CORRELATIONS AMONG LEARNING STYLES, CLASSROOM ENVIRONMENT AND LISTENING COMPREHENSION

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Abstract: The aim of this study was to investigate the correlation among classroom environment, students' learning styles, and their listening comprehension. Barsch's learning style inventory, a classroom environment questionnaire, and a listening comprehension test were used to collect the data from 211 English Education Study Program students of Faculty of Teacher Training and Education, Sriwijaya University. The findings showed that most of the students were visual learners. In terms of classroom environment, they were at the high satisfactory of it. However, their listening comprehension result showed that most of them were in Poor category. The result of the correlational analysis showed that there was a significant correlation between the predictor variables (learning styles together with classroom environment) and the criterion variable (listening comprehension). Specifically, there were two aspects of listening comprehension (auditory and kinaesthetic learning styles) and two aspects of classroom environment (personalization and involvement) that had significant correlation with listening comprehension. These four aspects gave contribution 5.3% to the criterion variable.

Keywords: *learning styles, classroom environment, listening comprehension*

Nunan (1998) states that in learning a language the basic skill is listening. If we take a baby as an example, we will see that baby cannot talk fluently, but can hear everything around him/her. It shows that before one can talk, he/she should listen first. In language learning, learners will never learn effectively without having a good listening skill. Listening becomes more crucial in communication since it enables learners to acquire language aspects: vocabulary, word-stress, syntax and others which are only possible when they listen. Around 40-50% people spend time to listen while communicating (Gilman & Moody, 1984). In communication, people involve around 40-50% of language competence from listening, 25-30%

from speaking, 11-16% from reading and 9% from writing (Mendelson, 1994).

There are some factors that can affect learning. Unsatisfactory English achievements of students are certainly caused by many factors which can be divided into internal and external factors (Slameto, 2003, p.54). The internal factors usually come from the students themselves such as low motivation to do better in the subject taught at the school, negative self-concept (Diem, 1998; Fitriani, Diem, & Saripudin, 2007) and different learning styles (Cheng,1988). It is now a widely belief that learners' psychological, mental, and personal factors play a determining role in realizing pedagogical objectives and achieving the best possible outcomes from the instructional practice (Lightbown & Spada, 2013; Nosratinia, Saveiy, & Zaker, 2014; Nosratinia & Zaker, 2014). One of personal factors that play a vital role in influencing students' outcomes is learning styles. Learning style is the way a person prefers to learn and process the information, where some students tent to learn through reading, others tent to learn through listening and the others tent to learn through experiencing.

Cheng (1988) discusses the importance of learning styles as being not only necessary, but also important for individuals in academic settings. Most students favor to learn in particular ways with each style of learning contributing to the success in retaining what they have learnt. As such, studies carried out conclude that students retain 10% of what they read, 26% of what they hear, 30% of what they see, 50% of what they see and hear, 70% of what they say, and 90% of what they say as they do something (Cheng, 1988). Furthermore, Barsch (1980) states that there are three types of learning styles: visual learning style, auditory learning style and kinesthetic learning style. The students, who enjoy reading, notice visual details easily, think in picture, and learn best from visual displays, refer to visual learning style. The students who often enjoy classroom discussion, learn the best through listening and speaking, and excel in public speaking or in persuasion belong to auditory learning style. Last, the students, who learn by their sense of touching or physically doing things, speak with their hands and with gestures, remember what was done, and find reasons to tinker or move when bored, refer to kinesthetic learning style.

In addition to the nternal factor, the other factor that can affect students' learning are the external factors which are usually coming from the parents, facilities, economic status, and also classroom environment.

Based on Vygotsky's (1978) theory of social cognitive development, classroom environment is the "culture" that determines students' learning development. In classrooms, students' learning development is taking place when interactions between students and teachers or among the students themselves occur. Elias and Wei (2011, p.248) found that perceived affiliation to be the most important dimension in the classroom, followed by rule clarity, teacher support, task orientation, involvement, and lastly, the order and organization. In addition, the results obtained from the findings showed that the perceived involvement and affiliation scales of classroom environment were

significantly correlated with students' intrinsic motivation, while task orientation was significantly correlated with students' extrinsic motivation. There are seven scales that affect the students' perception of classroom environment. They are student cohesiveness, satisfaction, personalization, involvement, task orientation, innovation and individualization. Fraser and Treagust (1986) state that the CUCEI is a useful instrument to measure the cultural background differences and can be used as a basis for identification and development of desirable teacher behaviors that will lead to a conducive learning environment.

Besides, classroom environment is an important determinant of student learning in educational system (Fraser 1994, 1998). Students learn better when they perceive the classroom environment more positively; therefore, the study of classroom environment has become a concern to educators, researchers, administrators of school system and parents. Moreover, Klem and Connell (2004) state that schools which provide good environment are more likely to have students who are involved and attached to their school. Hsieh (2000) states that the learning environment has a great influence on the language learning. Obviously, environment plays an important role in the process of language learning. Some studies had been done to investigate whether classroom environment influenced students' English achievement (Rahmi, 2014) or motivation (Elias & Wei, 2011). The results of the studies showed that classroom environment correlated to students' English achievement and their motivation.

The difference in absorbing information from each student can affects him/her listening skill. Students who are auditory might have better scores in listening, because they are more accustomed to listening activity. In relation to this, this study focused on answering the following research question: Were there any significant correlation among learning styles, classroom environment and listening comprehension? If yes, did they contribute significantly to listening comprehension?

METHODOLOGY

This study applied a correlational research design, involving 211 English Education Study Program students of Sriwijaya University as a sample. The data for the students' learning style was collected by using Barsch's learning style inventory formulated. It was a closed questionnaire using Likert scales as the responses (5-often, 3-sometimes, 1-seldom). There are 24 items which are grouped into three aspects of learning styles: visual learning style, auditory learning style, and kinesthetic learning style. To collect the data about classroom environment, the College and University Classroom Environment Inventory (CUCEI) invented by Fraser, and Treagust (1986) was given to the sample. It consists of 7 aspects with 49 statements. The seven aspects are: student cohesiveness, personalization, involvement, satisfaction, task orientation, innovation, and individualization. This questionnaire uses Likert scales with five categories of points which range from 1 to 5: 1- Strongly Disagree, 2- Disagree, 4- Agree, and 5- Strongly Agree. For the items designated (-) were scored in the reverse manner.

Omitted or invalid responses were scored 3.

FINDINGS

Description of Students' Learning Styles

The result of the analysis of the students' responses showed that each student had the three learning styles (visual, auditory, and kinesthetic) but they had only one dominant learning style. Table 1 showed that the most dominant learning style was visual learning style (44.08%), followed by auditory learning style (35.07%) and kinesthetic learning style (20.85%).

Table 1
Students' learning styles (N=211)

No	Semester	Inderalaya Campus			Palembang Campus			N	Percentages
		VPS	APS	KPS	VPS	APS	KPS		
1	II	9	10	12	11	17	6	65	30.8
	Mean	27.01	26.01	27.1	27.83	28.03	25.83		
2	IV	21	5	8	18	15	3	70	33.2
	Mean	32.03	26.41	27.62	29.33	26.44	25.17		
3	VI	18	15	9	16	12	6	76	36
	Mean	30.48	28.12	27	28,41	27.12	25.88		
	Total	47	30	29	46	44	15	211	100
	Percentages	22.27	14.22	13.74	21.81	20.85	7.11		100

VPS (Visual Preference Score); APS (Auditory Preference Score) KPS (Kinesthetic Preference Score);

Description of Classroom Environment

As shown in Table 2, the mean score of classroom environment was 162.92. Specifically, there were 160 students (76%) in high satisfactory of their classroom environment, 51 students (24%) were in medium satisfactory, but no students were in low satisfactory. In short, high satisfactory suggested that the students were very comfortable, enjoy and satisfied with the classroom where the teaching and learning process taken place.

Table 2
Classroom environment (N=211)

Category of Satisfactory	Interval Level	N	Percentages	Mean	Std.
High	154-210	160	76		
Medium	98-153	51	24		
Low	42-97	-	-		
		211	100	162.92	13.515

		Mean	Standard Deviation
Semester	II	160.03	14.80
	IV	163.66	13.67

	VI	164.80	11.89
Place	Inderalaya	160.88	15.00
	Palembang	165.07	11.51

Result of Students' Listening Comprehension

The listening test results showed that the highest score was 88 and the lowest score was 20. There were 117 students (55.45%) were in Poor category, followed by Average category (34.12% or 72 students), Good category (8.63% or 18 students), and Excellent category (1.9% or 4 students).The mean score of listening comprehension was 52.78 and the standard deviation was 16.88.

Table 3
Result of listening test

Category	Inderalaya			Palembang			Total
	II	IV	IV	II	IV	VI	
Excellent	-	-	1	-	-	3	4(1.9%)
Good	-	-	7	-	4	7	18(8.63%)
Average	3	14	19	9	13	14	72(34.12%)
Poor	27	20	15	26	19	10	117 (55.45%)
Mean	39.6	53.41	59.67	42.97	54.28	64.06	
Total	30	34	42	35	36	34	211(100%)

Results of Correlation Analysis

The correlation between students' learning styles and their listening comprehension showed that the $r_{obtained}$ (.186) was higher than the r_{table} (.181) and p value (.007) was lower than .01. It meant that H_0 was rejected and H_1 was accepted. It could be concluded that there was a significant positive correlation between the students' learning styles and listening comprehension.

Table 4
Result of correlation analysis between learning styles and listening comprehension

		Learning Styles
Listening Comp	r-value	.186**
	Sig. (2-tailed)	.007
	N	211

It was also found that there was a significant positive correlation between not only the total score of students' learning styles and their listening comprehension but also between some aspects of these variables. Kinesthetic and auditory learning style had significant correlation to listening comprehension but kinesthetic learning style had negative correlation. But, visual learning style had no significant correlation to listening comprehension.

Table 5
Correlation between aspects of learning styles and listening comprehension

Aspects of Learning Style	r	Sig.
Visual	.032	.762
Auditory	.308	.008
Kinesthetic	-.363	.015

The result of the correlation analysis showed that there was a significant correlation between classroom environment and students' listening comprehension (r-value was .154).

Table 6
Result of correlation analysis between classroom environment and listening comprehension

		Classroom environment
Listening Comp	r-value Sig. (2-tailed) N	.186** .007 211

Since there was a significant correlation between listening comprehension (total) and classroom environment (total), aspects of classroom environment were analyzed and correlated to listening comprehension.

Table 7
Result of correlation analysis between aspects of classroom environment and listening comprehension

Aspects	r	Sig, value
Satisfaction	.013	.855
Student Cohesiveness	.090	.195
Personalization	.175	.011
Task Orientation	.089	.196
Involvement	.154	.025
Innovation	.057	.410
Individualization	.004	.959

The results revealed that two aspects of classroom environment had a significant correlation to listening comprehension. The correlation coefficient of personalization and listening comprehension was .175 with the significance value .011. The regression analysis conducted revealed that the contribution of personalization to listening comprehension was 3.1%. The correlation coefficient of involvement and listening comprehension was .154 with the significance value .025. The contribution of involvement to listening comprehension was 2.4%.

DISCUSSION

As shown in the Finding, there were students who had good listening comprehension: 34.12% of them were in Average category, 8.6% of them were in Good category, and 1.9% of them were in Excellent category. However, 55.45% of the students had poor comprehension. The findings suggest that the students' listening ability were varied. This results were probably because the second and fourth semester students who got involved in this study had not completed all the Listening courses (IEC listening, listening I, listening II, and listening III). Furthermore, there were also 25 sixth semester out of 76 students who were in Poor category. According to Chen (2011), listening comprehension is regarded as the most difficult skill by most language learners. Bowers, Huisingh and Logiudice (2006, p.43) also state that listening is an essential skill to gain knowledge and contains a number of complex activities or components.

The result of learning styles showed that students were visual learners (93 students). It also showed that visual learning styles contribute 56.3% to learning styles total. This meant that students with visual learning style can easily visualize objects, plans, and outcomes in their

mind. They also have a good spatial sense, which gives them a good sense of direction. They can easily find their way around using maps, and rarely get lost. The whiteboard is a best friend for them. (Perles, 2012).

The result of classroom environment showed that students were in high satisfactory category. It showed that most students were very satisfied with the listening subject. It means that most of students felt comfortable, enjoyed, and very satisfied with the classroom environment where the teaching and learning process taken place. Based on semester and place, sixth semester and Palembang students got higher mean scores, they are: The classroom environment mean scores of second, fourth and sixth semester students were 160.03, 163.66 and 164.80 respectively. Meanwhile, classroom environment in Inderalaya and Palembang mean scores were 160.88 and 165.07. However, Fraser and Treagust (1886) state that satisfaction variable provided some useful information about what other aspects of classroom environment tend to be linked with student satisfaction within the class.

A positive correlation was found between learning styles and listening comprehension. This result rejected the studied by Himerly (2010) which showed that there was no correlation between learning styles and listening comprehension. Cheng (1988), Hakim (2015) and Jahiel (2008) define learning styles as the ways in which individuals observe, process, and analyze in order to have comprehension process. Furthermore, auditory learning style was greater correlation than other learning styles to listening comprehension. Barsch

(1980) states that auditory learners learn best through listening and speaking, it support the result that auditory learners had better score in listening comprehension. While, kinesthetic learners gave negative correlation to listening comprehension score, since kinesthetic learners has to use their body or movement before understanding lecture or conversation and usually take notes during lecture (Perles, 2012). It meant in order to get better score in listening comprehension students should concentrate more and they don't permit to take a note or write anything both in answer sheet or the question book. So, the higher listening comprehension score students get the minimum characteristic of kinesthetic learning styles they have.

There was also a positive correlation between classroom environment and listening comprehension. This result support the finding by Hamouda (2013) that classroom environment influenced students' listening comprehension. Miller and Cunningham (2011) state that classroom with highly cooperative group appear to have students with positive perception of fairness in grading, stronger cohesion, and higher degree of social support, as well as higher comprehension achievement. It also found that personalization and involvement had significant correlation to listening comprehension. It meant that opportunities for each student to interact with lecturer and on concern for students' personal welfare and students participated actively and attentively in class activities were high in listening class.

CONCLUSION

Some conclusions can be drawn from the results of the study. First, there was a significant correlation between learning styles and listening comprehension of the English Education Study Program Students of Sriwijaya University. The correlation found was not only between the learning styles (total) and listening comprehension (total) but also between their aspects, showing their close relationship. In addition, auditory learning style gave high contribution to their listening comprehension. Second, high significant correlation was also found between the classroom environment and the listening comprehension of the English Education Study Program Students of Sriwijaya University.

Two suggestions may be underlined and considered by lecturers, students, and future researchers. First, lecturers of English may not easily feel satisfied with the condition of their class. They should think of the way how to enhance their classroom environment so that, conducive teaching and learning process will always be maintained. They should also treat their students' equally since this aspect is proved to have significant contribution to the betterment of students' listening comprehension. It is also better if the lecturers also pay attention to this aspect when they interact with the students in the classroom. Second, for future researchers are suggested to do the study about whether or not the difference gender, educational background, and learning strategies affect listening comprehension. Therefore, it is encouraged that they do not merely rely on the questionnaire but also do some observation to crosscheck the students' answers to the questionnaire with the real condition. By doing so, it will add to the value of accuracy of the data.

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