

## **Exploring Students' Learning Style and Proficiency at a University in Indonesia: A Quantitative Classroom Research**

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### **Abstract**

This study is designed to confirm whether there is a relationship between students' learning styles and their English Proficiency at one of private universities in Indonesia. Using quantitative classroom research, 40 students were involved to fill out a questionnaire to explore their learning styles. Then, the students were also required to follow an Institutional English Proficiency Test (EPT) to measure their English ability. The result of the questionnaire is analyzed and presented in terms of visual, auditory, and kinesthetic categories of learning style, while the mean score of students' English proficiency is presented in terms of low, medium, and high proficiency. The correlational analysis is then calculated to reveal to what extent learning style has a relation to English proficiency. This study bears a pedagogical implication for English teachers and practitioners while some limitations were also highlighted.

**Keywords:** Learning style, English proficiency, classroom research, university

### **Introduction**

English has been an important skill to master (Ayu & Indrawati, 2018) and it is a common international language taught in a university. For university students, English language skills are required as requirements to accomplish their studies, get a scholarship, grants, and better career opportunities. There is a consensus in which the success of students depends on their English mastery. English is taught as a compulsory subject at universities in Indonesia. Students are required to follow each class and are supposed to finish the subject with satisfactory grades. Otherwise, they are required to follow a remedial procedure or even, retake the class in the following year. English subject curricula in universities require students to master macro skills such as listening comprehension, structure, and written expression, and reading comprehension. They also need to master micro-skills such as grammar, vocabulary, pronunciation, and fluency. For students whose native language is not English, mastering those skills may give a great challenge.

The challenges faced by the students are related to their lack exposure of English. It was found that they sometimes are unable to grab ideas from oral communication which means they lack of listening ability. Students occasionally found difficult vocabulary to get the meaning of written information. The last but not least, it is apparent that producing oral and written communication may also be a great challenge for students. Some students are reluctant and feel shy due to their inability to express ideas during spoken communication. Besides, students also faced problems in some tasks that require their writing ability. Sentence structure and vocabulary have been the aspects in which the students need to improve. These challenges become the concern of the teachers and practitioners.

Among the internal aspects of students that the teachers need to be concerned about, learning styles and strategies caught some attention in recent years. Learning styles are

important in the learning process and the final results to be achieved, each student has a different learning style (Wahyudin & Rido, 2020). Some students quickly reach information through various means, or information obtained through reading, writing, listening, etc. This means that students get benefits from those specific learning styles. Another report points out that students are able to understand learning materials when studying in groups but other students prefer to study independently (Aminatun & Oktaviani, 2019). It can be said that students employ different learning styles to help them be successful in language learning. This statement is also supported by Rido and Sari (2018) in which students have a unique way of learning and processing information. Students prefer different ways of learning, one student repeats orally, another student writes and another student in groups or individually. Thus, a language teacher might consider learning styles and preferences of students while they are tailoring the teaching and learning process.

Learning style is the tendency of students to adjust certain strategies in their learning as a form of responsibility to get a learning approach that is in accordance with the demands of learning in the classroom or school (Fleming & Mills, 1992). As well as the demands of the subject, learning styles are general plans such as auditory or visual, global or analytical, feelings or thoughts that students use in acquiring language or in studying other problems (Duun & Griggs, 1993). Language learning style is a factor that plays an important role in determining how well a learner learns a language. These styles constitute a whole pattern that provides a general direction for studying behavior. In other words, some learners are visual and prefer to learn with graphics, other learners prefer to learn by spoken explanation, like to study in groups, while others prefer to study individually (Felder, 1996).

Learning style might be a combination of how a person absorbs and then organizes and processes information (Hasrul, 2009). Learning styles are not only aspects of processing information, seeing, hearing, writing and speaking but also aspects of sequential, analytic, left brain and right brain information processing. Another aspect is when responding to something in the learning environment (absorbed abstractly and concretely). Since learning style might affect the students' English proficiency (Yuyun, et. al, 2018), exploring the relationship between those aspects is worth investigating. The English language proficiency test is called EPT, the same as the TOEFL, TOEFL test is a test to measure English language skills (Philips, 2004) in this study. Students with different learning styles might reveal different levels of English language proficiency (Dunn & Griggs, 1990).

Numerous previous studies related to students' learning style and students' English proficiency have been reported in the last five years with various results (Rosedi, Dahari, & Said, 2014; Supalak, 2016; Ariastuti, 2022; and Anggarista & Wahyudin, 2022). Gustanti (2021) investigated the correlation between cognitive reading strategies and students' English Proficiency. The result of this study indicated that there was positive correlation between cognitive reading strategies and English proficiency test scores. Students who used cognitive reading strategy while reading a text might constitute a slightly better English performance (Nurlaela et al, 2018).

On the other hand, Triyadi, Ash and Firdiansyah (2018) revealed that students with visual, auditory, and kinesthetic learning style possess different levels of English proficiency. Similarly, Fahriah (2021) pointed out that there was no significant difference in listening mastery among students whose learning styles are visual, auditory and kinesthetic. there is no significant difference of reading comprehension among students with different learning styles. In addition, Marzulina (2019) also found that the students' English proficiency was varied as they have different learning style preferences. Though it was revealed that there was no significant correlation between kinesthetic learning style and English proficiency of EFL students, there was a significant influence of visual learning style on English

proficiency with 18.5% contributions. These findings indicated that the students with different learning styles possess different English proficiency levels (Sahriyah, Mistar, & Rahmati, 2021).

### Theory and Method

The present study was conducted by following quantitative approach. To explore the students' learning style preferences, questionnaire is distributed to the 40 participants. The 15 items questionnaire adopted from Reid (1987) and modified by Rosedi, Dahari, and Said (2014) was deployed to measure the students' learning styles in terms of visual learning styles, kinesthetic learning styles, and auditory learning styles. During the process of research, 1 student was not able to attend the class, so there were only 39 students who participated in this study. Afterward, students were required to follow an English Proficiency Test which is an Institutional Test conducted to measure the students' mastery of English. The test consists of listening comprehension, structure and written expression, and reading comprehension. The test was conducted in a laboratory where they were not allowed to consult a dictionary and the test was fully supervised by the language lab assistant. The collected data from the questionnaire is analyzed categorically, and also quantitatively using computer software called SPSS version 18.0. The data from the English Proficiency Test was collected and analyzed using SPSS version 18.0 as well.

### Findings and Discussion

This study seeks to reveal the relationship between students' learning style preferences and students' English proficiency at the tertiary level. The data taken from a questionnaire consisting of 15 questions were distributed through a web-based form called Google Form and 39 students were able to complete the questionnaire. To ensure the reliability of the questionnaire data, Cronbach Alpha was calculated and the result shows that the value is 0.704. It is indicated that the questionnaire is considered highly reliable (See Table 1.1).

Table 1.1 The result of reliability analysis

Cronbach's Alpha	N of Items
.704	15

The analysis of respondents is also highlighted in this study. It can be seen from table 1.2 that the total of respondents is 39 consisting of 12 males (30,8%) and 27 females (69,2%). All respondents were English Education students in batch 2018 and they were willing to participate in this research.

Table 1.2 Characteristics of respondents based on gender

Gender	N	%
Male	12	30,8%
Female	27	69,2%
Total	39	100%

Table 1.2 shows that the participants were dominated by female students. It was reasonable since the teacher profession which is usually associated with females in Indonesia, the majority of English Education students were also female. The students were also asked

to follow an EPT that last for two hours. This paper-based test was conducted in a laboratory where the seating arrangement is designed to avoid academic plagiarism and fraud.

Table 1.3 The average of English proficiency level for different learning styles

Learning Style	Number of students	Questionnaire (mean)	EPT score (mean)
Kinesthetic	8	13,55	453.33
Visual	21	22,375	553.00
Auditory	10	17,88	427

Based on the results of the data analysis in table 1.3, it was revealed that there are 21 students who have a type of Visual learning style, then there are 10 students who have an auditory type of learning style and 8 students have a type of kinesthetic learning style. It is obvious that students with visual learning style outperformed all counterparts. The students with visual learning styles have an average score of 553 which indicates high intermediate level of proficiency. The students with kinesthetic learning style have an average score of 454 which is the low-intermediate level. At least the students with auditory learning style have the lowest average score which is 427. This study also portrays the learning style preferences of the students in each category.

Table 1.4 Students' learning style preferences in visual category

No.	Visual category	n	Statistics	
			Mean	SD
Q5	I am more comfortable learning through pictures and videos that do not include writing	39	3,8	0,91
Q6	During the reading test I could remember the graph of faces, names of characters, places clearly.	39	3,58	0,812
Q7	I can remember information about the picture story.	39	3,9	0,708
Q8	I would rather read than be read	39	3,58	0,708
Q9	It is difficult to study in a crowded, noisy atmosphere and lots of distractions.	39	4	0,877
Q10	I like to scribble on books, draw.	39	3,53	0,905
Mean			22,375	4,99

Table 1.4 is a report on the visual learning styles of English education students. Six statements were asked to the students completed by 39 students. the first question is, *I am more comfortable learning through pictures and videos that do not include writing*, with a mean score of 3.8 and a standard deviation of 0.91, the second question is, *During the reading test I could remember the graph of faces, names of characters, places clearly* with a mean score of 3.58 and a standard deviation of 0.812, the third question, namely, *I can remember information about the picture story* with a mean score of 3.9 and a standard deviation of 0.708, the fourth question, namely *I would rather read than be read* with a mean score of 3.58 and the standard deviation shows a score of 0.708, the 5th question is *It is difficult to study in a crowded, noisy atmosphere and lots of distractions* with a mean score of 4 and the number of standard deviations 0.877, the last question *I like to scribble on books, draw* with a mean score of 3.53 with a standard deviation value of 0.905. From these data, it can be seen that the students' learning style scores have 2 similar scores, which means that half of the English education students have the same opinion of learning styles, with a score of 3.58 in the Q6 and Q8 sections of English. Education students with visual learning style can remember someone's face, remember a place or someone's character, one opinion is the same according to English education students, namely, they prefer reading to reading,

another statement is the highest in English education students with visual learning styles feel disturbed by crowded conditions, and a lot of noise will disturb students with visual learning styles with a score of 4, students who can remember information through stories with a score of 3.9, while students who are more comfortable learning through video are 3.8 While students who prefer cross picture book is 3.53.

Table 1.5 Students' learning style preferences in kinesthetic category

No.	Kinesthetic category	n		
			Mean	SD
Q1	I prefer to tell stories, and explain something rather than taking notes on study material object when I will describe something.	39	3,5	1,102
Q2	When I was talking or explaining something, I would move my hand, tap the pen.	39	3,65	0,73
Q3	I am very ignorant in class when the learning time starts to get boring.	39	3,43	0,93
Q4	Easily restless and frustrated in listening to something while sitting for a long time, so it requires a little rest.	39	3,33	0,76
Mean			13,5	3,44

The table above shows a report on kinesthetic learning styles, this table presents 4 statements about the kinesthetic learning styles of English education students. The first question is *I prefer to tell stories, and explain something rather than taking notes on study material object when I will describe something*, with an mean score of 3.5 and a score of the standard deviation is 1.106, the second question, *When I was talking or explaining something, I would move my hand, tap the pen*, the mean score 3, 65 and a standard deviation score of 0.75, the third question, *I am very ignorant in class when the learning time starts to get boring* with a mean score 3.43 and a standard deviation score of 0.93, the last question is *Easily restless and frustrated in listening to something while sitting for a long time, so it requires a little rest*, with a mean value of 3.33 with a standard deviation of 0.76, from this data it can be seen that a the highest score is for respondent Q2. with a mean value of 3.65, an English education student when explaining something will make a tapping motion, tap the pen or move his finger, the second point is in question Q3, with a mean value of 3.43 which means more or less students with kinesthetic learning styles feel uncomfortable when listening to the teacher's explanations for a long time, it will make them bored, and only some students who have kinesthetic learning styles will prefer to explain a lesson in front of the class rather than record a subject matter.

Table 1.6 Students' learning style preferences in auditory category

No.	Auditory category	n		
			Mean	SD
Q11	when reading I make a sound or move my lips.	39	3,63	1,00
Q12	I will record the instruction of the study material	39	3,25	0,98
Q13	I am more comfortable learning discussions with friends so that it is easier to understand and remember the material	39	3,9	0,74
Q14	I have difficulty writing and prefer to speak it verbally	39	3,48	0,933
Q15	when studying or memorizing I often talk to myself	39	3,63	1,00
Mean			17,88	4,66

The last table points out the auditory student learning style, with 5 questions given. The first point shows students with the auditory learning style tend to do some habits such as moving their lips when reading, with a score of 3.63, the same point is shown by Q15 were students who often talk to themselves when learning. in Q12 students with auditory learning styles record the sound of the subject matter, some of the students around 3.9 percent of students with auditory learning styles like to study with friends, because thus auditory-style students better understand and understand subject matter They can ask for help and understand when they are with their friends, but the difficulties faced by students with auditory learning styles are difficulties in writing and speaking in public with a score of 3.48, in most cases students with auditory learning styles are more silent.

Table 1.7 The result of Correlational Analysis between EPT and learning style

		Learning style	EPT
Learning style	Pearson Correlation	1	.052
	Sig. (2-tailed)		.753
	N	39	39
	Pearson Correlation	.052	1
EPT	Sig. (2-tailed)	.753	
	N	39	39

Based on the data presented in Table 1.7 regarding the relationship between student learning styles and the EPT score results of English education students, it shows that there is a reciprocal relationship meaning that student learning styles affect the scores obtained by English education students. Students' learning styles Pearson Correlation 0.52 (slightly have positive correlation). The result indicates that there was a positive influence between visual, auditory, and kinesthetic learning styles on the EPT score of the students of English Education. Somehow it suggests that the more students optimize their learning styles, the higher their learning outcomes. Learning styles are an important part of learning, because learning styles are the key to developing performance at work, at school, and in interpersonal situations, the more familiar a person is with their learning styles, the better the results.

One of the characteristics of students that affect the results of the EPT score is their learning style. Learning style is an action that students feel attractive in carrying out learning activities, either alone or in a study group, with friends. There are three types of learning styles to assist in finding student learning modalities or types of student learning types, namely visual, auditory and kinesthetic learning styles.

First, the visual learning style is a learning style where students tend to learn through what they see. For students with a visual learning style, they rely on their sense of sight or eyes. from the existing data visual learning style has a score of 22.75 the Examples of learning styles in understanding subject matter, students need to look directly at the lecturer's body language, the expression of the lecturer in explaining. In the table above the students are classified as visual types. It is easier to remember which ones are seen than heard, prefer reading rather than being read, scribble on a book or draw something in a book. Students with this learning style can read quickly, thoroughly, and diligently, but students who have a visual learning style will have difficulty in crowded conditions.

Auditory is a learning style where students tend to learn through what they hear, students can listen to what lecturers or teachers say, examples of auditory learning styles understand subject matter through teacher explanations, students who are classified as auditory types more often do habits such as speaking to themselves at work, easily distracted by noise, moving their lips and pronouncing the text in the book when reading, in the table

students like to read aloud and listening, and can repeat and imitate the tone, bar, and color of sound, when studying students prefer student discussion activities can explain aloud, the weakness of the auditory learning style, namely students who have a visual learning style find it difficult to write, From the existing data, the auditory learning style has a score of 17.8 which indicates that only a few English education students choose the auditory learning style.

The last is kinesthetic learning styles. Kinesthetic learning style is a learning style where students tend to learn through motion and touch. Students who have a kinesthetic learning style will learn better when they are physically involved in direct activities. For example, in the English proficiency test (EPT), exam activities students will concentrate more when these activities take place directly, students with kinesthetic learning styles will learn very well if they are physically involved in learning. English education students will succeed in learning if they get the opportunity to manipulate the media to study new information. From the table above, the researcher explains that students who have kinetics learning styles have habits such as, standing close when talking to people, always physically oriented and moving a lot, learning through manipulation and practice, memorizing by walking and seeing, using fingers as pointers when reading. Many use body cues. The difficulty experienced by students who have a kinesthetic learning style is that it is difficult to sit still for hours because they have a desire to do activities. The number of students with their learning style compared to English education students with auditory learning styles, only a few students of English education feel comfortable when studying with a kinesthetic learning style related to the English proficiency test.

From all these data we can see that the learning styles of English education students are interrelated between visual, kinesthetic, and auditory, but from these data, it can be seen that students with visual styles have the highest score with a score of (22.37) dominating the students with auditory, and also kinesthetic. Visual learning styles means understanding what is seen, and what is conveyed by the teacher or lecturer, the data above shows that in English education classes most of the time carried out using visual aids. Thus, students of English education have a more dominant visual learning style. The learning style of English education students affects the achievements of the English Proficiency Test (EPT) as well as helping them in the learning process, as well as learning outcomes. This study somehow supports numerous previous studies (Faridah, 2014; Supalak, 2016; & Jaya 2019).

### **Conclusion**

This study highlights the preferences of students' learning style and their correlation with students' English proficiency. The results show that they are notable relationship between auditory, visual and kinesthetic learning styles of students with English language and their English proficiency. It was found that the students dominantly used visual learning styles which mean the student feel more comfortable when they are learning with what they see visually. It is likely that the students can accomplish the tests consisting of listening comprehension, structure and written expression and reading comprehension comfortably. Students with visual learning styles tend to make scribbles or take notes, lists and dots to be more concentrated and focused. However, they tend to have difficulty in understandings the test or information in crowded conditions. The result of this study might lend a hand English teachers and practitioners to adjust their classroom methods and practices with the preferences of student learning styles to be more successful in teaching and learning. This study has some limitations and room for further clarification. First, the present study only employed questionnaire as the instrument to explore students' learning styles. Second, the number of participants is relatively small so that the finding is not transferrable. Third, the

Proficiency test was conducted in the middle of their study. This condition may lack internal validity in which the students are not in the best condition to accomplish the EPT. Further study may employ classroom observation to explore thoroughly the students' learning styles. Then it is also suggested that a bigger sample size is required to make the finding of the research transferrable.

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