

## LEARNING STYLE AND STUDENTS' ACHIEVEMENT IN ENGLISH FOR PROFESSION COURSE OF IT EDUCATION DEPARTMENT

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### Abstract

This research was aimed at investigating students' learning style, investigating students' achievement on English for Profession Course and seeing whether there is significant difference on students' achievement across different learning style. This research used a convergent mixed method design. The data were taken using questionnaire of learning style and achievement test. The findings of this study showed that from 37 students, 17 students were auditory learners, 15 students were visual learners and 5 students were kinaesthetic learners. Further, the mean score of achievement test for auditory and visual learners showed that they can be categorized into good achievement while the mean score of kinaesthetic learners showed that they can be categorized into very good achievement. Here, the visual learners have the lowest mean score of 80.67 and the kinaesthetic learners have the highest mean score of 86.00. Meanwhile, the auditory learners were in between with 82.35 of mean score. Finally, one-way Anova analysis is used to test the hypothesis and it showed that the  $F_{count} < F_{table}$  ( $0.335 < 3.28$ ). Thus,  $H_0$  is accepted and it can be concluded that there is no significant difference on students' achievement in English for Profession course across the three learning styles of auditory, visual and kinaesthetic.

**Keywords:** Learning style, achievement, English for profession, one-way Anova, convergent mixed-method design

## INTRODUCTION

In learning, one of factors that has good impact on the learning achievement is learning style. Moreover, learning achievement usually shows the result of their learning process (Ha, 2021). However, learning style usually affect the achievement because it is needed to know whether students can achieve the goal of their learning using their preference of learning style. Individual learning is usually divided into two board categories. First is the way someone getting the information easily. It is called learning modality. Second is how someone can manage the information. This concept is called brain domination. Meanwhile, learning style is the combination of how someone get manage and arrange the information.

Thus, knowing students' learning style will affect the proper teaching method applied to the students and further students can broaden their knowledge based on their learning preference of learning style. Deporter et al. (2000) stated that knowing students' modality will help teacher to teach based on students' brain. However, the impact of individual differences of learning styles on English as foreign language has been neglected (Forbes, 2019).

As it is viewed by Srijongjai (2011), there are many classification of learning style such as visual, aural, verbal, physical, logical, social and solitary. Yet, in this present study, we take the learning style as it is viewed by DePorter et al. (2000) in Ningrum et al. (2016) that can be classified into three, visual, auditory and kinaesthetic (V-A-K). Deporter et al. (2000) stated the three learning styles are related to people's modality which makes people learn something easily.

In relation to the learning style, it is stated that individual differences in language learning can be seen from students' differences in learning style (Balci, 2017). We can point out that learning style usually relates to learners' learning strategies especially in learning English as foreign language that further affect how learners process the new skill. In the context of English learning for non-English Department students, learning style will still associated with psychological, affective and cognitive of the students when they learn English (Zulianti & Asari, 2022). Learning style, further, affects the students' preferences in retaining new information and skills of English. Moreover, knowing students' learning styles will help teachers to provide what kind of instruction that mostly effective for the students (Jaleel & Thomas, 2019). Besides, it is suggested for the teacher to facilitate each learning style of the students so that they can have the best achievement in learning (Hanafi & Septiana, 2021).

Some studies related to students' learning style and their achievement have been conducted. Hanafi & Septiana (2021) found that there is no significant influence of learning style on students' writing product. Moreover, Jaya (2019) also found that there is no positive and significant correlation between learning style and English proficiency. However, in contrast with the two previous studies, the study by Ha (2021) showed that learning style has positive correlation with students' achievement. Further, Hadriana et al. (2019) also found that there is a relationship between students' learning style and their learning achievement.

Knowing the fact the previous studies show some different result, the researchers wanted to know what learning style the second semester of IT Education Department have,

how the English achievement of non-English Department students is and whether there is significant different on students' achievement across different learning style.

At Universitas Bhinneka PGRI, the students of Information and Technology Education Departments usually get two courses on English, namely English for Profession and English Language courses. The course of English for Profession is English for specific purposes course and it is usually aimed at developing the students' English achievement related to Information and Technology area. Since the students in IT Education Departments learn English for specific purposes, it is still a question whether their learning style affect their achievement in the end of the course.

## **Learning style**

Jaleel & Thomas (2019) proposed that learning style means the individual differences in responding to instruction or study that is effective for the learners. Moreover, Hanafi & Septiana (2021) stated that learning style usually influences the proper teaching method that differs from one learning style to other learning style. Further, Dunn & Dunn (1992; 1993, 1999) in Dunn & Burke (2006) pointed out that learning style is the process of gaining information in which it is begun by concentrating, processing and absorbing the information.

However, the topic of research on learning style area has gained some interest in recent years. The researchers have shown some interest on how learning style become one of the individual differences among the learners. According to Weimer (2014), there are three basic learning styles namely auditory, visual and kinaesthetic learners (V-A-K learners). This is in line with learning modality as the learning style (Deporter et al., 2000). Auditory learners are those who learn by hearing and listening. It means that they can pay attention to what they are hearing. They usually remember by verbalizing the lessons to themselves. Further, visual learners are those who learn by seeing and looking. Visual learners usually sit in front in the class so that they can see the detailed notes. They also often close their eyes to visualize or imagine something. Meanwhile, the kinaesthetic learners are those who learn by touching and doing. They usually speak using hand gestures. Kinaesthetic learners need to be active and they barely have a break.

## **Identifying students' learning style**

As mentioned previously, learning style can be categorized into three that is auditory, visual and kinaesthetic learner. However, it is need to identify the students' learning style before we can categorize the learners into certain learning style. Identifying students' learning style can be done by administering questionnaire of learning style. The questionnaire

established by Weimer (2014) also has purposes to identify someone's learning style and show the differences between auditory, visual and kinaesthetic learners. Identifying learning style can help in the process of teaching and learning (Jamulia, 2018).

However, in this research, the researchers decided to use questionnaire adapted from Learning Center of University of Texas. It is one of the questionnaires that can be used to identify students' learning style. The questionnaire has 24 questions that can sort the students into visual, auditory or kinaesthetic learners. This questionnaire was chosen simply because it covers all the statement on visual, auditory and kinaesthetic learners which became the focus of this study.

### **Learning Style and Students' Achievement**

Learning style as learning modality is believed to be one factor in students' achievement (Deporter et al., 2000). By knowing students' learning style, teacher can teach using the learning style preference or using the way students gain the information and knowledge. It is the key of success in teaching.

Moreover, it is believed that learning style is one factor that affect achievement as learning outcomes (Munir et al., 2019). Further, awareness of preference in learning style will be useful, especially in language classroom (Hyland, 2003). Thus, it can be concluded that a good teacher should know and aware of students' learning style to help them achieve the best in their learning process.

Based on the explanation stated above, this research is aimed at investigating the relationship between students' learning style and their achievement in English for Profession of IT Education Department students.

Further, the research problems as the focus of this research were formulated as follows:

1. What is the learning style of the students of IT Education Department who were officially registered in English for Profession course?
2. How is the students' achievement in English for Profession course as related to their learning style?
3. Is there any significant difference on the students' achievement in English for Profession Course among auditory, visual and kinaesthetic learning style?

## **METHODOLOGY**

### **Research Design**

According to Ary et al. (2010), conducting scientific research means that applying scientific approach to find the answer of a problem. Its purpose is to investigate the answers of problems raised. Meanwhile, Creswell (2012) stated that research is a process to collect and analyze data to upgrade our understanding on certain topics.

Further, Ary et al. (2010) divided educational research into two board categories, that is quantitative and qualitative approach. Thus, Creswell (2012) pointed out that in educational research, the researchers do not only engaging into certain research process but also designing and writing the report. This research was used convergent mixed methods design. Creswell & Creswell (2018) argued that this design simply combined the quantitative and qualitative data. This design is single-phase research in which the quantitative data and the qualitative data are taken and analysed separately. However, the result of quantitative and qualitative data complement each other. Thus, it is suitable to be used in this research.

### **Respondents**

This research was conducted during English for Profession course which were taken by the second semester students of IT Education Department. There were 37 students who were officially registered to English for Profession course. Those students, further, were taken as the respondents in this study.

### **Instruments**

There are two kinds of instruments, namely learning style questionnaire and achievement test of English for profession course.

- a. Learning style questionnaire is intended to measure the students' preferences of learning style. There are 24 statements of close ended questionnaire that will describe the students' learning style. The questionnaire is adapted from the Learning Style Questionnaire of Learning Center University of Texas. In this questionnaire, the questions are distributed into auditory learning style on questions number 1, 5, 8, 11, 13, 21, 24; visual learning style on questions number 2, 3, 7, 10, 14, 16, 19, 22; and kinesthetic learning style on questions number 4, 6, 9, 12, 15, 17, 20, 23. The respondents were further expected to answer the questions using often, sometimes and seldom. Often gained 5 points for each question, sometimes gained 3 points for each question and seldom gained 1 point for each question.

- b. Achievement test is intended to measure students' achievement after having one semester learning process of English for Profession course. This achievement test consists of 20 questions related to the material being taught during the course which were distributed into 3 questions of reading comprehension, 8 questions of matching test, 5 questions of writing test and 4 questions of grammar.

## **Procedures**

In a research, steps or procedure in conducting a research determine the success or failure of a research. Since this research is a mixed method research, the researchers formulated the research problems based on the background of the research in separate research problems. First, the research problem raised is on the qualitative approach on what kinds of learning style that are owned by the students. Further, the research problem is on the quantitative approach that is to investigate the correlation between learning style and achievement in English for Profession course.

From the research problems, the researchers took the data on learning style and also the achievement of the students in English for Profession course. The data collected from the two variables of learning style and achievement in English for Profession course, further, were analysed to answer the research problems.

## **Data analysis**

After getting the data from the learning style questionnaire and the achievement test, the data then were analysed to answer the research problems. The data from the learning style questionnaire were analysed to see the students' learning style, whether it is auditory, visual or kinesthetic. In addition, the data about the learning style was described using descriptive statistics to measure the frequencies, percentages and means. The result further interpreted and explained to gain the discussion.

Further, the data of the achievement test were scored using the scoring rubric and resulted on the data of students' achievement. In line with the learning style questionnaire, the data from the achievement was described using descriptive statistics to see the frequencies and means. Moreover, the data from the achievement test was categorized into each learning style.

The next step to be done was analysed the data of the learning style and the students' achievement during English for Profession course. This was done to see whether any significant difference on students' achievement across the learning style. Hypothesis testing

was also conducted. However, a classical assumption test of normality was done to see whether the data is normally distributed or not. If it is normally distributed, the data was analysed using Anova statistical analysis to see whether there is significant difference on the students' achievement across different learning style.

## FINDINGS AND DISCUSSIONS

### Findings

This research was aimed at investigating students' the learning style of IT Education Department, investigating the achievement of the students on English for Profession course and seeing whether any significant difference on students' achievement across different learning style. There are two main data taken that is the data from the learning style questionnaire and the data from the achievement test.

### The Result of the Learning Style Questionnaire

There were 37 students who filled in the questionnaire of learning style which consisted of 24 questions. Each learning style was contained of 8 questions. In this research, the result of the learning style questionnaire can be seen in Table 1.

**Table 1. The Mean of Each Learning Style**

Learning Style	N	Xmin	Xmax	$\Sigma X$	Mean
Auditory	37	14	36	963	26.03
Visual	37	16	36	942	25.46
Kinesthetic	37	12	36	812	21.95

Based on the table of descriptive learning style above, it is known that the major learning style the students have is auditory with the mean 26.03. The minor learning styles is visual (mean = 25.46) and kinesthetic (mean = 21.95).

Further, each learning style can be described based on the statements in the questionnaire for each learning style. The degree of the statements, then, is also seen. The following degree of the statements is taken from Muhidin and Abdurahman in (Jamulia, 2018) which can be used to give elaboration on the statements.

Table 2. The Description Analysis Criteria

Score Category Range	Description Analysis
1.00 – 1.79	Strongly Low
1.80 – 2.59	Low
2.60 – 3.39	Sufficient
3.40 – 4.19	High
4.20 – 5.00	Strongly High

**a. The Description of Auditory Learning Style**

Auditory learning style was the major learning style of second semester of IT Education Department students who were registered on English for Profession Course. The following table presents the mean score of the statements in auditory learning style.

Table 3. Description of Auditory Learning Style

No.	Statements on Auditory Learning Style	N	$\Sigma X$	Mean
1.	I can remember best by listening to a lecture that includes information, explanation and discussion.	37	139	3.75
5.	I require explanation of diagram, graphs or visual direction.	37	129	3.48
8.	I can tell if sounds match when presented with pairs of sounds.	37	144	3.89
11.	I do best in academic subjects by listening to lectures or tapes.	37	123	3.32
13.	I learn to spell better by repeating words out loud than by writing the words on a paper.	37	91	2.45
18.	I would rather listen to a good lecture or speech than read about the same material.	37	129	3.48
21.	I prefer listening to the news on the radio or online rather than reading about it in a newspaper or on the internet.	37	89	2.40
24.	I follow oral directions better than written ones.	37	119	3.21

From the result of the questionnaire above, statement number 1,5,8 and 18 '*I can remember best by listening to a lecture that includes information, explanation and discussion*', '*I require explanation of diagram, graphs or visual direction* ', '*I can tell if sounds match when presented with pairs of sounds*' and '*I would rather listen to a good lecture or speech than read about the same material*' is categorized into high preference. Meanwhile, statement number 11 '*I do best in academic subjects by listening to lectures or tape*' and statement number 24 '*I follow oral directions better than written ones*' are categorized into sufficient. Further, the statement number 13 '*I learn to spell better by repeating words out loud than by writing the words on a paper*' and statement number 21 '*I prefer listening to the news on the radio or online rather than reading about it in a newspaper or on the internet*' are categorized into low.

### ***b. The Description of Visual Learning Style***

Visual learning style is categorized into minor learning style for the second semester students of IT Education Department. However, it is the second preference among the three learning styles. The following table showed the mean score of the visual learning style.

**Table 4. The Description of Visual Learning Style**

<b>No.</b>	<b>Statements on Visual Learning Style</b>	<b>N</b>	<b>ΣX</b>	<b>Mean</b>
2.	I prefer to see information written on the board and supplemented by visual aids and assigned readings.	37	135	3.64
3.	I like to write things down or take notes for visual review.	37	121	3.64
7.	I am skilful with and enjoy developing making graphs and charts.	37	101	3.27
10.	I can easily understand and follow directions on a map.	37	125	3.33
14.	I can understand a news article better by reading about it in the newspaper or online rather than by listening to a report about it on the radio or internet.	37	113	3.05
16.	I think the best way to remember something is to picture it in my mind	37	145	3.91
19.	I am good at working and solving jigsaw puzzles and mazes.	37	73	1.97
22.	I prefer obtaining information about an interesting subject by reading about it.	37	129	3.48

Table 4 above showed that statement number 2 '*I prefer to see information written on the board and supplemented by visual aids and assigned readings*', statement number 3 '*I like to write things down or take notes for visual review*', statement number 16 '*I think the best way to remember something is to picture it in my mind*', and statement number 22 '*I prefer obtaining information about an interesting subject by reading it*' are categorized into high preference. Meanwhile, statement number 7 '*I am skilful with and enjoy developing making graphs and charts*', statement number 10 '*I can easily understand and follow directions on a map*', statement number 14 '*I can understand a news article better by reading about it in the newspaper or online rather than by listening to a report about it on the radio or internet*' are categorized into sufficient preference. The low preference, furthermore, is shown through statement number 19 '*I am good at working and solving jigsaw puzzles and mazes*'.

### ***c. The Description of Kinesthetic Learning Style***

Another minor learning style of the IT Education Department students was the kinesthetic learning style. The description of kinesthetic learning style can be elaborated as follow.

Table 5. The Description of Kinesthetic Learning Style

No.	Statements on Kinesthetic Learning Style	N	$\Sigma X$	Mean
4.	I prefer to use posters, models, or actual practice and other activities in class	37	117	3.16
6.	I enjoy working with my hands or making things	37	121	3.27
9.	I can remember best by writing things down several times.	37	162	4.37
12.	I play with coins or keys in my pocket	37	71	1.91
15.	I chew gum, smoke or snack while studying	37	64	1.73
17.	I learn the spelling of words by “finger spelling” them	37	63	1.70
20.	I grip objects in my hands during learning periods	37	97	2.62
23.	I feel very comfortable touching others hugging, handshaking, etc	37	117	3.16

From the table description of kinesthetic learning style above, one statement is categorized into strongly high preference. It is the statement number 9 *‘I can remember best by writing things down several times’*. Meanwhile, statement number 4 *‘I prefer to use posters, models, or actual practice and other activities in class’*, statement number 6 *‘I enjoy working with my hands or making things’*, statement number 20 *‘I grip objects in my hands during learning periods’* and statement number 23 *‘I feel very comfortable touching others, hugging, handshaking, etc.’* are categorized into sufficient preference. Further, statement number 12 *‘I play with coins or keys in my pocket’* is categorized into low preference. Finally, statement number 15 *‘I chew gum, smoke or snack while studying’* and statement number 17 *‘I learn the spelling of words by “finger spelling” them’* are categorized into very low preference.

Further, based on the learning style preference, the second semester students were categorized into the three learning styles as can be seen in the following Table.

Table 6. The Students’ Learning Style Categorization

		Learning_style			Cumulative Percent
		Frequency	Percent	Valid Percent	
Valid	Auditory	17	45.9	45.9	45.9
	Visual	15	40.5	40.5	86.5
	Kinesthetic	5	13.5	13.5	100.0
	Total	37	100.0	100.0	

From table 6 above, it can be seen that the students of IT Education Department who were officially registered to English for Profession course were mostly auditory students. 45.9% or 17 students were auditory, 40.5 % or 15 students were visual and 13.5 % or 5 students were kinesthetic. This is in line with table 1 that is shown that the major learning style preference is auditory learning style.

## The Result of Achievement Test

Achievement in this research was developed based on the material taught in one semester. The achievement test was consisted of 20 questions including reading comprehension, writing test, grammar test and matching test. Further, the students' achievement scores were categorized from very poor to excellent. The following table showed students' achievement score categorization.

**Table 7. The Achievement Score Categorization**

Score	Category
96-100	Excellent
86-95	Very good
76-85	Good
66-75	Fairly good
56-65	Fair
36-55	Poor
00-35	Very poor

## The Result of Achievement Test of Auditory Learners

There were 17 students who were categorized into auditory learners. The result of the achievement test was as followed.

**Table 8. Achievement Score of Auditory Learners**

Students	Score	Category
1	100	Excellent
2	100	Excellent
3	80	Good
4	90	Very good
5	80	Good
6	65	Fair
7	65	Fair
8	60	Fair
9	80	Good
10	100	Excellent
11	100	Excellent
12	100	Excellent
13	80	Good
14	70	Fairly good
15	85	Good
16	65	Fair
17	80	Good
$\Sigma X$	1400	
Mean	82.35	Good

Table 8 showed that from 17 students of auditory learner, 5 students were categorized into excellent, 1 student was categorized into very good, 6 students were categorized into

good, 1 student was categorized into fairly good, 4 students were categorized into fair. However, the mean score of auditory learners were 82.35 which was categorized into good.

### The Result of Achievement Test of Visual Learners

There were 15 students who were categorized into visual learners. In detail, the achievement test score categorization was as followed:

**Table 9. Achievement Score of Visual Learners**

Students	Score	Category
1	95	Very good
2	80	Good
3	80	Good
4	65	Fair
5	80	Good
6	80	Good
7	75	Fairly good
8	65	Fair
9	70	Fairly good
10	95	Very good
11	95	Very good
12	80	Good
13	65	Fair
14	95	Very good
15	90	Very good
$\Sigma X$	1210	
Mean	80.66	Good

Table 9 showed that from 15 visual learner, 5 students were categorized into very good, 5 students were categorized into good, 2 students were categorized into fairly good and 3 students were categorized into fair. However, the mean score of the visual learners showed that they can be categorized into good.

### The Result of Achievement Test of Kinesthetic Learners

There were 5 students who were categorized into kinesthetic learners. The result of the achievement can be elaborated as follow:

**Table 10. Achievement Score of Kinesthetic Learners**

Students	Score	Category
1	80	Good
2	80	Good
3	75	Fairly good
4	100	Excellent
5	95	Very good
$\Sigma X$	430	
Mean	86	Very good

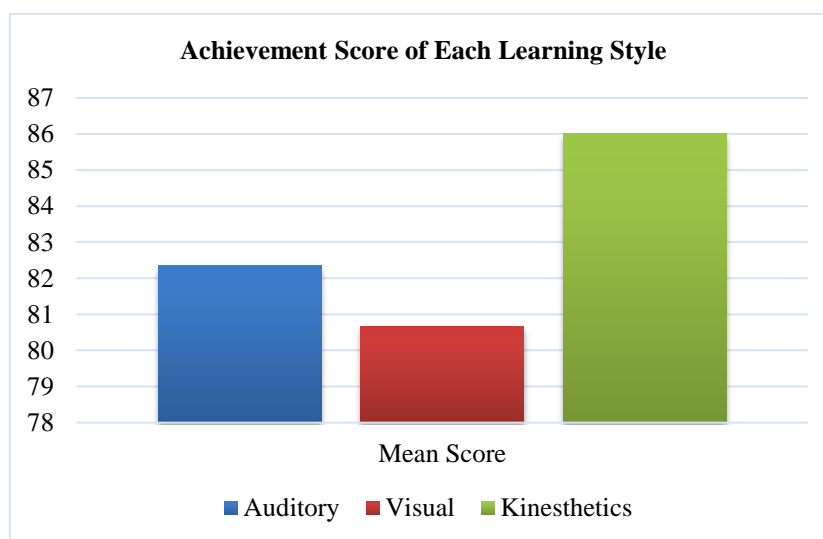
Table 10 above showed that from 5 kinesthetic learner, 1 student was categorized into excellent, 1 student was categorized into very good, 2 students were categorized into good and 1 student was categorized into fairly good. Yet, the mean score of the kinesthetic learners showed that they can be categorized into very good with 86.00 mean score. In short, the result of those three learning styles can be seen in table 11.

**Table 11. The Result of Achievement Test**

Learning Style	N	Min	Max	Mean
<b>Auditory</b>	17	60	100	83.25
<b>Visual</b>	15	65	95	80.67
<b>Kinesthetic</b>	5	75	100	86.00

From table 11 above, it can be seen that the kinesthetic students gained the highest mean score among others. The mean score of kinesthetic students were 86.00. Meanwhile, the auditory students which consisted of 17 students gained 83.25 as the mean score. The lowest mean score was gained by the visual students. From the result of the achievement test of those three learning styles, it can be seen that auditory and visual learners were categorized into good achievement. While the kinesthetic learners with the highest mean score were categorized into very good achievement.

Further, the following figure showed the difference of the mean score of each learning style.



**Figure 1. Differences of Mean Score**

The figure 1 above showed that the differences of mean score among the learning styles are only minimal. There were only slight differences. Thus, it is needed to know whether the differences across the learning style is significant or not.

### The Achievement Score Differences Across the Learning Styles

After getting data of the students' learning style and their achievement in English for Profession course, the next step is testing the hypothesis. The hypotheses in this research were formulated as follow:

$H_a$  = There is a significant difference on students' achievement across different learning styles of auditory, visual and kinesthetic.

$H_0$  = There is no significant difference on students' achievement across different learning styles of auditory, visual and kinesthetic.

Before conducting a hypothesis testing, a classical assumption test of normality test was done to know whether the data was normal or not. Here, the researchers chose the Kolmogorov-Smirnov normality test. In the normality test, hypothesis of the data were made as follows:

$H_a$  = The data is not normally distributed.

$H_0$  = The data is normally distributed.

The following table is the result of the Kolmogorov-Smirnov Normality Test

**Table 12. Normality Test**

Tests of Normality				
Learning_style		Kolmogorov-Smirnov <sup>a</sup>		
		Statistic	df	Sig.
Score	Auditory	.188	17	.113
	Visual	.190	15	.149
	Kinesthetic	.310	5	.131
a. Lilliefors Significance Correction				

From the test of normality above, it was found that the sig. value of all of the learning style were higher than 0.05. Thus, it can be concluded that the data was normally distributed. Since the data was normally distributed, the researchers used One Way Anova analysis to test the hypothesis. (Cronk, 2008) stated that one-way Anova compare the means of several groups that have different independent variable. Here, the learning style of the students were different, that is, auditory, visual and kinesthetic. The result of the one-way Anova is as follow:

**Table 13. One-Way Anova Analysis**

ANOVA					
Score	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	107.811	2	53.906	.335	.718
Within Groups	5469.216	34	160.859		
Total	5577.027	36			

Before taking the conclusion, the research made some criteria in deciding the result of the hypothesis testing.

- a. If  $F_{\text{count}} \leq F_{\text{table}}$ , it means that  $H_0$  is accepted.

From table 13 above, it can be seen that  $F_{\text{count}}$  is .335. Meanwhile, the  $F_{\text{table}}$  for df (2,34) is 3.28. Therefore,  $.335 < 3.28$ . So, it can be concluded that  $H_0$  is accepted.

- b. If  $\text{Sig} > \alpha$ , it means that  $H_0$  is accepted.

Further, table 13 also showed that the sig. is .718 while the  $\alpha$  is .05. Thus, it can be seen that  $.718 > .05$  or it can be concluded that  $H_0$  is accepted.

Since from the two criteria made above showed that  $H_0$  is accepted, the result of the hypothesis testing is that there is no significant difference on students' achievement among auditory, visual and kinesthetic learning styles.

## Discussions

This research was aimed at investigating the learning style of second semester students of IT Education Department who were officially registered to English for Profession Course, investigating the students' achievement on English for Profession course and testing whether there is a significant difference on students' achievement across different learning style. The result of the findings shows that the major learning style of the students is auditory while the minor learning style is visual and kinesthetic.

The auditory learning style as the major learning style has some characteristics such as:

1. Students can learn better when they are listening to a lecture or speech.
2. Students can follow oral directions better than the written ones.
3. Students prefer to listening to a material rather than reading the same material.

According to Flanagan (2017), auditory learners learn best from spoken words. Further, they can be advanced speakers. Moreover, auditory learners tend to be good language learners.

Meanwhile, as the minor learning style as the second preferred learning style, visual learners have some characteristics such as

1. Students can learn better by reading information on the board.
2. Students can remember better by seeing on the graphic, diagram or other visual presentation.
3. Students prefer to reading material rather than listening to a lecture.

Flanagan (2017) mentioned that visual learners can easily remember the information in the form of words, phrases or sentences. Moreover, they tend to have visualization skills to imagine what they are learning. Therefore, visual learners learn effectively by reading written information, graphics and visual presentation.

Last preferred learning style is the kinesthetic learning style which has some characteristics as follow:

1. Students can remember best by writing down what they are learning.
2. Students prefer learning activities that involve physical movement.
3. Students usually chew gum, smoke or eat some snack while studying.

Flanagan (2017) listed that the kinesthetic learners love body movement and any other physical activities. Moreover, they also tend to have a good coordination of body movement and timing.

Further, the test in the end of the course, further, shows their achievement. Although the second semester students of IT Education Department have three different learning styles of auditory, visual and kinesthetic, in the English for Profession course they were taught the same material using the same method and the same lecturer. The result of achievement test was that the kinesthetic learners got the highest mean score of 86.00, auditory learners got the second highest mean score of 82.35 and visual learners got the lowest mean score of 80.67. Seeing the mean score of the three learning styles was above 80, it can be stated that the students' achievement score is good. Moreover, the three learning styles only have slight differences of mean score of achievement test. Thus, it is still needed to test whether the differences of the achievement score is significant.

To see whether any significant different on students' achievement across the three learning styles, the researchers conducted One-way Anova analysis. The one-way Anova, further, shows that  $F_{count} < F_{table}$  ( $.829 < 3.28$ ) and  $sig > \alpha$  ( $.445 > .05$ ). It means that the  $H_0$  is accepted or it can be stated that there is no significant difference on the students'

achievement in English for Profession course among auditory, visual and kinesthetic learning styles.

This finding is opposed the finding of Hadriana et al. (2019) and Rachman et al. (2019). Yet, it is supported the findings of Hanafi & Septiana (2021) and Jaya (2019). Moreover, it cannot be denied that although the students have different learning styles, they learned exactly the same material with the same method and the lecturer. Therefore, they finally got no significant difference. Further, English for Profession course is only taught in one semester and it is not used in their everyday life so that they do not have deep material to be learned. Their achievement may be only on the surface so that their learning style do not really influence their learning achievement.

However, according to Jamulia (2018), it is better to teach students in accordance with their learning style so that it can accommodate the unique characteristics of the students. The auditory students may learn better if they learn by listening to the material, the visual students learn better if they learn using visualization of the material and the kinesthetic students learn better if they learn using some body movement.

Moreover, Rachman et al. (2019) suggested that learning the students' learning style can help teacher to take the benefit of the strengths of the learning style and avoid the weakness of the learning style. Thus, it is better for the teacher to be aware that each student has different learning style so that they learn and gain information in different ways.

However, knowing students' learning style preference should not only be the concern of teacher but also be the concern of the students (Zulianti & Asari, 2022). If teacher know students' learning style preferences, he can prepare the material that help students learn the best. Meanwhile, if the students know their learning style preference, they can learn the best using their style and their way of getting the information.

## CONCLUSION AND SUGGESTION

Based on the data in the findings and the discussion above, it can be concluded that that most of the students in IT Education Department have auditory learning style. There are 17 students who are categorized into auditory learners. Meanwhile, 13 students were categorized into visual learners and 5 students were categorized into kinesthetics learners.

Further, according to the achievement score, the three learning styles gained good achievement score. The kinesthetics learners gained the highest mean score of 86.00, the auditory learners gained the second highest of 82.35 mean score and the visual learner gained the lowest mean score of 80.67. However, there is only slight differences among the mean

score of the three learning styles. It is also supported by the result of one-way Anova analysis. The result showed that the  $F_{\text{count}} < F_{\text{table}}$  ( $0.335 < 3.28$ ). Therefore, it can be concluded that there is no significant difference on the students' achievement in English for Profession course among three learning styles of auditory, visual and kinesthetics.

Further, based on the findings, discussions and conclusion, it is suggested that the teacher should recognize the students' learning style. It is better to accommodate different learning style with different teaching material as well as different teaching method. Moreover, for the future researchers, it is suggested to take learning style as one of variable in their research so that there will be more theories on learning style.

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