

Learning Styles and English Learning Achievement

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Abstract

The purpose of this study was to determine the relationship between the learning styles and English achievement of a selected private Junior High School students in Manado. This research also showed the description of the student learning styles and English learning achievement. An adapted questionnaire was used to gather data from 182 student participants, wherein 55 students participated in the pilot study and 127 students participated in the actual study. The data were analyzed and interpreted with a statistical software which included the use of both descriptive and inferential statistics. The descriptive statistic showed that the students had high level of all the six learning styles and a very good level of English achievement. Analysis of inferential statistics revealed that there was no significant relationship between each of the six learning styles and English achievement.

Keywords—learning style, English learning achievement

Abstrak

Tujuan dari penelitian ini adalah untuk mengetahui hubungan antara gaya belajar dan prestasi bahasa Inggris siswa salah satu SMP swasta yang dipilih di Manado. Penelitian ini juga menunjukkan gambaran gaya belajar siswa dan prestasi belajar bahasa Inggris. Kuesioner yang disesuaikan digunakan untuk mengumpulkan data dari 182 peserta siswa, di mana 55 siswa berpartisipasi dalam studi uji coba dan 127 siswa berpartisipasi dalam studi yang sebenarnya. Data dianalisis dan diinterpretasikan dengan perangkat lunak statistik yang meliputi penggunaan statistik deskriptif dan inferensial. Statistik deskriptif menunjukkan bahwa siswa memiliki gaya belajar yang tinggi dan tingkat pencapaian bahasa Inggris yang sangat baik. Analisis statistik inferensial mengungkapkan bahwa tidak ada hubungan yang signifikan antara masing-masing dari enam gaya belajar dan prestasi bahasa Inggris.

Kata kunci—gaya belajar, prestasi belajar bahasa Inggris

INTRODUCTION

The way students learn differs from one individual to another. There are those who absorb learning material better through notes, material that is heard, and there are those who prefer practicum in the laboratory and so forth. In connection with various variations of student learning styles, not a single learning approach fits to any student learning needs.

Learning Styles Theories

Learning styles theories suggest that every individual learns best in different ways, wherein they prefer certain types of ways to process information in their brains. These theories are varied, but they hold the notion that every individual learns in different ways. When learning is optimized by using instruction that is suitable to the styles, the student learning achievement can be maximized.

David Kolb (cited in Healey & Jenkins, 2000) suggests that each student develops a preference for learning in a certain way, wherein the student tends to adopt different learning styles in different situations. He advocates four learning styles as follows: diverging, assimilating, converging, and accommodating. Divergers are imaginative learners who tend to use personal experience by brainstorming and observing. Assimilators are sequential learners who prefer abstract ideas and theoretical reasoning. Convergers are learners who prefer to learn by solving problems, and they strive to find practical solutions for things that they understand. Accommodators are learners who rely on their feelings more than their logical analysis.

Peter Honey and Alan Mumford (cited in Ferreira, 2022) developed Kolb's model of learning styles, because they found low validity of his learning styles instrument in certain areas. They suggest four new learning styles as follows: activist, reflector, theorist, and pragmatist. Activists prefer to learn through new experiences and challenges, and they do not like theories. Reflectors are natural observers who prefer to stand back and gather more information before making decisions. Theorists are sequential learners who want to fully understand the theory behind a subject, by analyzing its single aspect. Pragmatists are active learners who prefer to see theories put into practice and try them until they get satisfactory.

Bernice McCarthy (cited in Janse, 2018) developed the 4MAT with four learning styles which was based on Kolb's model of learning styles and brain dominance approach. She analyzed the 4 main questions of "why", "what", "how", and "if", and came up with four learning styles outlined in the 4MAT as follows: innovative, analytic, common-sense, and dynamic. Innovative learners with their creative minds prefer cooperative learning and brainstorming. Analytic learners are individuals who prefer to analyze data on their own to understand concepts and processes. Common-sense learners are thinkers who prefer concrete experimental learning activities, and they are more interested in how things work. Dynamic learners rely heavily on their own intuition, preferring self-discovery tasks, such as games.

Neil Fleming (cited in Sreenidhi & Tay, 2017) developed VAK learning styles with three categories of learner: visual learners, auditory learners, and kinesthetic learners. Visual learners tend to absorb information better by seeing or observing others, through videos, or reading books. Auditory learners tend to absorb information better through listening, such as lectures, discussions, audiobooks, and recordings. Kinesthetic learners tend to absorb information better through physical movement, experience, and hands-on tasks.

This article reported the study that focused on the six learning styles developed by Joy Reid (cited in Ha, 2021; Vaseghi, Ramezani, & Gholami, 2012): Visual, auditory, tactile, group, kinesthetic, and individual. Visual learners tend to absorb and process information through visual stimuli. Auditory learners tend to absorb and process information through auditory stimuli. Tactile learners prefer to learn better through experiences in classroom

learning. Group learners prefer to study with others through group interaction. Kinesthetic learners prefer to learn through their own body movement experiences in class. Individual learners tend to prefer to study alone.

Related Studies

Farsides and Woodfield (2003) who examined the relationship between motivation, learning styles, and academic achievement found that there was a positive relationship between learning styles and student academic achievement. Learning style differences affected learning achievement and hence if handled appropriately, a large increase in achievement of learning outcomes can take place, particularly the visual learners (Pallapu, 2007; Jahanbakhsh, 2012). Likewise, Homayoni and Abdolahi (2003), investigated that there was a very close relationship between learning styles and academic achievement of high school students. With a sample of 308 students, Siddiquei and Khalid (2018) reported that personality and learning style can simultaneously contributed 17% of the change in learning performance.

Hidayana (2009) conducted a study entitled Pengaruh Gaya Belajar terhadap Prestasi Belajar Siswa Kelas X SMK Negeri 2 Balikpapan came up with a recommendation that students should be able to recognize their learning style so they can determine how or what to learn optimally for themselves, and it can help the teachers in determining the appropriate teaching methods that are more suitable to students learning need. Abidin, Rezaee, Abdullah, and Sigh (2011) reported that most students were frustrated because of their learning style were not accounted for by the teachers so the students did not learn effectively in the classroom and most of them were passive in receiving knowledge. Aunurrahman, Kurniawati, and Ramadhiyanti (2013) with their study on learning styles related to English language outcomes, recommended that the students should have been aware of the self-learning style so they could experience a better English learning experience. So, it is important for both the students and teachers to be knowledgeable in learning styles as they are associated with learning achievement.

On the other hand, there were studies that reported different results wherein the student learning styles did not affect their academic performance. Almigbal (2015) from Saudi Arabia, reported that learning styles were not significantly correlated with academic achievement of nursing students in King Saud University. Argasetra (2017) reported that there was no correlation among active, reflective, sensing, intuitive, visual, sequential, global, and academic achievement of the students in Universitas Islam Negeri Raden Fatah Palembang, Indonesia. There was also no significant relationship between the dominant learning styles and academic performance among the nursing students of medical and dental colleges of Pakistan in the study of Noushin, et al. (2021).

Purpose of the Study

Due to the inconsistent findings of studies on learnings styles and academic achievement, it was deemed necessary to investigate the relationship between these variables in local context, so the results could yield more relevant and meaningful implication. In this study, the focus was on student learning styles and their English learning achievement of a selected private Junior High School in Manado. This article was intended to describe the students' learning styles and their English learning achievement as well as the relationship of these two variables.

RESEARCH METHODS

Research Design

In this study, the researchers used a descriptive and correlational quantitative research design. The quantitative study was descriptive because the researcher focused on the main description of the student English learning achievement and their learning styles

of the student such as visual, auditory, kinesthetic, social, group, and individual. This study was correlational, wherein it explored the relationship between the student learning styles and their academic performance in learning English.

Respondents

This study was conducted among grade 7, 8, and 9 students who officially enrolled at a selected private Junior High School in Manado in the academic year 2022 / 2023. The study took the whole population as the respondents, which were divided in two groups: there were 55 students who participated in the pilot study and there were 127 participant students in the actual study.

Instrument

An adapted 30-item questionnaire of six learning styles which was specially designed for English learning (Reid, 1984) and student final grades in the semester were the tools in collecting the data. Five-point Likert-scale ranging from 5 (strongly agree) 4 (agree) 3 (not sure) 2 (disagree) 1 (strongly disagree). This questionnaire contained two sections, firstly the demographic section where the respondents could write their school ID number (which was used to match with their English achievement which was requested separately from the English teachers) and secondly, the multiple choices section in a 5-point Likert-scale form that is focused on student six learning styles. The English original questionnaire was translated to Bahasa Indonesia in such a way that it may be easier for the respondents to understand the questionnaire.

Data Collection Procedures

To collect the data, firstly the researchers asked for permission from the selected population and made an appointment with the headmaster of the selected private Junior High School in Manado. After a schedule was approved by the headmaster, the researchers came to administer questionnaire to the respondents in the school classrooms. Before distributing the questionnaire, an explanation was given so the respondents knew how to fill out the questionnaire. Also, the participants were reminded that this survey did not affect their examination grade. The respondents were given 20 to 30 minutes to answer all questions in the questionnaire. The researchers collected all the filled-up questionnaires that were further fed into a statistical computer application for analysis and interpretation.

Validity and Reliability

A pilot study was conducted to determine whether each item in the construct is statistically valid and whether the whole construct is statistically reliable. As advocated by Sim and Lewis (2011), 55 respondents were involved to examine the validity of each item in the construct of the learning styles and the reliability of the whole construct of the learning styles. These 55 participants were not included in respondents for the actual study.

For statistical validity, the mean score of each item was correlated with the mean score of the total score of all items in the construct of learning styles; when the correlation between each item and the total items was significant, then the item was valid. For statistical reliability, all the valid items in each construct or scale were statistically analyzed to find the value of Cronbach α . A general accepted rule advocated by Hulin, Netemeyer, and Cudeck (2001) is that .60 - .70 indicates an acceptable level of reliability, and .08 or greater a very good level.

After analysis of correlation between score of each item and sum score of items in the construct of visual learning style, there were only three valid items out of the five items, namely item numbers 6, 24, and 29; and all these three valid items were reliable with Cronbach $\alpha = .67$. In the construct of auditory learning style, there were four valid items out of the five items, namely item numbers 7, 9, 17, and 20; and all these four valid items were

reliable with Cronbach $\alpha = .67$. In the construct of kinesthetic learning style, there were four valid items out the five items, namely item numbers 2, 8, 15, and 19; and all these four valid items were also reliable with Cronbach $\alpha = .72$. In the construct of tactile learning style, there were five valid items, namely item numbers 11, 14, 16, 22, and 25; and all these five valid items were reliable with Cronbach $\alpha = .77$. In the construct of individual learning style, there were five valid items namely item numbers 13, 18, 27, 28, and 30; all these five valid items were also reliable with Cronbach $\alpha > .71$. In the construct of group learning style, there were five valid items, namely item numbers 3, 4, 5, 21, and 23; all these five valid items were also reliable with Cronbach $\alpha > .08$.

Data Analysis Techniques

A descriptive statistical analysis of the mean scores was used to find the student learning styles. The interpretation of the mean score was based on the rounding of the five points in the Likert-scale, and thus the mean score ranged from 1.00 to 5.00 as indicated in Table 1.

Table 1. Interpretation of Mean Score

Likert Scale	Mean Score Range	Interpretation
1	1.00 – 1.49	very low
2	1.50 – 2.49	low
3	2.50 – 3.49	moderate
4	3.50 – 4.49	high
5	4.50 – 5.00	very high

The interpretation of English achievement was based on the following score range as shown in Table 2.

Table 2. Interpretation of English Learning Achievement

Grade	Score Range	Interpretation
A	91.60 – 100.00	Excellent
A-	83.26 – 91.59	Very Good
B+	75.10 – 83.25	Good
B	66.51 – 75.09	Good
B-	58.26 – 66.50	Average
C+	50.10 – 58.25	Average
C	41.60 – 50.00	Below Average
C-	33.26 – 41.59	Fail
D+	25.10 – 33.25	Fail
D	0 – 25.00	Fail

The alternative hypothesis was tested by using bivariate Pearson Correlation analysis. If the significance value p was less than the significance level $\alpha = .05$, the alternative hypothesis was retained, meaning that there was a significant relationship between the learning styles and the English achievement. On the other hand, if the

significance value p was greater than significance level $\alpha = .05$, the alternative hypothesis was rejected, implying that there was no significant relationship between the learning styles and the English achievement.

RESULTS AND DISCUSSIONS

Learning Styles of the Students

Descriptive statistics were used to find out the mean score of each of learning style of the student at a selected private Junior High School in Manado. As shown in Table 3, the mean scores of the six learning styles were as follows: visual learning style = 3.80, auditory learning style = 3.61, kinesthetic learning style = 3.76, tactile learning style = 3.71, individual learning style = 3.46, and group learning style = 3.82. The mean scores of the learning styles, except the individual learning style, could be rounded up to 4.00 which was interpreted as high level, while the level of individual learning style was moderate (but nearly high level). The finding showed that the 127 students had the about same level across the six learning styles, although the group learning style appeared to have the highest score ($M = 3.82$) and the individual learning style was moderate level ($M = 3.46$). It all meant that the 127 student respondents have developed all the learning styles evenly in themselves in such a way that they could learn best in whatever learning style, be it visual, auditory, kinesthetic, tactile, individual, or group learning styles. They preferred multimodal learning styles like the students of medical and dental colleges in Pakistan (Fahim et al., 2021). Whatever teaching approaches of their English teacher were considered as suitable to the students. It might be due to the latest development of current communication technology where teachers are using multimedia, such as laptop and LCD projector, and other user-friendly software applications in their teaching and the students' learning of English language.

Table 3. Descriptive Statistics of Student Learning Styles

Learning Style	N	Minimum	Maximum	Mean	Std. Deviation
Visual	127	2.00	5.00	3.80	.69
Auditory	127	2.00	4.75	3.61	.54
Kinesthetic	127	2.00	5.00	3.76	.59
Tactile	127	1.60	4.60	3.71	.52
Individual	127	2.00	5.00	3.46	.58
Group	127	1.20	5.00	3.82	.60

English Learning Achievement of the Students

A descriptive statistical analysis was used, and it was found that the mean score of the 127 students was 88.97 which was interpreted as very good. This very good level might be due to the students who apparently could learn well in any styles of the six learning styles. The students could learn well through visual and auditory stimuli, through experiential learning through hand-on activities in the laboratory, and in group through games, and role play in class.

Table 4. Descriptive Statistics of English Achievement

Achievement	N	Minimum	Maximum	Mean	Std. Deviation
English Grade	127	77.00	99.00	88.97	5.61

Relationship between Student Learning Styles and English Achievement

Bi-variate Pearson correlation was used to analyze whether to retain or reject the alternative hypothesis. As shown in Table 5, the significance values of the six learning styles are greater than significance level $\alpha = .05$. These values imply that the alternative hypothesis is rejected, indicating the there was no significant correlation between the six learning styles and English achievement.

Table 5. Correlation between Six Learning Styles and English Achievement

Learning Style	English Achievement	
Visual	Pearson Correlation	.03
	Significance value (2-tailed)	.79
	N	126
Auditory	Pearson Correlation	-.03
	Significance value (2-tailed)	.73
	N	126
Kinesthetic	Pearson Correlation	.02
	Significance value (2-tailed)	.81
	N	126
Tactile	Pearson Correlation	-.10
	Significance value (2-tailed)	.26
	N	126
Individual	Pearson Correlation	-.06
	Significance value (2-tailed)	.50
	N	126
Group	Pearson Correlation	.05
	Significance value (2-tailed)	.61
	N	126

This finding was consistent with the study results in other places like Indonesia and abroad. Firstly, Argasetra (2017) who reported a study result in Indonesia that there was no correlation among active, reflective, sensing, intuitive, visual, sequential, global learners, and the academic achievement of the students in Universitas Islam Negeri Raden Fatah Palembang. A study (Noushin, et al., 2021) in Pakistan also revealed that there was no significant relationship between the dominant learning styles and academic performance. Almigbal (2015) from Saudi Arabia, reported that learning styles were not significantly associated with academic achievement of nursing students in King Saud University. Similar findings were also reported by Alamri et al. (2019), Sulastri et al. (2021), and Khalid et al. (2022). These studies seemed to be consistent with the finding of this study that the learning styles may not be a reliable predictor of academic achievement, particularly in English learning achievement.

CONCLUSIONS

This descriptive quantitative study aimed to describe the learning styles and English achievement of the students who were registered in a selected private Junior High School in Manado. Primarily it was intended to find out whether there was a significant correlation between learning styles and English achievement of the students. An adapted questionnaire was used to gather data from 127 student respondents. The data were analyzed and interpreted with statistical software, descriptive, and inferential statistics. The use of descriptive statistic resulted in the high level of the student six learning styles and a very good level of English achievement. However, the use of inferential statistics revealed that

there was no significant relationship between each of the six learning styles and English achievement.

The students at a selected private Junior High School in Manado preferred multimodal learning styles which included the six learning styles, namely visual, auditory, kinesthetic, tactile, individual, and group. Apparently, the students were able to adjust to any of the learning styles and show very good level of English achievement. It might be due to the common use of multimedia, such as laptop and computer and various approaches to learning activities, in learning English language at the school.

The learning styles were not significantly associated with English achievement at the school. It seemed to suggest the learning styles were not a significant predictor of English achievement. With the use of multimedia, which includes communication technology, the students have developed several modes of learning styles, rather than a single modal of learning style.

RECOMMENDATIONS

In relation to the findings, this study came up with the following recommendations. First, due to the very good level of English achievement, the students should keep whatever learning modal they have acquired so far. Second, the English teacher should keep his or her teaching approaches he or she has been using so far because they seemed to be suitable to the students' learning styles. Finally, further similar studies be conducted regarding the finding that learning styles were not significantly associated with English achievement. The further studies should be confirmatory whether the learning styles were not correlated with English achievement.

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