



The effect of learning styles and student learning activities using the course review horay model on indonesian language learning outcomes of students at SD Negeri 02 Wanarejan, Pemalang regency

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| Article info | Abstract |
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| Keywords style learning, activities learning, results study, course review horay | This study aims to determine the effect of learning styles and learning activities on Indonesian language learning outcomes and the achievement of learning mastery in the Indonesian language after the Course Review Horay model is implemented. The research was conducted on grade VI students at SD Negeri 02 Wanarejan. The research approach used was qualitative, with a survey research design. Data were collected through questionnaires, documentation, and tests. Data analysis was performed using multiple linear regression analysis, the paired sample t-test, and the independent sample t-test. The study's results indicate that learning styles affect Indonesian language learning outcomes by 24.1%, while learning activities affect 22.3%. Additionally, the combined effect of learning styles and learning activities on Indonesian language learning outcomes among grade VI students at SD Negeri 02 Wanarejan is 46.8%. The conclusion of this study indicates that learning styles and learning activities affect Indonesian language learning outcomes among grade VI students at SD Negeri 02 Wanarejan. Based on the pre-test and post-test evaluation, all students achieved learning mastery in the Indonesian language after the CRH model was implemented with the support of Question Card media. |

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1. Introduction

Learning is a process of changing behavior toward a better direction. Learning activities aim to deliver information and cultivate attitudes that help develop students' potential. Various teaching approaches are used to improve the quality of learning rather than relying solely on the lecture

method and limited media, which may result in suboptimal learning outcomes and low levels of student comprehension.

The primary objective of the teaching and learning process in education is to achieve success in the learning process. In an educational institution, the success of the teaching and learning process can be observed through students' academic achievement. According to Siagian (2022), learning outcomes refer to students' academic achievements, which can be measured based on their scores after completing the assigned questions during the evaluation process. It implies that learning success is reflected in students' achievement of learning outcomes.

According to Gufron (2013), students' learning success is affected by several factors, including both teacher-related and student-related aspects. Teachers act as learning facilitators or educators. However, learning is sometimes not fully achieved due to various internal and external factors, such as students' conditions, teachers' explanations, teaching strategies and methods, learning atmosphere and environment, students' intelligence, and learning styles. De Porter (2015) stated that learning styles are the key to enhancing workplace, school, and interpersonal performance. An individual's learning style is a combination of how they absorb, organize, and process information. A student's learning style is a combination of factors influencing how they approach tasks, solve problems, and engage with new concepts. For example, some students may prefer a structured, step-by-step approach to learning, while others may thrive in more open-ended, exploratory environments.

Each student has a different way or style of learning. Suyono (2018) stated that learning styles affect the learning process because students can understand the material, allowing them to focus on what is being discussed. According to Hasanah et al. (2018), a person's academic achievement or learning outcomes are affected by various factors, including learning style. A supporting factor in achieving students' learning outcomes is learning style. Rijal and Bachtiar (2015) stated that learning styles contribute to achieving cognitive learning outcomes.

Students have different learning styles in the learning process. According to DePorter in Hasanah (2018:278), there are three learning styles: visual, auditory, and kinesthetic. Students with a visual learning style learn by seeing, observing, and analyzing through reading materials such as diagrams, charts, graphs, and tables. Students with an auditory learning style learn by relying more on their sense of hearing; they absorb information more easily through lectures, discussions, debates, and instructions. Students with a kinesthetic learning style prefer to learn through physical activities and direct involvement, which may include handling objects and movement.

Each student possesses all three learning styles. However, when viewed from the characteristics of specific core competencies in specialized journals, students need to adjust their learning style to match the subject they are studying. The visual learning style is generally referred to as a learning style based on observation. This style heavily relies on the learning process's sense of sight (eyes). Students with this style tend to sit at the front to see more clearly.

Additionally, they believe they can learn faster through visual displays such as diagrams, charts, tables, and graphs. In other words, they find it easier to understand learning materials that can be perceived through their sense of sight. The auditory learning style is generally referred to as a learning style based on listening. This style relies heavily on the sense of hearing (ears) in learning. The kinesthetic learning style is commonly known as a learning style based on handling and emphasizing physical activities. Thus, learning styles help students understand the lesson materials they receive (Hasanah, 2018).

In addition to learning styles, learning activities are crucial in supporting efforts to improve learning outcomes. Learning activities refer to students' actions that contribute to their success in learning. These activities relate to various learning processes, such as writing, taking notes, observing, reading, memorizing, thinking, practicing, and applying knowledge (Mulyati, 2013).

According to Mintarti (2016:91), the activities or engagements a person undertakes in learning will affect their learning outcomes. Students who study by writing, solving exercises, and summarizing will achieve better results than those who only read. Students can carry out activities in the classroom and at home. Classroom activities include physical and mental activities that support the teaching and learning process at school, such as taking notes, listening to the teacher's explanation, asking the teacher questions, and going to the library. Meanwhile, home learning activities refer to activities that students do at home to continue their school learning, such as doing homework, practicing exercises, organizing notes, and other related tasks. Learning activities in schools are still often dominated by teachers, while students remain passive and receive the lesson material. Student activities are limited to listening, taking notes, and answering questions when the teacher asks. Although students are not passive, this learning process does not encourage them to think creatively or actively participate (Mintarti, 2016). There is a need for teaching variations that can stimulate and actively involve students physically, intellectually, and emotionally. Teachers are one of the most influential components in the learning process, as they play a crucial role in preparing lesson materials and managing all teaching and learning activities during the learning process. Therefore, in carrying out their teaching duties, teachers must first understand and master learning models to create a better learning environment and achieve optimal learning outcomes, especially in specific subjects.

The role of the teacher in the learning process is highly important, as the teacher directly interacts with students as the subjects of learning. Therefore, teachers need to play a role in making learning more effective and engaging for students. The classroom environment should be carefully planned and structured using appropriate learning media to motivate students and encourage active participation in the learning process, ultimately improving their learning outcomes. However, not all teachers have implemented attention-grabbing media to engage students actively in classroom learning, such as interactive, card-based, and other learning tools.

One approach considered effective in aligning students' learning styles and learning activities with their learning outcomes in Indonesian language subjects is the Course Review Horay learning model. The Course Review Horay (CRH) model is a cooperative learning model in which students learn and work collaboratively in small groups. This cooperative learning model allows teachers to create a more engaging and enjoyable classroom environment, making students more interested in learning (Safrizal, 2022). According to Wahyuningtyas (2020), the Course Review Horay learning model can make students feel happy and enjoy the learning process, as those who answer correctly will enthusiastically shout "Hooray!". By implementing this model, students are required to actively participate in answering questions and remain focused on understanding the material. In applying the CRH model in the experimental class, students appeared to be more interactive in expressing their opinions, the classroom atmosphere was less tense, and they could collaborate effectively with their group members (Wahyuningtyas, 2020). Learning will be more effective and enjoyable for students if a teacher considers the appropriate learning model and learning styles when teaching in the classroom to enhance student's learning outcomes. Student engagement in learning the Indonesian language in the classroom is essential for improving their academic performance. Choosing the right learning model is one solution to help students easily understand and enjoy the material being delivered. Additionally, recognizing students' different learning styles gives teachers a formula for understanding each student's unique learning characteristics more deeply.

The results of observations conducted at SDN 01 Wanarejan, SD Negeri 02 Wanarejan, SD Negeri 03 Wanarejan, SD Negeri 05 Wanarejan, SD Negeri 07 Wanarejan, SD Negeri 08 Wanarejan, SD Negeri 09 Wanarejan, and SD Negeri 10 Wanarejan revealed that the Indonesian language learning process implemented by teachers faces several issues. It was found that the average final semester scores for the 2022/2023 academic year in Indonesian language proficiency remain low.

2. Literature Review

According to Rifa'i and Anni (2012, p. 69), the definition of learning outcomes refers to behavioral changes acquired by students after a learning process. The acquisition of these behavioral changes depends on what the students have learned. Therefore, if students study conceptual knowledge, the resulting behavioral change will be concept mastery. The behavioral changes students must achieve after completing a learning process are formulated as learning objectives in education. Learning objectives describe the desired behavioral changes or serve as an indicator that learning has taken place.

Sudjana (2011) states that students' learning outcomes are behavioral changes. In a broad sense, behavior as a learning outcome encompasses cognitive, affective, and psychomotor domains. Therefore, in assessing learning outcomes, the role of instructional objectives, which contain formulations of the desired skills and behaviors that students should master, becomes an essential element as a foundation and reference for assessment. Learning process assessment is an effort to evaluate the teaching and learning activities carried out by students and teachers to achieve learning goals. Thus, the assessment of learning outcomes and the learning process are interrelated, as outcomes result from the process.

Kingsley (as cited in Sudjana, 2014) categorizes learning outcomes into three types: (a) skills and habits, (b) knowledge and understanding, and (c) attitudes and aspirations. Each learning outcome can be aligned with the materials outlined in the curriculum. Gagne (as cited in Sudjana, 2014) classifies learning outcomes into five categories: (a) verbal information, (b) intellectual skills, (c) cognitive strategies, (d) attitudes, and (e) motor skills. The national education system formulates educational objectives, including both curricular and instructional goals, based on the classification of learning outcomes by Benjamin Bloom, which broadly divides them into three domains: cognitive, affective, and psychomotor. The cognitive domain relates to intellectual learning outcomes, which consist of six aspects: knowledge or memory, comprehension, application, analysis, synthesis, and evaluation. The first two aspects are categorized as lower-order cognitive skills, while the remaining four are classified as higher-order cognitive skills. The affective domain pertains to attitudes and consists of five aspects: receiving, responding, valuing, organizing, and internalizing. The psychomotor domain is associated with skill-based learning outcomes and the ability to perform actions. It includes six aspects: (a) reflex movements, (b) fundamental movement skills, (c) perceptual abilities, (d) coordination or precision, (e) complex movement skills, and (f) expressive and interpretative movements.

One of the student characteristics that must be considered in the learning process is their learning style. Simply put, a student's learning style can be cognitive, affective, and psychological behavioral characteristics that determine how they understand, interact with, and respond to their learning environment. Each student has a different learning style.

According to Arylien (2014), "Learning style is the easiest way an individual absorbs, organizes, and processes the information they receive." Learning style is how a person absorbs, organizes, and processes information or learning materials. In responding to stimuli or information, some students prefer to process information individually, while others prefer to work collaboratively in groups. Students with an independent learning style tend to solve problems on their own. As a result, they become more motivated in learning, leading to better learning outcomes. Sundayana (2016) states that learning style is a student's habit of processing how they absorb information, gain experiences, and handle learning experiences. Therefore, learning style is one of the individual characteristics of a learner (Hartati, 2015).

According to Ghufroon and Risnawita (2013), learning style is an approach that explains how individuals learn or the methods each person uses to focus on the process and master difficult or new information through different perceptions. Learning styles are individualistic, distinguishing one person from another. Thus, learning styles are generally assumed to be linked to personal traits, beliefs, preferences, and behaviors that individuals use to facilitate their learning in a structured learning environment.

Based on the explanation of learning styles, it can be concluded that learning style is an approach or method individuals use to acquire, process, understand, and retain information. Learning style refers to how a person obtains information or knowledge in a learning process. Each individual has a different learning style. If someone processes information uncomfortably, they may find it difficult to acquire and comprehend information during learning. Therefore, learning needs vary among individuals, and how they learn and process information also differs. Thus, learning style is the method each student uses to acquire and receive lessons from their teacher.

In general, students' learning styles are categorized into three main groups: (1) visual learning style, (2) auditory learning style, and (3) kinesthetic learning style. The explanations are as follows (Rahmat, 2020): a) Visual Learning Style. The visual learning style refers to learning through seeing. Students with a visual learning style tend to glance to the left while speaking and have a fast speech rhythm. In this style, eyes or vision (visual perception) play a crucial role. Teachers' teaching methods for students with a visual learning style should focus more on demonstrating media or visual representations. b) Auditory Learning Style. Auditory learning refers to learning through listening. According to Rachmawati and Daryanto (2015, pp. 18–19), students with an auditory learning style can be identified by their tendency to rely heavily on the sense of hearing (ears) as their dominant learning modality. DePorter and Hernacki (as cited in Rachmawati & Daryanto, 2015, pp. 18–19) explain that individuals with an auditory learning style tend to talk to themselves frequently and prefer lectures or seminars over writing activities.

DePorter and Hernacki (as cited in Rachmawati & Daryanto, 2015) state that auditory learners often use phrases such as "I hear what you are saying," and their speaking pace is moderate. Auditory learners apply strong listening strategies to absorb information and utilize sounds and auditory-based expressions. c) Kinesthetic Learning Style. Kinesthetic learning refers to learning through movement, action, and touch. According to Suparman (2015), this learning style is often motor-driven. It occurs because students with this learning style consistently use and engage their body movements during the learning process or when trying to understand something. Students in this category enjoy body movement activities, such as crawling, walking, and similar physical actions.

Learning activities are various tasks assigned to learners in a teaching and learning situation. Learning activities involve engagement and tasks that students undertake during the learning process (Hamalik, 2016). Learning activities can be physical and mental; these two aspects must be interconnected in the learning process. The principle of activity is based on action. According to behaviorist theory, engagement in learning refers to an individual's willingness and ability to respond to external stimuli. Meanwhile, based on cognitive theory, engagement in learning is the mental awareness to process information received through the senses (Kurniawan, 2018).

The Course Review Hooray learning model is a cooperative learning approach that creates a lively and enjoyable classroom atmosphere, as students who answer correctly must shout "Hooray!" or chant other cheers they like. This model assesses students' understanding by having them write their answers on cards or numbered boxes. Students or groups who provide the correct answer must immediately shout "Hooray!" or perform their group's chant. This model also helps students grasp concepts effectively through group discussions (Shoimin, 2017). The Course Review Hooray learning model is a cooperative learning method that encourages students to actively engage in the learning process (Faradita, 2017).

The Course Review Horay learning model is a teaching method that creates a lively and enjoyable classroom atmosphere, as students who answer correctly must shout "Hooray!" or chant other cheers they like (Huda, 2016). Course Review Horay is a cooperative learning model in which students are divided into small groups during the teaching and learning process. The group receiving a correct answer mark must immediately shout, "Hooray!". This model encourages students to be more actively engaged in learning while still being guided by the teacher, ensuring an active and structured learning process (Astuti, 2019).

According to Eliyah et al. (2018), the Course Review Horay learning model creates a lively classroom atmosphere and helps students understand concepts effectively through group discussions. The Course Review Horay cooperative learning model involves dividing students into small groups. This model assesses students' understanding by using numbered boxes where they write their answers. The group receiving a correct answer mark must immediately shout, "Hooray!" (Dwitantra, 2010).

3. Method

This study used a quantitative research approach. Quantitative research methods are used to examine a specific population or sample, where data collection is conducted using research instruments, and data analysis is statistical, aiming to test predetermined hypotheses (Sugiyono, 2016). The type of research used in this study was a survey study, as information was gathered from respondents using a questionnaire. According to Soehardi Sigit (2018), the survey method is a systematic data collection technique from respondents intended to understand or predict certain behavioral aspects of the target population. This study identified the effect of one variable on another, specifically the effect of learning styles and learning activities on learning outcomes. The population in this study consisted of all students at SD Negeri 02 Wanarejan, totaling 230 students. The sampling technique used in this study was the purposive sampling method. Purposive sampling is a sampling technique in which researchers select samples based on specific objectives (Sugiyono, 2017), such as selecting participants based on certain characteristics they possess. In this context, the researcher selected all grade VI students, which is considered the most relevant group for this study. During the experimental study, data collection was conducted using several techniques that aligned with the research objectives to determine the effect of the research. The data collection techniques used included 1) Questionnaire. In this study, the questionnaire was used to obtain information about students' learning styles at the beginning of the learning process before the study was conducted. 2) Documentation. Documentation is a technique used to obtain information from existing documents. Schools typically maintain various student records, including academic performance, achievements, family background, personal development, and activities inside and outside school. In this study, the researcher collected data through documentation to assess student's learning outcomes and review the learning materials used. 3) Test. A test is an instrument used to measure the abilities of research subjects through assessment. For example, a written test was used to evaluate students' mastery of a specific subject, while a practical test was used to measure their proficiency in using certain tools or performing specific tasks (Sanjaya, 2016).

The test's target is the achievement of competencies outlined in several indicators. The test was written to measure students' level of understanding in the form of learning outcomes obtained through the Course Review Horay learning model with Question Card media.

4. Results

Initial Observation Results

The research data indicate the presence of independent variables. The learning style variable consists of three indicators: visual learning style, auditory learning style, and kinesthetic learning style, each containing five statement items. The following section presents the respondents' answers for each independent variable. 1) Learning Styles. The learning style variable consists of three statement indicators: visual learning style, auditory learning style, and kinesthetic learning style. The frequency distribution of responses for each indicator within the learning style variable is presented as follows.

Table 1. Respondent ratings on visual learning style indicators

| Interval | Category | Frequency | Percentage |
|--------------|-----------|-----------|---------------|
| 5 - 9 | Very Poor | 0 | 0.0% |
| >9 - 13 | Poor | 0 | 0.0% |
| >13 - 17 | Fair | 6 | 20.0% |
| >17 - 21 | Good | 20 | 66.7% |
| >21 - 25 | Very Good | 4 | 13.3% |
| Total | | | 100.0% |

Table 1 shows that among 30 respondents, none of the students were categorized as having a very poor or poor visual learning style. A total of 6 students (20%) had a fair visual learning style, while 20 students (66.7%) were in a good category, and four students (13.3%) were in the very good category. This indicates that students retain information more easily by reading books and looking at images rather than listening to teacher explanations. The pictures and posters in Indonesian language textbooks significantly help students remember and understand lessons. After studying, students tend to organize their books, pens, and other stationery into their bags. During group study sessions, students are not easily distracted by noise from their peers, and they prefer having information read to them by the teacher or classmates rather than reading it themselves.

Table 2. Respondent ratings on auditory learning style indicators

| Interval | Category | Frequency | Percentage |
|--------------|-----------|-----------|---------------|
| 5 - 9 | Very Poor | 0 | 0.0% |
| >9 - 13 | Poor | 0 | 0.0% |
| >13 - 17 | Fair | 2 | 6.7% |
| >17 - 21 | Good | 22 | 73.3% |
| >21 - 25 | Very Good | 6 | 20.0% |
| Total | | 30 | 100.0% |

Table 2 shows that among 30 respondents, none of the students were categorized as having a very poor or poor auditory learning style. A total of 2 students (6.7%) had a fair auditory learning style, while 22 students (73.3%) were in the good category, and six students (20.0%) were in the very good category. This indicates that students prefer listening to the teacher's explanations of Indonesian language material. When reading Indonesian language material, they often read aloud rather than silently. Students struggle to concentrate on learning while listening to music and find it difficult to understand lessons in a noisy environment. Additionally, they retain information better through listening rather than by observing visuals.

Table 3. Respondent ratings on kinesthetic learning style indicators

| Interval | Category | Frequency | Percentage |
|----------|----------|-----------|------------|
|----------|----------|-----------|------------|

| | | | |
|--------------|-----------|-----------|---------------|
| 5 - 9 | Very Poor | 0 | 0.0% |
| >9 - 13 | Poor | 0 | 0.0% |
| >13 - 17 | Fair | 1 | 3.3% |
| >17 - 21 | Good | 20 | 66.7% |
| >21 - 25 | Very Good | 9 | 30.0% |
| Total | | 30 | 100.0% |

Table 3 shows that among 30 respondents, none of the students were categorized as having a very poor or poor kinesthetic learning style. A total of 1 student (3.3%) had a fair kinesthetic learning style, while 20 students (66.7%) were in a good category, and nine students (30.0%) were in the very good category. This indicates that students prefer hands-on learning to merely listening to teacher explanations. They can understand lessons better with the help of peer explanations during group work by observing body movements or physical gestures. When telling stories to others, students tend to move their hands frequently. Additionally, when answering Indonesian language exercises by writing directly in textbooks, they struggle to comprehend spoken explanations without accompanying physical gestures or actions.

Table 4. Respondent ratings on the learning style variable

| Interval | Category | Frequency | Percentage |
|--------------|-----------|-----------|---------------|
| 15 - 27 | Very Poor | 0 | 0.0% |
| >27 - 39 | Poor | 0 | 0.0% |
| >39 - 51 | Fair | 1 | 3.3% |
| >51 - 63 | Good | 21 | 70.0% |
| >63 - 75 | Very Good | 8 | 26.7% |
| Total | | 30 | 100.0% |

Table 4 shows that among 30 respondents, none of the students were categorized as having a very poor or poor learning style. A total of 1 student (3.3%) had a fair learning style, while 21 students (70.0%) were in the good category, and eight students (26.7%) were in the very good category. This indicates that the learning styles of students at SD Negeri 02 Wanarejan, Pemalang Regency, which include visual, auditory, and kinesthetic learning styles, are generally in the good category.

The learning activity variable consists of 20 statement items. The following section presents the frequency distribution of the learning activity variable.

Table 5. Respondent ratings on the learning activity variable

| Interval | Category | Frequency | Percentage |
|--------------|-----------|-----------|---------------|
| 20 - 36 | Very Poor | 0 | 0.0% |
| >36 - 52 | Poor | 0 | 0.0% |
| >52 - 68 | Fair | 2 | 6.7% |
| >68 - 84 | Good | 23 | 76.7% |
| >84 - 100 | Very Good | 5 | 16.7% |
| Total | | 30 | 100.0% |

Based on **Table 5**, it can be observed that among 30 respondents, none of the students were categorized as having very poor or poor learning activities. A total of 2 students (6.7%) had fair learning activities, while 23 students (76.7%) were in the good category, and five students (16.7%) were in the very good category. It indicates that students pay attention to the teacher's explanation,

express their opinions, ask and answer questions, engage in writing activities, actively participate in discussions, solve problems, listen to lesson presentations, and confidently summarize discussions. Overall, students' learning activities at SD Negeri 02 Wanarejan, Pemalang Regency, fall into the good category. Furthermore, learning outcomes were determined through pre-test and post-test evaluations conducted using the Course Review Horay (CRH) learning model. The Learning Objective Achievement Criteria (KKTP) established the learning outcome categories. The following section presents the frequency distribution of the learning outcome variable.

Table 6. Respondent ratings on the learning outcome variable

| Category | Pre-test | | Post-test | |
|-------------------|----------|------------|-----------|------------|
| | Number | Percentage | Number | Percentage |
| Did Not Pass KKTP | 13 | 43.3% | 0 | 0.0% |
| Passed KKTP | 17 | 56.7% | 30 | 100.0% |
| Total | 30 | 100.0% | 30 | 100.0% |

Based on **Table 6**, it can be seen that before the implementation of the Course Review Horay learning model, out of 30 respondents, 13 students (43.3%) did not pass the Learning Objective Achievement Criteria (KKTP), while 17 students (56.7%) successfully passed. After implementing the Course Review Horay learning model, all students (100%) passed the Learning Objective Achievement Criteria (KKTP). It indicates that innovative learning models, such as the Course Review Horay model, can significantly improve students' learning outcomes at SD Negeri 02 Wanarejan, Pemalang Regency.

Data Analysis Results

Before conducting statistical tests, a classical assumption deviation test was performed. This test was conducted to validate the results of multiple linear regression analysis, ensuring that the conclusions drawn were unbiased. The tests applied included normality, multicollinearity, heteroscedasticity, and autocorrelation tests. 1) Normality Test. The normality test aims to determine whether the data are normally distributed. The tool used to detect normality was the Normal P-P Plot of Regression. The results of the normality test are presented in the following figure:

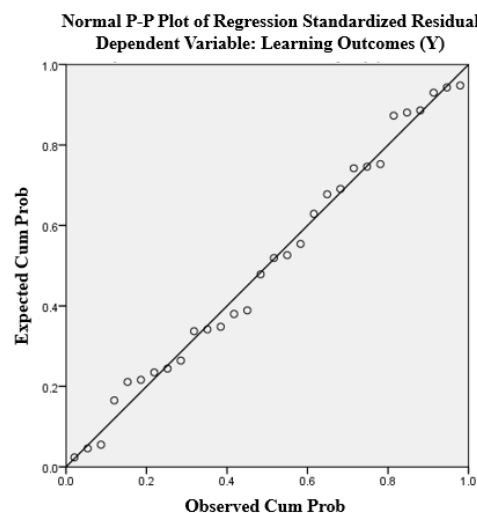


Figure 1. Normal p-p plot graph

Based on **Figure 1**, it can be observed that the data points are spread around the diagonal line and follow its direction, indicating that the data are normally distributed. 2) Multicollinearity Test.

The multicollinearity test aims to determine whether there is a correlation among independent variables in the regression model. Detection was performed using the Tolerance Value and Variance Inflation Factor (VIF). If the Tolerance Value > 0.10 and the VIF < 10 , multicollinearity does not occur.

Table 7. Results of the multicollinearity test

| Variable | Tolerance | VIF |
|------------------------|-----------|-------|
| Learning Style (X1) | 0.901 | 1.109 |
| Learning Activity (X2) | 0.901 | 1.109 |

Based on **Table 7**, it can be seen that all independent variables have VIF values less than 10, so it can be concluded that there is no indication of multicollinearity in this research model. 3) Heteroscedasticity Test. The heteroscedasticity test determines whether variance inequality occurs among independent variables from one residual observation to another in the regression model. The decision-making criteria are as follows: heteroscedasticity occurs if a regular pattern is observed. If there is no clear pattern, and the data points are scattered below and above zero on the Y-axis, then heteroscedasticity does not occur. The results of the heteroscedasticity test can be seen in **Figure 2**:

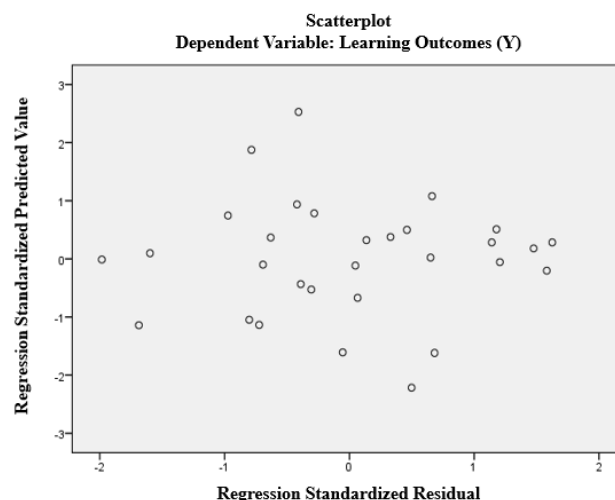


Figure 2. Heteroscedasticity test

Based on the Scatterplot graph, heteroscedasticity does not occur in the regression model if no clear pattern is present and the data points are scattered above and below zero on the Y-axis. The Durbin-Watson (DW) value obtained is then compared with the Durbin-Watson table, as presented in the following section:

Table 8. Results of the autocorrelation test

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|-------|-------------------|----------|-------------------|----------------------------|---------------|
| 1 | .684 ^a | .468 | .429 | 4.12771 | 2.175 |

a. Predictors: (Constant), Learning Activity (X2), Learning Style (X1)

b. Dependent Variable: Learning Outcomes (Y)

Table 9. Autocorrelation measurement table

| Durbin-Watson Value | Conclusion |
|---------------------|------------|
|---------------------|------------|

| | |
|-------------|-------------------------|
| < 1.08 | Autocorrelation Present |
| 1.08 – 1.66 | No Conclusion |
| 1.66 – 2.34 | No Autocorrelation |
| 2.34 – 2.92 | No Conclusion |
| > 2.92 | Autocorrelation Present |

Based on **Table 9**, the regression analysis results indicate that the Durbin-Watson value is 2.175, which falls within the range of 1.66 to 2.34. This confirms that the model is in the "no autocorrelation" category, concluding that autocorrelation is not present in this regression model. The results of the multiple linear regression analysis are as follows:

The multiple linear regression model for the independent variables concerning the dependent variable is formulated as follows:

$$Y = b_0 + b_1X_1 + b_2X_2$$

This study analyzed multiple linear regression using the SPSS version 21 statistical software. The results of the multiple linear regression analysis are presented in **Table 10**, as shown below:

Table 10. Summary of multiple linear regression results

| Variable | Regression | Std. | t-value | Sig t | R | r ² |
|-------------------------------------|------------|-------|---------|-------|-------|----------------|
| Constant | 22.204 | | | | | |
| Learning Style (X ₁) | 0.533 | 0.182 | 2.930 | 0.007 | 0.491 | 0.241 |
| Learning Activity (X ₂) | 0.349 | 0.125 | 2.782 | 0.010 | 0.472 | 0.223 |
| R Square | = 0.468 | | | | | |
| R | = 0.684 | | | | | |
| F-value | = 11.895 | | | | | |
| Significance F | = 0.000 | | | | | |

The equation for the variables influencing learning outcomes at the Satuan Kerja Perangkat Daerah (SKPD) of Balangan Regency is formulated as follows:

$$Y = 22.204 + 0.533X_1 + 0.349X_2$$

Based on the regression coefficient results, which are formulated in the regression equation for the variables influencing learning outcomes, the interpretation is as follows (Author, Year). 1) Constant. The constant value is 22.204, which means that if there are no independent variables (learning style and learning activity) affecting learning outcomes, the learning outcome value will be 22.204. 2) Regression Coefficient of the Learning Style Variable (b₁). The learning style variable positively affects learning outcomes, with a regression coefficient 0.533. It indicates that if the learning style variable increases by 1 unit, the learning outcome will increase by 0.533 units, assuming that the learning activity variable remains constant. The positive effect suggests a direct relationship between learning style and learning outcomes. 3) Regression Coefficient of the Learning Activity Variable (b₂). The learning activity variable positively affects learning outcomes, with a regression coefficient of 0.349. If the learning activity variable increases by 1 unit, the learning outcome will increase by 0.349 units, assuming that the learning style variable remains constant. With the presence of this positive effect, it means that learning activity and learning outcomes exhibit a direct relationship. 1) Coefficient of Determination (R²). Based on Table 4.10, the coefficient of determination (R²) is 0.468. This indicates that 46.8% of learning outcomes can be explained by the two independent variables: learning style and learning activity. Meanwhile, the remaining 53.2% is affected by other variables not included in this research model. The effect of learning style on

Indonesian language learning outcomes among students is 0.241 (24.1%), while the effect of learning activity on Indonesian language learning outcomes is 0.223 (22.3%). 2) Partial Regression Test (t-test). The t-test determines how an individual independent variable (X) affects the dependent variable (Y). Based on Table 4.10, the t-values for each independent variable can be observed and used as a basis for decision-making by comparing sig. t with 0.05. The hypothesis testing criteria are as follows:

If $\text{sig } t \leq 0.05$, then the hypothesis is accepted

If $\text{sig } t > 0.05$, then the hypothesis is rejected.

T-test for the Learning Style Variable (X1). The hypotheses for this test are as follows:

Ho: The learning style variable (X1) does not partially affect the learning outcome variable (Y).

Ha: The learning style variable (X1) partially affects the learning outcome variable (Y).

The results of the multiple regression analysis show that the t-value is 2.930 with a significance value (sig.) of 0.007. Since $\text{sig } t < 0.05$, the hypothesis is accepted, meaning that the learning style variable (X1) has a significant partial effect on learning outcomes (Y). 2) t-test for the Learning Activity Variable (X2). The hypotheses for this test are as follows:

Ho: The learning activity variable (X2) does not partially affect the learning outcome variable (Y).

Ha: The learning activity variable (X2) partially affects the learning outcome variable (Y). The results of the multiple regression analysis indicate that the t-value is 2.782 with a significance value (sig.) of 0.010. Since $\text{sig. } t < 0.05$, the hypothesis is accepted, meaning that the learning activity variable has a significant partial effect on learning outcomes. 3) Simultaneous Regression Test (F-test). The statistical test used for the simultaneous regression test (F-test) is as follows:

Ho: There is no significant effect of learning style and learning activity together on learning outcomes.

Ha: There is a significant effect of learning style and learning activity together on learning outcomes.

The hypothesis testing criteria are as follows:

If $\text{sig. } F > 0.05$, the hypothesis is rejected

If $\text{sig. } F \leq 0.05$, the hypothesis is accepted.

Based on the multiple linear regression analysis results, the F-value is 11.895 with a significance value (sig.) of 0.000. This indicates that $\text{sig. } F < 0.05$, meaning that the learning style and learning activity variables significantly affect learning outcomes. Next, for the paired sample t-test, the analysis includes: 1) Results of the paired t-test on student learning outcomes without the Course Review Horay (CRH) learning model.

Table 11. Results of the paired t-test on student learning outcomes without the course review horay (CRH) learning model

| Pair | Mean | Mean Difference | t-value | Sig. |
|------------------------------|---------|-----------------|---------|-------|
| Learning Outcome (pre-test) | 73.2000 | 0.46667 | 1.380 | 0.178 |
| Learning Outcome (Post-test) | 73.6667 | | | |

The pre-test learning outcomes showed an average score of 73.2, while the post-test had an average score of 73.667. The difference in the average learning outcome scores between the pre-test and post-test was 0.4667. The paired t-test results showed a t-value of 1.380 with a significance value (sig.) of 0.178. Since $\text{sig. } > 0.05$, it can be concluded that there is no significant difference in students' learning outcomes before the intervention compared to after implementing the learning model in the control group. Next, the paired t-test results on students' learning outcomes using the Course Review Horay (CRH) learning model in the experimental group are presented.

Table 12. Results of the paired t-test on student learning outcomes using the course review horay (CRH) learning model

| Pair | Mean | Mean Difference | t-value | Sig. |
|------------------------------|---------|-----------------|---------|-------|
| Learning Outcome (pre-test) | 73.6333 | 11.6 | 16.956 | 0.000 |
| Learning Outcome (Post-test) | 85.2333 | | | |

The pre-test learning outcomes showed an average score of 73.6, while the post-test had an average score of 85.233. The difference in the average learning outcome scores between the pre-test and post-test was 11.60. The paired t-test results showed a t-value of 16.956 with a significance value (sig.) of 0.000. Since sig. < 0.05, it can be concluded that there is a significant difference in students' learning outcomes before and after implementing the Course Review Horay (CRH) learning model in the experimental group. Next, the independent sample t-test was conducted. This test aims to determine the difference in learning outcomes between students who did not receive the CRH learning model and those who were taught using the CRH learning model.

Table 13. Results of the independent sample t-test

| Pair | Mean | t-value | Sig. |
|--------------------------------|---------|---------|-------|
| Learning Outcome (Without CRH) | 73.6667 | 8.137 | 0.000 |
| Learning Outcome (With CRH) | 85.2333 | | |

The learning outcomes of students without the Course Review Horay (CRH) learning model had an average score of 73.667, while those with the CRH model had an average score of 85.233. The difference in the average learning outcome scores between students who did not receive CRH and those who did was 11.667. The independent t-test results showed a t-value of 8.137 with a significance value (sig.) of 0.000. Since sig. < 0.05, it can be concluded that there is a significant difference in learning outcomes between students who did not receive CRH in the control group and those who were taught using the CRH model in the experimental group.

5. Discussion

The research results indicate that learning style significantly affects Indonesian language learning outcomes among grade VI students at SD Negeri 02 Wanarejan, as shown by sig $t = 0.007 < \alpha = 0.05$. One of the key characteristics of students that must be considered in the teaching and learning process is their learning style. Learning style can be defined as a student's cognitive, affective, and psychological behavioral characteristics that determine how they understand, interact with, and respond to their learning environment. Each student has a different learning style. According to Ghufuron and Risnawita (2013, p. 42), learning style is an approach that explains how individuals learn or the methods each person uses to focus on the process and master difficult or new information through different perceptions.

Learning styles are individualistic for each person and serve to distinguish one individual from another. Thus, learning styles are generally assumed to be related to personal traits, beliefs, preferences, and behaviors that individuals use to facilitate their learning process within a structured learning environment.

Sudjana (2011, p. 3) states that student learning outcomes are behavior changes. In a broader sense, behavior as a learning outcome encompasses the cognitive, affective, and psychomotor domains. Therefore, in assessing learning outcomes, instructional objectives, which define the skills and behaviors students are expected to master, become a crucial element as a foundation and reference for evaluation. Learning process assessment is an effort to evaluate teaching and learning

activities carried out by students and teachers in achieving educational goals. Thus, learning outcomes and learning process assessments are interconnected, as outcomes result from the process.

Students' learning styles are the key to improving their academic performance. Each student naturally has a different learning style. Understanding these differences in learning styles can help teachers deliver instructional materials more effectively, ensuring that learning outcomes become more optimal. According to Kolb (as cited in Ghufon & Risnawita, 2013, p. 11), learning style is an individual's method of acquiring information, which, in principle, is an integral part of the active learning cycle. Learning style refers to an individual's approach to focus on the learning process and absorb complex information.

Each student has a different learning style. Suyono (2018) stated that learning style affects the learning process because it allows students to understand the material better, enabling them to focus on the discussed topic. According to Hasanah et al. (2018), academic achievement or learning outcomes are affected by various factors, one of which is learning style. Learning style is a key factor in helping students achieve better learning outcomes. Furthermore, Rijal and Bachtiar (2015) emphasized that learning style contributes to achieving cognitive learning outcomes.

Based on the research findings, the learning activity variable significantly affects Indonesian language learning outcomes among grade VI students at SD Negeri 02 Wanarejan, as indicated by $\text{sig } t = 0.010 < \alpha = 0.05$. Learning activity plays a crucial role in enhancing learning outcomes. It consists of various student activities that contribute to learning success. Learning activity is related to learning processes, such as writing, taking notes, observing, reading, memorizing, thinking, practicing, and so on (Mulyati, 2013).

Learning activity involves both physical and mental activities. In the learning process, these two aspects must be interconnected. The principle of activity is action, as explained by behaviorist theory, which states that engagement in learning depends on an individual's willingness and ability to respond to external stimuli. Meanwhile, according to cognitive theory, active learning is driven by mental awareness in processing information perceived by the senses (Kurniawan, 2018). Each student has a different learning activity level, which depends on how the teacher conducts the class. Students who enjoy the teacher's teaching style tend to engage more actively in learning, whereas those who do not may exhibit lower learning activity. Therefore, teachers must understand students' characteristics and learning styles to effectively enhance student engagement in learning activities.

The research results from the paired sample t-test indicate a significant difference in students' learning outcomes before and after the implementation of the Course Review Horay (CRH) learning model in the experimental group, with a t-value of 16.956 and a significance value (sig.) of $0.000 < \alpha = 0.05$. Similarly, the results of the independent sample t-test show a significant difference in learning outcomes between students who did not receive the CRH learning model in the control group and those who received the CRH learning model in the experimental group, with a t-value of 8.137 and a significance value (sig.) of $0.000 < \alpha = 0.05$.

This indicates that the Course Review Horay (CRH) learning model effectively improves students' learning outcomes. The Course Review Horay model is a cooperative learning model in which students learn and work collaboratively in small groups. Teachers can implement the CRH cooperative learning model to create a more engaging classroom atmosphere, making students more interested in learning (Safrizal, 2022). According to Wahyuningtyas (2020), the Course Review Horay learning model helps students feel excited and enjoy learning, as those who answer correctly are encouraged to shout "Hooray enthusiastically!". Applying the Course Review Horay (CRH) learning model in the experimental class showed that students became more interactive in expressing their opinions, the classroom atmosphere was less stressful, and students could collaborate effectively with their group members (Wahyuningtyas, 2020). Learning becomes more

effective and enjoyable for students when teachers consider appropriate learning models and learning styles in their teaching methods to improve student learning outcomes. Students' interest in learning the Indonesian language in class is essential for improving their academic achievement.

6. Conclusion and Implications

Based on the research findings as described in the previous chapters, the following conclusions can be drawn: 1) Based on the t-test results from multiple linear regression analysis, learning style significantly affects the Indonesian language learning outcomes of grade VI students at SD Negeri 02 Wanarejan after implementing the Course Review Horay model (sig. $t = 0.007 < 0.05$). 2) Based on the t-test results from multiple linear regression analysis, learning activity significantly affects the Indonesian language learning outcomes of grade VI students at SD Negeri 02 Wanarejan after implementing the Course Review Horay model (sig. $t = 0.010 < 0.05$). 3) Based on the F-test results from multiple linear regression analysis, learning style and learning activity significantly affect the Indonesian language learning outcomes of grade VI students at SD Negeri 02 Wanarejan after implementing the Course Review Horay model (sig. $F = 0.000 < 0.05$). 4) Based on the pre-test and post-test evaluations, all students achieved mastery of learning in the Indonesian language after implementing the Course Review Horay model.

Based on these conclusions, the following recommendations are proposed, which are expected to be beneficial for students, teachers, and schools regarding the effect of learning style and learning activity on students' learning outcomes: 2) Teachers should provide knowledge about students' learning styles, allowing students to understand their learning styles while also helping teachers identify and adapt to students' learning preferences. This can be achieved through various activities that are suitable and aligned with students' learning characteristics. 2) Teachers should optimize opportunities for students to actively learn the Indonesian language, while students should become more proactive in their learning process to achieve better results. Since students' learning activity directly affects their learning outcomes in Indonesian language subjects, increased engagement can lead to improved academic performance.

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