



ALIGNING STUDENTS' LEARNING STYLES AND ACTIVITIES TO BOOST VOCABULARY ACQUISITION

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Abstract

The curriculum in Indonesia currently uses the Merdeka curriculum. Differentiated student learning programs are closely related to student learning styles. Therefore, this needs to be researched because learning has shifted and is focused on students. Teachers need to know more about students' learning styles to maximize learning in the classroom. A mixed-method design was applied in this study. Therefore, six participants from SMP Plus Bandung Timur were recruited and assessed using the Akupintar.co.id website as a test instrument to investigate students' learning styles. This aimed to investigate the alignment of students' learning styles and learning activities using multimodality texts in the classroom. After conducting the research, some findings emerged. The quantitative results showed that the t-test showed no significant increase in students' vocabulary. However, the qualitative findings show three types of learning styles: visual, audio, and kinesthetic, that mostly aligned to their learning activities in the classroom.

Keywords: Learning style, Learning activities, Multimodal text, Vocabulary

Abstrak

Kurikulum di Indonesia saat ini menggunakan kurikulum Merdeka. Program pembelajaran siswa yang berbeda sangat erat kaitannya dengan gaya belajar siswa. Oleh karena itu, hal ini perlu diteliti karena pembelajaran telah

bergeser dan terfokus pada siswa. Penting bagi guru untuk mengetahui lebih banyak tentang gaya belajar siswa untuk memaksimalkan pembelajaran di kelas. Desain metode campuran diterapkan dalam penelitian ini. Oleh karena itu, untuk menyelidiki gaya belajar siswa, enam peserta dari SMP Plus Bandung Timur direkrut dan dinilai menggunakan situs web Akupintar.co.id sebagai instrumen tes. Hal ini bertujuan untuk menyelidiki keselarasan gaya belajar siswa dan kegiatan belajar mereka menggunakan teks multimodalitas di kelas. Setelah melakukan penelitian, beberapa temuan muncul sebagai berikut, dari hasil kuantitatif menunjukkan bahwa uji-t menunjukkan tidak ada peningkatan yang signifikan dalam kosakata siswa. Namun, temuan kualitatif menunjukkan bahwa ada tiga jenis gaya belajar: visual, audio, dan kinestetik yang mayoritas selaras dengan aktivitas belajar mereka di kelas.

Kata kunci: Gaya Belajar, Kegiatan belajar, teks Multimodal, Kosakata

A. INTRODUCTION

The concept of learning styles, which suggests that individuals have different preferences for how they learn, has a significant impact on education. However, the evidence supporting the use of learning styles in education is limited (Pashler et al., 2009). Csapo & Hayen (2006) found that kinesthetic learning styles are particularly important in information technology courses, while Manochehr, (2006) reported that e-learning may be more effective for certain learning styles. Dewi et al., (2019) further emphasized the importance of aligning teaching styles with students' learning styles to improve academic performance.

Learning style is one way to determine how someone is most comfortable in the learning process (Hardiyanto, 2023). Much research has been conducted on learning styles research. First, Hardiyanto (2023) explains that the findings show that students in ESL contexts tend to use a combination of unimodal and bimodal learning styles, with the kinesthetic learning style being the most dominant. Second, Dewi Isda and Nuramalina's (2016) research results also show that kinesthetic is the most dominant learning style. In other words, it prefers to learn English with a kinesthetic learning style. Third, Vukić (2018) research results show that students like visual and group learning styles, while teachers like visual and auditory teaching styles. It can be concluded that there is a match between the dominant learning and teaching styles. Fourth, Sabeh et al. (2011) showed that Lebanese students prefer multiple learning styles: auditory, kinesthetic, tactile, and visual. Age, gender, discipline, and time spent learning English influence students' learning styles. Research findings show no match between teachers' and students' teaching and learning styles. Fifth, Akbarzadeh and Fatemipour's (2014) research results show that students prefer tactile learning. The results of class observations show that the teachers did not have a primary teaching

style preference. The results of several of the aforementioned investigations are comparable and differ. The study's qualitative findings also revealed a correlation between the student's learning activities and the Akupintar.co.id learning style test outcomes. The study's quantitative findings showed no significant effects on students' vocabulary growth.

There are two research questions; the first is whether there is a match or mismatch between students' learning style test results and classroom activity. This question arises to ensure the suitability of the student learning style test using the akupintar.co.id website. The second is how the learning style of multimodal text increases students' vocabulary. Akupintar.co.id is a free website that helps teachers discover students' learning styles by answering questions in a questionnaire on the website. Reporting from akupintar.co.id, it is an information technology company dedicated to the progress of Indonesia by helping promote education. The akupintar.co.id website will help Indonesia's young generation get an education that suits their interests and talents.

B. LITERATURE REVIEW

1. Learning Style

While intuitively appealing, the concept of learning styles lacks sufficient scientific evidence to support its use in educational practice (Pashler, 2008; Landrum, 2010). However, it is still considered a relevant pedagogical concept, with potential applications in tailoring teaching styles and expanding students' academic capabilities (Romanelli, 2009). Despite the lack of conclusive evidence, the influence of learning styles on student performance is acknowledged, with a focus on environmental factors and cognitive learning styles (Gordon, 1998). Therefore, while using learning styles in education is not fully supported by research, it remains a topic of interest and potential application in the classroom.

Research on learning styles has identified a range of preferences, including visual, auditory, kinesthetic, and tactile (Csapo & Hayen, 2006). These preferences can influence the teaching and learning process, with some students showing a strong preference for a particular style. However, the relationship between learning styles and educational performance is inconclusive, and it is important to consider individual and contextual factors (Lee & Kim, 2014). Despite this, understanding and incorporating learning styles into teaching can enhance the educational experience (Gilakjani, 2011).

Learning style is a preferred way of thinking, processing, and understanding information. Everyone prefers patterns of thinking and behaviour that influence their learning process. In other words, we all learn differently (Allen et al., 2010). It is a term to reveal individual differences in the learning process. In accepting individual differences, we must consider 'learning styles' (Jaleel & Thomas, 2019). Students can maximize their learning if they know their learning styles.

There are three dominant learning styles: Visual, Auditory, and kinesthetic (akupintar, 2023). Visual learners learn through sight, so tools like diagrams, flowcharts, pictures, and symbols can be key to understanding new concepts. Auditory learners learn through listening (Wilfrid, 2008). Auditory learners learn best by listening to information. They may have difficulty understanding a text if they read it,

but they can capture more details if they listen. People with a kinaesthetic learning style can learn best by interacting or experiencing things around them. The kinaesthetic learning style tends to be able to understand something with direct involvement rather than listening to a lecture or reading from a book. Kinaesthetic learning styles like doing things and using their bodies to remember facts (akupintar, 2023).

2. Multimodal text

The creation of multimodal compositions has become an everyday practice due to the increasing use of digital technologies that combine resources and facilitate the creation of meaning using multiple modalities and media (Magnusson & Godhe, 2019). A multimodal-based learning process can accommodate the multi-style learning characteristics of students with different learning abilities. So that students can obtain and express ideas and thoughts based on the knowledge they have obtained during learning, which can be meaningful for them (Hanum, 2023). In expressing their understanding, students can use multimodal texts.

This aligns with (Hikmah, 2019) who argues that words limit texts and can take the form of images, visuals, performances, musicals, or digital texts based on information and communication technology. In teaching and learning, media is also defined as graphic, photographic, or electronic tools for capturing, processing, and reconstructing visual or verbal information. Multimodal learning, which incorporates various forms of content, has been shown to enhance student engagement and comprehension (Sankey et al., 2010). This approach is particularly beneficial for students with diverse learning styles, and the digital age has further expanded its potential by integrating immersive technologies and digital tools (Bouchev, 2021). Multisensorial media, such as haptic, olfaction, and airflow effects, has also improved the learner experience. However, the design of integrated multimodal systems remains a challenge (M. M. Blattner and E. P. Glinert, 1996).

Learnexus (2023) reported that three types make up the multimodal approach. The first is visual learning. The main visual learning method is presenting knowledge through pictures, graphs, charts, and other visual aids. This modality is designed for those who learn best when things are represented visually. For instance, watching instructional videos or studying infographics that simplify difficult information into understandable visuals may benefit a visually impaired learner. The second is auditory learning. Conversely, some auditory learners prefer to take in information through spoken words and sound. Teachers can provide voice-based presentations, podcasts, or audio recordings to suit this type of learning. Teachers can help these students understand and retain material by using aural tools to engage them. The third is kinesthetic learning. It benefits greatly from practical experiences and movement. Interactive exercises, experiments, and simulations that let this kind of learner concretely interact with the material are beneficial to them. Teachers can capitalize on the innate tendency of kinesthetic learners and improve their learning process by introducing these components into the curriculum.

3. Learning Activities

Teaching and learning activities in Indonesia focus on the Merdeka curriculum, which emphasizes the student center; thus, the student guides himself to learn and knows what he likes or how he learns. Unconsciously, students have determined their

nature (*fitrah*) by choosing how they want to learn. Knowledge of learning styles will help teachers deliver effective presentations to various students in the classroom.

Learning is the interaction process between students, between students and teachers, and between students and learning resources in the learning environment, according to Ministry of Education Regulation Number 23, 2016, concerning assessment standards. Thus, classroom contact is necessary. Students will develop their language and social abilities by interacting with the teacher and other students. Teachers must develop a well-thought-out lesson plan to help with the teaching and learning process (Hanum, 2023).

Gebhard & Oprandy, (1999). List the following five requirements for ensuring interesting classroom interactions: putting less emphasis on the teacher, honouring each person's uniqueness, letting students meaningfully express themselves, and letting them negotiate to mean. Give students the freedom to choose what they want to say, who they want to say it to, and how they want to say it—both to the teacher and each other.

Teaching English to students is not just about depriving them of too many authentic language assignments in class. According to Baity (2016), five categories can provide some practical approaches to teaching English to children successfully. Intellectual development becomes the first category because children are still in the intellectual stage, which Piaget (1972) (Baity, 2016) calls "concrete operations"; children up to the age of around eleven need to remember that they have limitations. The second is attention span. One important difference between adolescence and YL is attention span. Because children focus on urgent matters, teachers must design activities to capture their immediate interests. The third is sensory input. Children need to have their five senses stimulated. In designing activities for them, we must consider visual and auditory modes because children are excellent observers who can observe language from body language, intonation, gestures, facial expressions, social context, and even language itself. These are skills that adults may not have. The next is affective factors. The importance of emotional factors can easily be seen if teachers succeed in considering the relationship between students' cognitive and affective aspects. Moreover the last is authentic and meaningful learning. Children actively try to construct meaning. They also try to understand actively (Cameron, 2001).

4. Increasing Students Vocabularies

Vocabulary has a very essential role in mastering foreign languages, especially English. A person's vocabulary is a collection of terms that they are familiar with. It is crucial for junior high school students to understand vocabulary when learning English (Pitriana & Hadi, 2021). This is because, in the early years, students' vocabulary-related experiences play an important role in their language development (Syarifudin et al., 2021).

Several aspects must be considered; according to Lado (1955), Meaning is a significant perspective that should be taught to understudies in vocabulary learning. Spelling and reading have a relationship with each other because this can strengthen the relationship between letters and sounds. It can be seen that some words differ from what is written, such as the letter (I) is not always pronounced / I /. Pronunciation is a way of pronouncing words and letters. Pronunciation is difficult to learn because not all words have to do with spelling. Word Class In semantic analysis, word class is an

important feature. Nouns, adjectives, verbs, adverbs, and prepositions are among the word class categories. The Value of Vocabulary in Language Learning Since language is so individualized, each person's answer will be unique in this situation.

Without mastering adequate vocabulary, students not only have difficulty communicating but may not even be able to communicate at all. Apart from that, without understanding vocabulary and grammar, students will face problems accessing information and operating their electronic devices. Considering the importance of English, learning English in the classroom must use appropriate strategies and attract and involve students so that English language competence can be mastered optimally (Rohmatillah, 2021). Studying English at school aims to improve one's oral and written communication abilities. Speaking, listening, reading, and writing are the four English language proficiency areas in question.

C. RESEARCH METHOD

A mixed method of study is being used. Using interviews and classroom treatment observations as research tools, the qualitative technique seeks to determine if students' learning style test results correspond with students' learning activities. Next, the quantitative approach seeks to ascertain how multimodal text affects learning style activities and how much vocabulary students pick up. Provided a pre-test and post-test regarding their favorite household items (My Favorite Items at Home), which was subsequently validated by reputable data sources through statistical computations. Because the pre-test and post-test conditions can be compared, the treatment outcomes can be determined with more accuracy.

D. FINDINGS AND DISCUSSION

The research findings on learning styles are presented based on the two previously formulated portions of the questions.

1. The Match Between Students' Learning Styles and Their Learning Activities in The Classroom

This research was carried out to analyze the match between students' learning styles and their learning activities in the classroom in the English language learning students of SMP Plus Bandung Timur. Researchers made observations, gave Pre-tests and post-tests, and then provided treatment and interviews to obtain data. Observations were carried out to determine the learning conditions of SMP Plus Bandung Timur students.

To determine the type of student learning style, students answer questions from the website akupintar.co.id. The results of the learning style test from the Akupintar.co.id website show three students with a kinesthetic learning style, 2 with a visual learning style, and 1 person with an auditory learning style. The results of learning styles by akupintar.co.id are listed in the following table:

Table 1. Students learning style result by akupintar.co.id

Sample	Students Learning Style Result
S1	K
S2	K

S3	V
S4	K
S5	V
S6	A

To match the student's learning style result and their learning activities in class, the researcher observes the participants by seeing how they work on multimodal text / and follow teaching and learning activities for three meetings. This activity is a treatment for students after students do the pre-test.

The first meeting was about making product advertising posters according to the pre-test questions. This activity represents a visual learning style. The questions made by the researcher are included in the multimodal text. The teacher gave the participants an explanation about digital and paper posters (manually using crayons/colored pencils). The six students observed chose digital posters. Then, students were directed to make digital posters on the school computer. Making digital posters using Canva.

In the second meeting, students were invited to work on multimodal texts by listening to music and filling in the blanks on the exercise questions to train students' listening practice. In addition to listening to music practice, students are given listening questions related to vocabulary in the pre-test questions. This activity represents the auditory learning style.

The third meeting is the last, and it will include activities representing kinesthetic learning styles. The researcher has prepared questions that students must answer. The answers were posted on the wall of the school area. Students are given pictures according to the vocabulary related to the pre-test questions. Then, students must guess, find, and match the names of objects in the pictures given to participants and leave the classroom to do these activities.

The following are the results of the researcher's observations of the six student participants who participated in the three visual, auditory, and kinesthetic learning style activities.

S1's learning style from the results of akupintar.co.id is kinesthetic. As we know, someone who is kinesthetic prioritizes body exercise. However, he looks enthusiastic when making digital posters. He said, *"This is a new thing for me. This is my first time using the Canva app to make a poster. I've never made a poster before, and I only know about Canva now"*.

Finding a new hobby is new for someone with a kinesthetic learning style. Changes in students' learning styles can occur over time at school, this occurs due to changes in the experiences received by students (Akbar et al., 2022).

At the second meeting, student S1 performed auditory learning style activities. S1 worked on the problem well. He worked on problems and answered listening questions with a perfect score of 100 = 15/15.

The third meeting was a meeting with a kinesthetic learning style. This student looks superior to the others, with evidence that S1 looks enthusiastic by looking for answers first from other friends. The answers he showed were also all correct. S1 was the first student to collect this task.

The researcher interviewed S1 and asked which question was the most favorite

and easiest to answer from the three questions in all meeting activities. S1 said that he chose the kinesthetic (outdoor class) and visual (poster making) learning style questions. S1 was also asked about his hobby, which is playing sports. From the observations above, students are more inclined to kinesthetic learning styles according to the results of the learning style test on the akupintar.co.id website. It can be said that S1's learning style is in accordance with the results of akupintar.co.id learning style.

S2 learning style from the results by akupintar.co.id, the result is kinesthetic. S2, in the poster-making activity, did not look too excited. When the researcher asked S2, he said that he had never used a computer before: *"I have never used a computer before, so I do not know how to use it, and I have a little trouble logging in using my account on Canva,"* and many times he said that he was not confident when he was about to submit his work *"This is not a great work, Mrs."*

At the second meeting, S2 participated in activities with an audio learning style, with the results of answering audio questions with a score of 80 = 12/15. This means that S2 still has any mistakes in answering audio learning style questions.

In the third meeting, S2 participated in kinesthetic learning style activities. However, S2's English language skills still lack vocabulary; seen from S2's achievements in outdoor activity, S2 showed less performance than the others. It is proven that he is the last participant who submitted the assignment. there is proof from what S2 said when doing this activity. *"Mrs, I do not know what this means; I do not know which name it is."* From these words, S2 seems confused and unconfident about doing the assignment.

The researcher interviewed S2 and asked the same question to S2. What activities are the most favorite and easiest to do from the three questions on visual, audio, and kinesthetic learning style activities? S2 answered, *"I enjoy learning outdoors, but the problem is that I am not proficient in English. If only the language were Indonesian, I would have been able to do it"*. Based on S2's explanation, he chose to work on the activity outside the classroom rather than in the classroom. When asked about his hobbies, S2 said he likes futsal, volleyball, basketball, and taekwondo. Therefore, there is a match between researcher observations and the results of learning styles on the akupintar.co.id website.

Next is student S3 with the results of learning style by website akupintar.co.id as a visual learner. S3 works on digital posters as a visual learning style activity. S3 is not very expressive in expressing his feelings. However, S3 can work on digital posters well and has out-of-the-box ideas, so his ideas are original and not the same as others.

S3 at the second meeting in the activity of working on audio learning style questions, S3 got the results of listening scores 73 = 11/15. These results do not show that S3 stands out in audio learning style activities. The third meeting, S3, showed maximum results following kinesthetic learning style activities. S3 found the answers to the questions given quickly and accurately. He became the second fastest participant in collecting the assignment.

In S3's interview, the researcher found new findings said by S3 that he likes to look for music tutorials in his spare time. However, he also likes watching movies rather than listening to music. When given the choice between listening to music or watching movies, he prefers watching movies to other activities. This is encouraging

because S3 matches the researcher's observations and the student's learning style results on the akupintar.co.id website.

S4, according to the results of the learning style test on the akupintar.co.id website, is kinesthetic. At the first meeting in the poster-making visual learning style activity, S4 also chose a digital poster using the Canva application on the school computer. In addition, S4 did not show anything that stood out when working on this digital poster. S4 worked on posters with almost the same theme as everyone else.

In the second meeting, S4 participated in learning activities with an audio-learning style. The result shown by S4 in this audio learning style test was $73 = 11/15$. This result shows no interest in S4 with audio learning style. He looked confused and lagged behind more often when the spoken speaker on the audio spoke too fast, so the results obtained were not maximized.

The third meeting was a meeting with kinesthetic learning style activities. S4 showed his excitement and readiness to undergo this kinesthetic learning style activity. S4 also showed significant results when participating in this outdoor kinesthetic learning style activity. S4 was among the students who worked quickly and accurately. He is the third participant who collected the kinesthetic assignment.

In the interview, S4 explained that the questions answered in the three activities above were the easiest and his favorite question: making a poster. Although his learning style is kinesthetic, S4 showed that he was interested in the visual learning style to try new things (make a poster). His statement does not match the result of akupintar.co.id.

S5 in this study also participated in the entire series of learning style research activities. S5 has visual learning style test results on the akupintar.co.id website. At the first meeting, namely visual learning style activities, S5 did not show unpredictable expressions while working on making digital posters on the computer. S5 worked carefully in the process. The results of S5's poster have more cheerful colors than other participants' posters. However, there are still many shortcomings in the delivery of messages on S5's digital posters. The originality of the poster also did not really show anything different. Thus, S5 chose the poster theme most chosen by other participants.

The second meeting, S5, showed results on the audio learning style activity with a score of $67=10/15$. This result does not show that S5 is prominent and interested in the audio learning style. The third meeting was a kinesthetic learning style activity. S5 also looked quieter when he found difficulties and did not ask too many questions, but S5 watched and observed his friends while looking for answers on the school wall outside the classroom. S5 only asked occasionally about the instructions to be carried out on the activity. S5 ranked 5th in doing the kinesthetic learning style task.

S5 was also asked in the practice interview if he was more likely to enjoy making posters and the process of making posters than other activities. The hobby or activity that S5 does in his spare time is watching videos / just scrolling videos on social media. So, this is the evidence from the result of student's learning style and their activity in the classroom match.

The last student is S6. The results obtained by him on the akupintar.co.id website are audio learning styles. In the first meeting, he did digital poster-making activities on the computer and showed good results. His poster was good, with a

different theme from those of other friends. S6 also said, "I am used to using Canva to design something related to school assignments, etc." So S6 looks more flexible and confident when working on posters in this visual learning style activity.

In the second activity, S6 did not show maximum results working on multimodality text questions about audio learning styles. The result shown was 87=13/15. However, S6's score was still above that of the other participants. The third meeting was a kinesthetic learning style activity. S6, in the researcher's observation, seemed to have difficulty in working on the problem because he did not master the vocabulary of the problem given. Therefore, he was the last to answer the questions in this kinesthetic learning style activity.

During the interview session, S6 informed us that she prefers doing posters to other activities. When asked about hobbies, S6 said he likes doing new things and exercising. He is also a person who can work with music. Still, the music in question is a musical instrument that generates enthusiasm for learning, so according to S6, music is helpful as motivation when studying. Thus, the results from akupintar.co.id are incompatible or mismatched with S6's learning activities at school. The result table of S1-S6 is mentioned in the table below.

Table 2. S1-S6 multimodal text result and Interview

Sample	Visual	Auditory	Kinesthetic	akupintar	interview
S1	86	100	100	Kinesthetic	Kinesthetic
S2	80	80	75	Kinesthetic	Kinesthetic
S3	85	73	80	Visual	Visual
S4	80	73	90	Kinesthetic	Visual
S5	80	67	75	Visual	Visual
S6	88	87	75	Auditory	Visual

2. Learning Style Multimodal Text Increase Students' Vocabulary

Before entering the class, at the first meeting, the six student participants who were used as research samples were given pre-test questions about the learning style multimodal text to increase students' vocabulary about "my favorite items at home." The following are the results of the pre-test and post-test after the students did the visual, audio, and kinesthetic learning style activities:

Table 3. Pre-test and Post-test Score

Sample	Pre-test	Post-test
S1	99	99
S2	58	91
S3	99	99
S4	99	99
S5	66	99
S6	75	99

Based on the results of the research that has been carried out on Pre-test and

Post-Test activities, it will be presented as follows:

a. Pre-test Results (Initial Test in English Learning "My favorite items at home")

Based on the data analysis of the Pre-test score assessment, it was found that the highest score achieved by students was 99, and the lowest score was 58. The details of the scores obtained by students with a score of 58 were one person, a score of 66 was one person, and a score of 75 was one person. And the value of 99 was three people. The assessment obtained on the Pre-test results uses the following formula.

$$NP = \frac{R}{SM} \times 100$$

Researchers use the formula above to determine the results of student scores in Pre-test activities. NP is the percent value sought, R is the score obtained by students, and SM is the ideal maximum score of the test conducted. While the value of 100 is a fixed number. Based on one of the students' Pre-test scores, for example, a score of 58 is obtained. If the above formula is used, the following value will be generated.

$$N = \frac{58}{99} \times 100 = 58\%$$

The aspects assessed on students' scores in learning style multimodal text vocabularies include the accuracy of students answering questions.

b. Post-Test Results (Final Test in English Learning "My favorite items at home")

Based on the data analysis of the pre-test score assessment, the highest and the lowest scores were obtained by students. The highest score was 99, and the lowest score was 91. The details of the scores obtained by students with a score of 91 was one person, and a score of 99 was five people. The aspects assessed in the students' scores in learning style multimodal text vocabularies include the accuracy of students answering questions.

c. Influence of Multimodal Text Learning Style on Students' Vocabulary Improvement

Based on the results of data analysis, it states that the results of the Pre-test and Post-Test do not have a significant effect and change, even though they have been given treatment. This can be proven based on the t-test results calculated by the price of t count 2.193. While the calculated t price is consulted with the degree of freedom (df) $N-1$ or $6-1 = 5$ with a significance level of 0.05, the t table price is 2.015. It shows that the price of the t count is greater than the t table because the t count is 2.193 and the t table is 2.015. If the t count is greater than the t table, there is no significant influence between one independent and dependent variable.

E. CONCLUSION

Two study questions led to two findings. The first is the qualitative method's findings, which are largely consistent with the akupintar.co.id learning style result test and the six students who participated in the learning activity in the classroom. Two individuals had findings from the akupintar.co.id learning style exam that did not match what they had been studying in class. The learning activities they completed in class and the results of the akupintar.co.id test on learning styles matched for the other four pupils. This outcome shows that pupils are still self-discovering and have the

capacity to change their learning approaches over time.

The second conclusion of the quantitative method of multimodal text learning style is that students cannot benefit enough from this method to improve their writing ability. The lack of variation in the Pre-test and Post-test tasks, as shown by the t-test value at $t_{count} 2.193 > t_{table} 2.015$, demonstrates this. This indicates that hypothesis H_0 , which states, "Multimodal text learning style does not affect students' vocabulary improvement in English language learning," can be accepted. Thus, the claim H_a , which states that "Multimodal text learning style does not affect students' vocabulary improvement in English learning," is rejected. Compared to the Pre-test scores, the student's results in the Post-Test activity were not statistically significant.

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