

The Relationship among Learning Styles, Classroom Environment, and Academic Achievement of English Education Study Program Students in State Islamic University of Raden Fatah Palembang

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Abstract

This research is a correlational study with 441 students used as the population of the study. 366 students were selected as sample by using purposive sampling technique. In collecting the data, questionnaires (the learning styles and the classroom environment questionnaire) and documentation (student's GPA) were used to find the correlation and the influence among learning styles, classroom environment, and students' academic achievement. From the results of correlational analysis between learning styles and students' academic achievement using Pearson Product Moment Correlation, it was found that the significant correlation between the two variables was not found. Then, the second correlational analysis between classroom environment and students' academic achievement showed that there was a significant correlation between the two variables with p-output = .313 which was significant at .01 level. Since the significant correlation between learning styles and students' academic achievement were not found, the regression analysis to find the influence was not further conducted. Meanwhile, since classroom environment and students' academic achievement were significantly correlated, the regression analysis was then conducted. Based on the regression analysis, it was found that R square was .098, which means that classroom environment influenced the students' academic achievement with 9.8% contribution.

Keywords: classroom environment, learning styles, and students' academic achievement.

Introduction

As one of the international languages, English is studied mostly in all countries of the world. Therefore, English becomes very important to communicate when we have some interactions with others. Besides, English is also used as a means of communication in some areas such as transportation, commerce, banking, tourism, technology, diplomacy, and scientific research (Brown, 2001). It is in line with The 1989 law on the Indonesian educational system which gives English a place as the first foreign language among other foreign languages used in Indonesia such as German, Arabic, or Japanese (Abrar, Mukminin, Habibi, Asyraf, Makmur, & Marzulina, 2018).

Learning English for some countries in the world is a must, including Indonesia. The role of English in Indonesia is very important in many parts, especially in education (Lauder, 2008). Education gives insight, grooms the personality, inculcates moral values, adds knowledge, and provides skills for people who will live in a very competitive society (Marzulina et al., 2018). It can be seen that English has been taught from early education to college level. At university level, students are trained to succeed in academics because they

are prepared for a better life in this era of globalization. Brockman and Russell (2012) consider that academic success is directly related to their successful outcomes and academic values. Furthermore, Musthaq and Khan (2012) explain that the country's social and economic development is directly related to the academic performance of the students. It reflects on how well or worse something is done. In the language of education, performance is demonstrated through academic achievement (Siahi & Maiyo, 2015).

Moreover, Hisken (2011) defines academic achievement as the level of actual achievement or one's ability has been achieved in the academic field. Therefore, the quality of students' experience during the lecture is demonstrated by their academic achievement. However, to get a better academic achievement is not an easy task. Mushtaq and Khan (2012) state that in the process of teaching and learning, there are various factors that affect students' academic achievement namely: gender, education and teaching style of teachers, classroom environment, socioeconomic factors, family education background, age, peer influence, assessment, class attendance, class size and entry qualification.

One of the factors that influence the students' academic achievement is classroom environment. Classroom is the basic structural unit of the education system (Talton & Simpson, 2007). Classroom is a miniature society in which its members can influence the behavior of others. Vygotsky says that the classroom environment is a culture that can be a place to learn and learn about knowledge (as cited in Wei & Elias, 2011). The classroom environment is a manifestation of physical psychosocial conditions.

According to Carpenter (2006), the physical environment consists of chairs, tables, light, ventilation, space, acoustics and teaching materials, while psychosocial refers to feelings, class types that have to do with classroom interactions. The classroom environment plays an important role in the success of student education. Vygotsky states that the development of student learning can be determined by the classroom environment (as cited in Wei & Elias, 2011). That is because students spend their time studying mostly in the classroom. Although learning can take place elsewhere, the class still remains the primary learning environment within an institution (Falsario, Muyong, & Nuevaespana, 2014).

In addition, classroom environment has become the factor determining the success of students' academic achievement. Then, other factor that supports the success of students is their learning style. Learning styles have become one of the factors that help them to understand what they learn easily because each student has a different learning style. Moreover, there are many teachers who do not pay attention to their students' learning styles and many students learn also do not pay attention to their own learning styles. Chiya states that teachers should consider learning styles of students for their learning success (as cited in Eska, 2017).

When teachers recognize the importance of learning styles, they can provide direction for the success of their academic achievement. It is not easy for teachers to accommodate different learning styles unless their students develop their learning styles. From that statement, it can be recognized that the weaknesses and the strengths of the learning style are important for students to be effective learners. Based on the explanation above, I was interested in conducting a research to find out the correlation between learning styles and students' academic achievement, and the correlation between classroom environment and students' academic achievement. If the correlations were identified, so were the influences among the variables.

Literature Review

The Concept of learning styles

Learning styles can be defined, classified, and identified in various ways as a set of factors, behaviors, and attitudes that enhance learning in any situation. How students learn and how teachers teach, and how they interact with each other are influenced by their different learning styles. Each learner has a different and consistent way of perception, organization and retention. It is happened because this learning style is used as an indicator of how learners perceive, interact with, and respond to the learning environment. Students have different learning styles, and they learn differently from each other.

Oxford (2001) defines learning styles as an approach that learners use in learning a new language or studying various subjects. Furthermore, Oxford describes that three categories of learning styles are described as follows.

1. *Visual (learning by sight)*

In visual learning styles, students can visualize their learning with their eyes. In this case, the teaching method used by the teacher should be more focused on the show or media and take them to the objects related to the lesson, or by showing the instrument directly to the student or describing it on the board.

2. *Auditory (learning by listening)*

Students who are in this type rely on the success of learning through the ear (hearing instrument). In this type, the teacher should have to pay attention to the students to their hearing instrument.

3. *Kinesthetic (learning by moving, working and touching)*

Students who are in kinesthetic learning styles learn through moving, touching, and doing. Students who learn this style learn through motion and touch.

The Concept of learning environment

The learning environment is the place where the process of teaching and learning processes takes place. Akubue (2001) defines the class as the basis for all types of activities. It holds students together and offers them opportunities to achieve educational goals. Most of the educational activities of any school or college take place in this room. Hannah (2013) also explained that classes are the place where students develop what they want their future to look like, as well as the knowledge of the skills required to achieve that goal. The classroom environment is also defined in terms of students and teachers of shared perceptions in the environment (Fraser & Pickett, 2010). In addition, classes are a place for interaction between teachers, materials and students in order to create student behavior.

Students' Academic Achievement

Students' academic achievement refers to the grades of the students in achieving the courses of their studies. At university, the academic achievement of students in each semester is represented by cumulative achievement (GPA). The academic grade score for each course ranges from the lowest "F" to the highest "A" with the corresponding achievement index starting from the lowest "0.00" to the highest "4.00". The total of GPA for all semesters or last semesters of student property is called a cumulative GPA.

Methods

Research Design

In this study, I used a correlational research design. Creswell (2012) states that the correlation is a statistical test to determine trends or patterns for two (or more) variables or two sets of data to vary consistently. Correlation research design was used to determine the correlation among learning styles, classroom environment and students' academic achievement (GPA).

Research site, sampling, and participants

According to Frankel, Wallen and Hyun, the population is a group where the researcher will describe the results of the research (as cited in Marzulina, 2018). The population of the study was all students of English Education Study Program in the academic year of 2016/2017. There were 441 students which divided into 144 students from semester II, 120 students from semester III, 102 students from semester VI, and 75 students from semester VIII. In this study, purposive sampling method was used in selecting the sample. Fraenkel and Wallen (2012) stated that purposive sampling is the method by which the researcher uses personal assessment to select the sample. Only the second, fourth and sixth semester students were used as the sample in this study with total number of 336 students because they were active students. Meanwhile, the eighth semester students were not involved because they rarely came to campus due to their thesis writing.

Data Collection

The data were collected by using questionnaires on learning styles, classroom environment and documentation on students' academic achievement (GPA). **Questionnaire on learning styles**, the questionnaire on learning styles were analysed to know the categories and to classify the students into three categories (visual, auditory and tactile/kineasthetic). There were 24 items about learning styles. In answering the items, three choices of answers were given to students (often = 5, sometimes = 3, seldom = 1). In selecting the answer, students were asked to choose one option based on the question given in the questionnaire. Then, the answers that have been analyzed were grouped into three categories of learning styles. The visual category was questions number: 2, 7, 10, 14, 16, 19 and 22. The Auditory category is questions number: 1, 5, 8, 11, 13, 18, 21 and 24. The last are questions for the tactile/kineasthetic category which were questions number: 4, 6, 9, 12, 15, 17, 20 and 23.

Questionnaire on classroom environment, in this study, data from the classroom environment was measured using CUCEI (College and University Classroom Environment Inventory) questionnaires. In CUCEI questionnaire, there were 49 items. The questionnaire statement was divided into seven groups of statements based on students' perceptions of the classroom environment scale (personalization, involvement, student cohesiveness, satisfaction, job orientation, innovation and individualization).

Documentation, in connection with documents, Creswell (1994) suggests it will be helpful to note whether the information represents primary material or second material (as cited in Marzulina, 2010, 33). In this stage of the study, documentation on students' academic achievement (GPA) was used as one of the instruments to obtain students' category on their

academic achievement. There are five categories of students' academic achievement, they are: summa cumlaude, cumlaude, very good, good and enough. In this study, I used the category of student achievement proposed by State Islamic University of Raden Fatah Palembang South Sumatera.

Table 1. Students' Academic Achievement Category

No	Score Interval	Category
1	4.00	Summa Cumlaude
2	3.51 – 3.99	Cumlaude
3	3.01 – 3.50	Very Good
4	2.51 – 3.00	Good
5	2.00 – 2.50	Enough

Source: Tarbiyah Faculty and Teacher Training, State Islamic University of Raden Fatah Palembang, 2017.

Data analysis

From the result analysis, it was obtained that 147 students (43,75%) were categorized in visual learning style. Then, 97 students (28.86%) were categorized into auditory learning styles. 92 students (27.38%) were in kinesthetic learning category. From the analysis of classroom environment questionnaire, 357 students (97.54%) gave positive statements, and 9 students (2.46%) gave negative statements in the personalization category. Then, 271 students (74.04%) gave positive statements, and 95 students (25,96%) gave negative statements in the involvement category. Next, 58 students (15,85%) gave positive statement, and 308 student (84,15%) gave negative statement in the cohesiveness category. 359 students (98.09%) gave positive statements, and 7 students (19.44%) gave negative statements in the satisfaction category. 354 students (96.72%) gave positive statements, and 12 students (3.28%) gave negative statements in the task orientation category. Then, 172 students (46.99%) gave positive statements and 194 students (53.00%) in the innovation category. 360 students (98.36%) gave positive statements and 6 students (1.63%) in the individualization category. The result analysis on students' academic achievement category was displayed in the following table.

Table 2. The result analysis on students' academic achievement categories

Category Number	Score level	Category	Total	%
1	4	Summa Cumlaude	3	0,892857
2	3,51-3,99	Cumlaude	148	44,04762
3	3,01-3,50	Very Good	171	50,89524
4	2,50-3,00	Good	12	3,571429
5	1,99-2,50	Enough	2	0,592857
Total sample			336	100

Before conducting the correlation and regression analysis, the two prerequisite analyses should be conducted, namely normality and linearity test. Based on Kolmogorov Smirnov

formula, the data for learning styles, classroom environment, and students' academic achievement were found normal with p-outputs lower than .05.

After the data were found normal, it was also important to conduct the linearity test. After conducting the test, the result of analysis revealed that all the deviation from linearity between learning styles and students' academic achievement, and classroom environment and students' academic achievement were higher than .05, which also means that the data were linear for each correlation.

Findings and Discussions

The correlation between learning styles on students' academic achievement

After conducting the correlation between learning styles and students' academic achievement using *Pearson Product Moment*, it was found that there was no correlation between the two variables with correlation coefficient =-.018 and p-value .741. The correlation between learning styles and students' academic achievement was displayed in the table as follows.

Table 3. The Correlation between Learning Styles and Students' Academic Achievement

		Correlations Learning Styles	GPA
Learning Styles	Pearson Correlation	1	-,018
	Sig. (2-tailed)		,741
	N	336	336
GPA	Pearson Correlation	-,018	1
	Sig. (2-tailed)	,741	
	N	336	336

The correlation between classroom environment on students' academic achievement

From the result of the correlation analysis between classroom environment on students' academic achievement using *Pearson Product Moment*, it was found that there was a significant correlation between the two variables with correlation coefficient .313 (p-output=.00). It means that the better the classroom environment was, the higher the students' academic achievement would be. The result analysis was displayed in the following table.

Table 4. The Correlation between Classroom Environment and Students' Academic Achievement

		Correlation Classroom environment	GPA
Classroom Environment	Pearson Correlation	1	,313**
	Sig. (2-tailed)		,000

	N	336	336
GPA	Pearson Correlation	,313**	1
	Sig. (2-tailed)	,000	
	N	336	336

** . Correlation is significant at the 0.01 level (2-tailed).

The influence of learning styles on students' academic achievement

Since there was no correlation between learning styles on students' academic achievement, no further analysis was conducted. After a significant correlation between the classroom environment and students' academic achievement was found, further analysis, regression analysis, was then conducted to find the influence of classroom environment on students' academic achievement. From the result of R square (.098), it can be concluded that classroom environment contributed 9.8% to the students' academic achievement. The result analysis on the influence of classroom environment on students' academic achievement was displayed in the following table.

Table 5. The influence of classroom environment on students' academic achievement

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,313 ^a	,098	,095	16,32380

a. Predictors: (Constant), IPK

Discussion

There were some interpretations drawn on the basis of the above results. First, there was no significant correlation between learning styles and students' academic achievement. In the context of this study, there were some reasons why this could happen. This insignificant correlation denies the theories which believed that learning style is the independent variable that has big influence in predicting students' achievement (Oxford, 2003; Dunn & Dunn, 2000; Keefe, 1979). This finding is supported by many antithesis of learning styles theory in which many researchers and theorists believe that learning styles is just a bunk, and there is an absence of evidence related to the learning styles (Bjork, 2015, Willingham, 2008; Pashler, McDaniel, Rohrer, & Blork, 2008). Hence, this current study can also be considered as a reference to prove the inexistence of someone's learning styles.

Then, the correlation and influence between classroom environment and students' academic achievement were found. This means that classroom environment had slight relation to their academic achievement. Though it was a slight correlation, classroom environment can give an impact toward students' academic achievement. It is in line with Fraser (1998) who stated that the quality of the classroom environment is the significant determinant of students' learning. Similarly, a study conducted by Akomolafe and Adesua (2015) showed that there was a significant relationship between classroom environment and the academic performance.

Finally, students classroom environment gave slight influence on students academic achievement. Students spend their time to learn mostly in the classroom, classroom is remains to be the main learning environment in an institution (Falsario, Muyong, Nuevaespana, 2014). However, it did not ensure that classroom environment take larger part in influencing students' academic achievement. In this study, classroom environment gave only 9.8% effect toward academic achievement. It means that from 336 students, classroom environment influence 30 students academic achievement, and 91,2% was influenced by other factors. Those factors are gender difference, teacher's education and teaching style, class environment, family education background (Mushtaq & Khan, 2012), age, peer influences, course assessment, class attendance, class size and entry qualification (Daniel, 2016).

Conclusion

From the data analysis, it can be concluded that the correlation between learning styles and students' academic achievement using *Pearson Product Moment* was not found that since correlation coefficient (-.018) at significant level at ,01. Since the two variables were not correlated, the further analysis on the influence of learning styles on students' academic achievement was not conducted. Then, the correlation analysis between classroom environment and students' academic achievement were found since the correlation coefficient .313 (p-output=.00). It means that the better the classroom environment was, the higher the students' academic achievement would be. Finally, the analysis on the influence of classroom environment towards students' academic achievement were found since the classroom environment give effect 9,8% on students' academic achievement.

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