 | 68 | 26,969 | | |
| Total | 461968,000 | 72 | | | |
| Corrected Total | 5318,611 | 71 | | | |

a. R Squared = ,655 (Adjusted R Squared = ,640)

Before the researcher used the two-way ANOVA, the research done the normality test and homogeneity test. From the calculation of the SPSS, in the research conclude that the writing by using Discovery Learning method has a significant difference, it showed the output ,000 was lower than α 05. It means that the interaction effect was found between teaching write descriptive text using Discovery Learning Method and Traditional teaching towards students' motivation (High and Low Category). The further analysis using two-way ANOVA is displayed in Table 4 above.

D. Conclusion

The first, based on the percentage of motivation (high and low) in the tenth grade of students in SMAN 20 Palembang. It was found that the motivation between the experimental group and control group had a difference. The researcher saw from the calculation of SPSS showed that high motivation is preferred by the experimental group, and low motivation is preferred by the control group. The second, based on the data analysis, the students wrote the descriptive text, they were taught using the discovery learning Method and had a significant increase on students' writing ability in traditional teaching. From the normality test show the output was 0,70 for Discovery Learning Method and the output ,516 for traditional teaching. It means that both scores were also categorized into normal because p-output was higher than α (.05). The third, the homogeneity test showed that the p-output of mean is ,669, it meant the p-output is higher than α (.05). it meant the sample taken, they were homogenous. The fourth, the researcher used the two-way ANOVA that showed the p-output is ,000. It means that an interaction effect was found between teaching by using the discovery learning method and traditional teaching.

D. Acknowledgment

The biggest thanks to all of the tenth-grade students at SMA Negeri 20 Palembang, Chancellor Universitas PGRI Palembang, Director of Graduate Program Universitas PGRI Palembang. This project is independently funded. We also want to thank our

friends from the Board of Education, who helped us a lot in a short time to finish the investigation.

References

- Bicknell-Holmes, T., & Seth Hoffman, P. (2000). Elicit, engage, experience, explore: Discovery learning in library instruction. *Reference Services Review*, 28(4), 313–322. <https://doi.org/10.1108/00907320010359632>
- Bruner, J. (1983). *Child's Talk: Learning to Use Language*. New York: Norton.
- Bruner, J. (1986). *Actual Minds, Possible Worlds*. Cambridge, MA: Harvard University Press.
- Elbow, P. (1998). *Writing {With} {Power}: {Techniques} for {Mastering} the {Writing} {Process}*.
- Filgona, J., Sakiyo, J., Gwany, D. M., & Okoronka, A. U. (2020). Motivation in Learning. *Asian Journal of Education and Social Studies*, September, 16–37. <https://doi.org/10.9734/ajess/2020/v10i430273>
- Firdaus, F. (2020). Pictures and Learning Motivation Towards the Eighth Grade Students' Writing Achievement on Descriptive Paragraph. *Channing: Journal of English Language Education and Literature*, 5(1), 26–35. <https://doi.org/10.30599/channing.v5i1.754>
- Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2012). *A Guided Tour of How to Design and Evaluate Research in Education*. *How to Design and Evaluate Research in Education*, 1–29. https://www.researchgate.net/publication/316801489_Effective_Instructional_Methods_and_Strategies_for_Teaching_Art_History
- Hedge, T. (2003). *Teaching and Learning in the Language Classroom*. New York: Oxford University Press.
- Lismiyati, L., Simaibang, B., & Mulyadi, M. (2021). Correlations among learning strategy, learning motivation, and speaking ability of students in junior high school. *JPGI (Jurnal Penelitian Guru Indonesia)*, 6(3), 683. <https://doi.org/10.29210/021110jpgi0005>
- Martínez, D. E., Slack, J. Y., & Martínez-Schuldt, R. (2018). Research methods. *The Shadow of the Wall: Violence and Migration on the U.S.-Mexico Border*, 18–42. <https://doi.org/10.4324/9781351258241-3>
- Mukharomah, L. (2015). The Use of Discovery Learning Method to Improve Students' Writing Descriptive Text. *PROJECT (Professional Journal of English Education)*, 2(2), 1–198.
- Odanga, S. (2018). Strategies for Increasing Students' Self-motivation. *Asian Research Journal of Arts & Social Sciences*, 6(4), 1–16. <https://doi.org/10.9734/arjass/2018/41354>
- Prawerti, R. C. (2014). The Effectiveness of Using Discovery Learning Method in Teaching Writing Skill Viewed from the Students' Creativity: An Experimental

Study at the Tenth Grade Students of SMAN 1 Durenan Trenggalek in the Academic Year of 2014/2015

Razaq, Y., & Muzkiyah, N. (2022). the Impact of Using Discovery Learning on Efl Students' Writing Skill. *Indonesian Journal of Research and Educational Review*, 1(3), 389-397. <https://doi.org/10.51574/ijrer.v1i2.393>