

## **CHAPTER 4**

### **RESULTS AND DISCUSSION**

This chapter presents the results of the study, which answers the four research questions:

- (1) What are the learning styles of the students?
- (2) What are the teaching styles of the teachers?
- (3) Is there any congruence between the learning and teaching styles?
- (4) If there is congruence between the learning and teaching styles, is it related to the English language achievement?

#### **1. Students' Learning Styles**

In order to attain the students' learning style profile, their responses to the Learning Style Questionnaire were analyzed in three steps. First, the levels of the students' preference for each learning style which was reflected in two items were calculated and ranked from that with the highest mean to that with the lowest one. Second, the students' learning styles were grouped into four correlates based on Willing's four types of learners. Third, the preference mean of each correlate was summed up and computed for the percentage. The learning style profile consisting of a combination of correlates of learning styles was then established.

### 1.1 Categories of Students' Preferred Learning Styles

Under this investigation, only three levels of preference for English learning styles were found: *the strongly preferred styles* ( $\bar{X} = 3.21-4.00$ ), *the preferred* ( $\bar{X} = 2.41-3.20$ ), and *the moderately preferred* ( $\bar{X} = 1.61- 2.40$ ). Each level of preference is discussed starting from that with the highest mean to that with the lowest one.

**Table 3 Categories of Students' Preferred English Learning Styles**

Item no.	Learning styles	Category	Mean	Rank	Level of Preference
1	I prefer my teacher to give me the course outline at the beginning of the course.	(3.96)			Strongly preferred
2	I prefer my teacher to teach me step by step e.g., having a leading stage, using transitional words before going to the next topic, explaining how to do exercises clearly together with some examples, and summarizing what has been taught.	Analytic (3.72)	3.8418	1	

**Table 3 Categories of Students' Preferred English Learning Styles (cont.)**

Item no.	Learning styles	Category	Mean	Rank	Level of Preference
4	I prefer my teacher to write what is being taught on the board.	(3.38)	3.1684	2	Preferred
23	I prefer my teacher to give feedback on my language usage through writing.	Visual (2.96)			
3	I prefer my teacher to teach me in Thai because that helps me understand all he is teaching.	(2.62)	3.1480	3	
7	I prefer my teacher to tell me the meanings of some unknown words.	Intolerant of ambiguity (3.67)			
8	I prefer my teacher to give some examples besides those given in the textbook.	(3.43)	3.1480	3	
10	I prefer my teacher to use authentic materials in teaching, e.g., train timetables, menus, pictures, maps, etc.	Global (2.94)			
18	I prefer to work in pairs.	(2.90)	3.0714	4	
19	I prefer to work in groups.	Group (3.24)			
16	I prefer my teacher to teach through songs.	(2.84)	2.9541	5	
22	I prefer my teacher to give feedback on my language usage through speaking.	Auditory (3.07)			
5	I prefer my teacher to have me note down what is being taught.	(3.14)	2.9235	6	
20	I prefer my teacher to assign me to work on a class project.	Tactile (2.70)			
11	I prefer my teacher to have me read though I can't read all correctly.	(2.92)	2.8520	7	
12	I prefer my teacher to have me guess the meanings of some unknown words.	Tolerant of ambiguity (2.79)			

**Table 3 Categories of Students' Preferred English Learning Styles (cont.)**

Item no.	Learning styles	Category	Mean	Rank	Level of Preference
13	I prefer my teacher to have me compete to get answers in a limited time.	(2.57)	2.8316	8	
6	I prefer to have a chance to ask what I don't understand immediately.	(2.94)			
14	I prefer to have adequate time to finish an exercise and think of an answer.	(2.94)	2.7092	9	
24	I prefer to summarize what has been taught at the end of each class by myself.	(2.48)			
9	I prefer my teacher to teach me through action.	(2.87)	2.5816	10	
15	I prefer to learn by role-playing.	(2.30)			
17	I prefer to work alone.	(1.79)	1.9235	11	Moderately preferred
21	I prefer to do my homework alone	(2.06)			

### 1.1.1 The strongly preferred learning styles ( $\bar{X} = 3.21-4.00$ )

Only one learning style was strongly preferred, **analytic learning style** ( $\bar{X} = 3.8418$ ; Item No.1 ( $\bar{X} = 3.96$ ): *I prefer my teacher to give me the course outline at the beginning of the course* and Item No.2 ( $\bar{X} = 3.72$ ): *I prefer my teacher to teach me step by step e.g., has a leading stage, uses transitional words before going to next topic, explains how to do exercises clearly together with some examples, and summarizes what has been taught.*) The result indicated that before studying, the students strongly preferred to know what they were going to learn, what the course objectives and evaluation procedures were, so they could prepare themselves to

achieve those objectives. Knowing these might help the students see the whole picture of the course and it would be easy for them to follow and catch up with what they were supposed to learn in the course. The students also strongly preferred their teachers to teach them step by step. This is very natural because then the lesson would be easy to follow. They might perform better in more structured situations.

### 1.1.2 The preferred learning styles ( $\bar{X} = 2.41-3.20$ )

Ten learning styles were preferred: visual, intolerant, global, group, auditory, tactile, tolerant, impulsive, reflective, and kinesthetic. Each style will be discussed starting from that with the highest mean to that with the lowest one.

**Visual learning style** ( $\bar{X} = 3.1684$ ; Item No.4 ( $\bar{X} = 3.38$ ): *I prefer my teacher to write what is being taught on the board* and Item No.23 ( $\bar{X} = 2.96$ ): *I prefer my teacher to give feedback on my language usage through writing.*) When the teachers were teaching, the students preferred their teachers to write what was being taught on the board. These students had to see those words on the board in order to understand them. The students also preferred their teachers to give feedback on their language use through writing. The visual learners might not understand thoroughly by listening. They needed to see written feedback from their teachers. When they saw the feedback, they would learn from it.

**Intolerant of ambiguity learning style** ( $\bar{X} = 3.1480$ ; Item No.3 ( $\bar{X} = 2.62$ ): *I prefer my teacher to teach me in Thai because that helps me understand all he is teaching* and Item No.7 ( $\bar{X} = 3.67$ ): *I prefer my teacher to tell me the meanings of some unknown words.*) The students preferred their teachers to instruct in Thai. They liked Thai instructions because they would understand most of what they were learning and would not miss any words. For vocabulary, when the students confronted some unknown words, they strongly preferred their teachers to tell them the meaning of those words. These students might not want to guess the meaning because they did not want to take risks because for them taking risks if not successful might make them lose their face. Instead of getting the answers by themselves, the

students preferred to get the answers from their teachers because they were afraid of not getting correct answers.

**Global learning style** ( $\bar{X} = 3.1480$ ; Item No.8 ( $\bar{X} = 3.43$ ): *I prefer my teacher to give some examples beside those given in the textbook* and Item No.10 ( $\bar{X} = 2.94$ ): *I prefer my teacher to use authentic materials in teaching, e.g., train timetables, menus, pictures, maps, etc.*) The students under investigation preferred to see more examples besides those given in the textbooks. The examples helped them understand and remember the lesson better. If the teachers gave more and various examples, the students might be able to apply what they were learning to other situations. These students also preferred to be taught through authentic materials. Authentic materials helped them understand the lesson better and motivate them to learn.

**Group learning style** ( $\bar{X} = 3.0714$ ; Item No.18 ( $\bar{X} = 2.90$ ): *I prefer to work in pairs* and Item No.19 ( $\bar{X} = 3.24$ ): *I prefer to work in groups.*) The mean of preference ( $\bar{X} = 2.90$ ) shows that the students under investigation preferred to work in pairs. Working in pairs made them more confident and not afraid of taking risks. This might facilitate their study. The students preferred Item No.18 to a lesser extent than they did Item No.19. That is, they liked to work in a group than in a pair. The students might think working with others made the work easier and they got many ideas and ways to approach the tasks. The students felt like they were taking risks when they worked individually and had to find the answers themselves.

**Auditory learning style** ( $\bar{X} = 2.9541$ ; Item No.16 ( $\bar{X} = 2.84$ ): *I prefer my teacher to teach through songs* and Item No.22 ( $\bar{X} = 3.07$ ): *I prefer my teacher to give feedback on my language usage through speaking.*) The students preferred to learn through songs. Listening to songs gave them both knowledge and relaxation. They might remember the language used in the songs better than that in other types of lessons. The students also preferred their teachers to give spoken feedback on their

language use. Getting spoken feedback was faster and they would know of their ability in using the language right away.

**Tactile learning style** ( $\bar{X} = 2.9235$ ; Item No.5 ( $\bar{X} = 3.14$ ): *I prefer my teacher to have me note down what is being taught* and Item No.20 ( $\bar{X} = 2.70$ ): *I prefer my teacher to assign me to work on a class project.*) The students under investigation preferred to write down what they were studying. Some students might not be able to remember it if they did not write down what they had learned. When they wrote, their brains worked and their writing helped remind them of the lesson when time passed. In addition, the students preferred to work on a class project. When they did a class project, they had a chance to use the language, which facilitated their learning.

**Tolerant of ambiguity learning style** ( $\bar{X} = 2.8520$ ; Item No.11 ( $\bar{X} = 2.92$ ): *I prefer my teacher to have me read though I can't read all correctly* and Item No. 12 ( $\bar{X} = 2.79$ ): *I prefer my teacher to have me guess the meanings of some unknown words.*) The students under investigation preferred their teachers to have them read even though they could not read all correctly. They were not shy when they made mistakes. This is a good thing because making mistakes is the process of learning. When they accepted making mistakes, they read better. Also, the students preferred to guess the meanings of unknown words. They thought it was challenging when they had time to guess the meaning of some unknown words. The finding here is not consistent with what was found in Item No.7 (*I prefer my teacher to tell me the meanings of some unknown words*), though Item No.7 had a higher mean ( $\bar{X} = 3.67$ ) than Item No.12 ( $\bar{X} = 2.79$ ). This might reflect that among this group of students, the degree of their intolerance of ambiguity was higher than the degree of their tolerance of ambiguity.

**Impulsive learning style** ( $\bar{X} = 2.8316$ ; Item No.6 ( $\bar{X} = 2.94$ ): *I prefer to have a chance to ask what I don't understand immediately* and Item No.13

( $\bar{X} = 2.57$ ): *I prefer my teacher to have me compete to get answers in a limited time.*)

The mean of Item No.6 shows that when the students did not understand what their teachers were teaching, they preferred to have a chance to ask immediately. The students did not want to wait until the end of the class because they might be confused or forget. So, they preferred to ask the teachers before going on to the next topic. Also, the students preferred to compete in getting the answer in a limited time. They liked it because this made learning enjoyable and they would remember what they were learning.

**Reflective learning style** ( $\bar{X} = 2.7092$ ; Item No.14 ( $\bar{X} = 2.94$ ): *I prefer to have adequate time to finish an exercise and think of an answer* and Item No.24 ( $\bar{X} = 2.48$ ): *I prefer to summarize what has been taught at the end of each class by myself.*)

The students preferred to have adequate time to finish exercises and to think of answers. This proved that reflective learners needed more time to complete their tasks. When they had more time, they could perform better tasks and that made them succeed better in learning. The students also preferred to summarize what they had learned by themselves because they would remember what they had learned.

**Kinesthetic learning style** ( $\bar{X} = 2.5816$ ; Item No.9 ( $\bar{X} = 2.87$ ): *I prefer my teacher to teach me through action* and Item No.15 ( $\bar{X} = 2.30$ ): *I prefer to learn by role-playing.*) The students preferred the teachers to teach them through action. Actions helped them remember the lesson and when performing the action, they had fun. When they had fun, they learned. In addition, the students preferred to learn by role-playing. So, kinesthetic learners preferred the teachers to incorporate action and role-playing into their teaching because it was fun. Also, role-play gave them a chance to use the language.

### 1.1.3 The moderately preferred learning styles ( $\bar{X} = 1.61-2.40$ )

Among twelve learning styles under investigation, there was only one style which was in the moderately preferred group, **individual learning style** ( $\bar{X} = 1.9235$ ; Item No.17 ( $\bar{X} = 1.79$ ): *I prefer to work alone* and Item No.21 ( $\bar{X} = 2.06$ ): *I*



*prefer to do my homework alone.*) The relatively low means of preference in these items might reflect that the students moderately preferred to work and do their homework alone. Doing things alone might make them feel insecure and they were not sure in what they were doing.

The results reported in this section reflect the learning styles of the students. They point to the fact that the students under investigation have mixed learning styles: **analytic** ( $\bar{X} = 3.8418$ ), **visual** ( $\bar{X} = 3.1684$ ), **intolerant and global** ( $\bar{X} = 3.1480$  each), **group** ( $\bar{X} = 3.0714$ ), **auditory** ( $\bar{X} = 2.9541$ ), **tactile** ( $\bar{X} = 2.9235$ ), **tolerant** ( $\bar{X} = 2.8520$ ), **impulsive** ( $\bar{X} = 2.8316$ ), **reflective** ( $\bar{X} = 2.7092$ ), **kinesthetic** ( $\bar{X} = 2.5816$ ), and **individual** ( $\bar{X} = 1.9235$ ) learning styles respectively.

## 1.2 Correlates of Learning Styles

The preferred learning styles of the students under investigation may be grouped into four correlates of learning styles based on Willing's learner types (cited in Nunan, 1991: 170): analytical, concrete, communicative, and authority-oriented learners. The correlates of the students' learning styles are presented starting from the one with the highest mean to the one with the lowest mean.

### 1.2.1 Correlate One: Authority-oriented learners ( $\bar{X} = 3.14$ : intolerant of ambiguity)

These learners were dependent since they preferred their teachers to have an important role. They liked to have clear instructions and to know exactly what they were doing and they are not comfortable with impromptu discussion. For example, in their study, they not only preferred their teachers to tell the meanings of some unknown words but also to lecture in Thai.

There are four main reasons why the students in this study had high degree of preference for authority-oriented correlate. Those reasons are related to culture,

students' personality, students' English proficiency, and previous educational experience.

*Culture:* In Thai culture, young people are taught to pay respect to parents, the elderly and the better-qualified persons (Yawalak Nachiangmai, 1998). When the students are at home, they do not ask questions and they believe what their parents tell or teach. As a result, many Thai students also keep silent and wait for everything to be taught and trust everything the teachers tell and hence are passive in the class.

*Students' personality:* Students' personality could be influenced by the way they are brought up. Traditionally, most Thai students pay respect to parents, older and better-qualified people. Hence, the students tend to be reserved and might not contribute much to class discussions and hesitate to ask teachers questions (Yawalak Nachiangmai, 1998).

*Students' proficiency:* The college attended by the subjects was a private school. Most students here could not get a seat in government institutes because they did not pass the entrance exam. Their English proficiency was not very high. When learning, they might not participate much in class because they feared being embarrassed or they did not have much language knowledge to contribute, so it was better for them to keep silent and listen to their teachers.

*Previous educational experience:* Previous educational experience also influences students' learning styles and strategies. In typical Thai classrooms, teachers speak and students listen. Students are accustomed to this kind of instruction and would not try to ask questions or participate in class. Moreover, the students mostly study for tests because they have to get seats in government institutes at the end of each level. These are usually objective tests focusing on discrete grammatical points or forms that students can learn directly from their teachers. That is why the students have to depend on their teachers when they are learning.

Culture, students' personality, students' proficiency, and previous educational experience might influence this group of students to highly prefer authority-oriented learning styles.

### **1.2.2 Correlate Two: Concrete learners ( $\bar{X} = 3.04$ : visual, global, auditory, and tactile)**

The students under this investigation, who tended to have sensory preferences, had high degree of preference for concrete learning styles. *Visual* learners liked their teachers to write what was being taught on the board and if there was some feedback on their language use, they also preferred to see the teachers' explanation on the board or in writing. For *global* learners, teaching methods without any visual aids or some examples besides those given in the textbook, such as pictures, films, videos and cassettes might not be effective. *Auditory* learners enjoyed learning by listening. *Tactile* learners were delighted when learning through class projects and they had noted down what they were learning.

Generally, when the students learn, they use the preferred senses to perceive information. Some want to see pictures, some want to listen, some want to speak, and some want to do role-playing or class projects. We cannot say which sense is better than others. It depends on the situation or the skill the students are learning. It is better if they can learn by using all senses they have. For example, when learning speaking they can speak and listen to and interact with their partner. Before producing a writing task, the students may exchange ideas on the topic they are going to write about and then apply those ideas as input for the writing. After reading, the students may tell that story to others and share opinions. In this case, the students will get practice other than writing and get to use other senses in learning, too. In the real world, English is for communication. People sometimes receive message by reading, sometimes by listening and by interpreting what they have read or heard or they have

to send a message to others. So, in learning we have to help the students cultivate their own ability to give and receive message by all senses.

### **1.2.3 Correlate Three: Communicative learners ( $\bar{X} = 2.83$ : group, kinesthetic, impulsive, and tolerant)**

These students had a moderate degree of preference for the correlate of communicative learning styles. They liked group work such as working with others in socially interactive and communicative events. Kinesthetic learners were happy when they learned by role-playing and acting. They were also impulsive learners who not only preferred guessing the meaning of words or competing in language games but also preferred working with others. If the students were not clear in what they were learning, they preferred to get clarification immediately. This group of learners might be happy when they joined class activities like voluntary reading, answering questions, or guessing unknown words. They were not afraid of making mistakes.

The students in this study had a moderate level of preference for learning in a communicative approach, a more effective approach to help them succeed in language learning. Communicative learners are ones who immediately ask questions when they want to know answers. They are not afraid of making mistakes and try to use language in the classroom. This kind of learning style helps learners improve their communication skills. Unfortunately, the results show that there was little preference for this style among the students under investigation.

### **1.2.4 Correlate Four: Analytic learners ( $\bar{X} = 2.82$ : analytic, reflective, and individual)**

The students in this study liked to know the course outline in the beginning. They preferred a step by step and a more organized presentation. They were often slow but made progress at their own pace to achieve the goals. They also did not prefer to take risks so they liked to be in more structured situations (analytic). When doing exercises or playing games, they needed more time to think or consider options before responding (reflective). When doing activities in class or doing homework,

these learners preferred working independently (individual). Besides, they did not like to guess but would rather look up the right information in the dictionary or ask their teachers because they usually were concerned with accuracy. They were believed to be more accurate in their learning because they were analytical and critical (Yawalak Nachiangmai, 1998).

### 1.3 Students' Learning Style Profile

The profile of the students' learning styles in this study consisted of four correlates of learning styles: authority-oriented, concrete, communicative, and analytic as presented in Table 4.

**Table 4 Students' Learning Style Profile**

Components (Correlates of Learning Styles)	Level of Preference	
	Mean	Percentage
1. Authority-oriented	3.14	26.55
2. Concrete	3.04	25.70
3. Communicative	2.83	23.92
4. Analytic	2.82	23.83
<b>Total</b>		<b>100</b>

### 1.4 Discussion

The findings show that the most dominant correlate is *authority-oriented* learning styles ( $\bar{X} = 3.14, 26.55\%$ ), which may reflect the typical Thai classrooms where teachers still have more important roles than the students. The finding also reflects the current English Language teaching situation in Thailand that is still in the continuum between the traditional method and the communicative approach. What

approach will be employed depends on the characteristics of both the teachers and learners. If the majority of students have rather low English proficiency, negative attitudes towards learning English and low motivation, teachers should try to change students' attitudes and find ways to help them learn English better. In addition, the teachers may teach with a traditional approach if the teachers are not familiar with learning English by communicative approach or if their preferred teaching styles are not in the correlate of communicative learning styles.

The students also had preference for the correlate of *concrete learning styles* ( $\bar{X} = 3.04, 25.70\%$ ) This correlate seems to facilitate successful language learning as learners have a chance to use many senses when learning: their sight (visual), hearing (auditory), surroundings (global), and touching (tactile).

In addition, the students preferred to learn in the correlates of *communicative* ( $\bar{X} = 2.83, 23.92\%$ ) and of *analytic learning styles* ( $\bar{X} = 2.82, 23.83\%$ ). These students tend to be independent learners. In some situations learners learn how to interact with others in a group, but in other situations they have to work alone to see their own progress.

In sum, the answer to research question one is that students under this investigation have a learning profile which consists of four correlates of their learning styles but the most prominent correlate is authority-oriented. The other correlates are concrete, communicative, and analytic respectively. These are the ways these students prefer to learn. Students may be successful in learning if they can adapt their learning styles to suit different activities set by the teachers. Although some of the effective learning style correlates such as communicative and concrete are found not to be strongly preferred ways of learning by the students, there may be some ways to cultivate preferences in them for the hope that they will be able to learn better.

## **2. Teaching Styles of the Teachers**

In order to uncover the teachers' teaching style profile, the students' responses to the Teaching Style Questionnaire were analyzed in three steps. First, the levels of the teachers' practice of each teaching style which was reflected in two items were calculated and ranked from that with the highest mean to that with the lowest one. Second, the teachers' teaching styles were grouped into four correlates of teaching styles. Third, the levels of practice mean of each correlate was summed up and computed for the percentage. The teaching style profile consisting of a combination of each correlate of teaching styles was then established.

### **2.1 Categories of Teachers' Practiced Teaching Styles**

Under this investigation, only three levels of practice of the teachers' teaching styles were considered as contributing to the teaching style profile: the mostly practiced ( $\bar{X} = 3.21-4.00$ ), the frequently practiced ( $\bar{X} = 2.41-3.20$ ), and the moderately practiced ( $\bar{X} = 1.61- 2.40$ ). Each level of preference is discussed starting from that with the highest mean to that with the lowest one.

**Table 5 Categories of Teachers' Practiced English Teaching Styles**

<b>Item no.</b>	<b>Teaching styles</b>	<b>Category</b>	<b>Mean</b>	<b>Rank</b>	<b>Level of Practice</b>
1	My teacher gave me the course outline at the beginning of the course.	(3.59)			<b>Mostly practiced</b>
2	My teacher taught me step by step e.g., had a leading stage, used transitional words before going to the next topic, explained how to do exercises clearly together with some examples, and summarized what has been taught.	Analytic (3.35)	3.4694	1	
11	My teacher had me read though I couldn't read all correctly.	(3.24)			
12	My teacher had me guess the meanings of some unknown words.	Tolerant (3.42)	3.3316	2	



**Table 5 Categories of Teachers' Practiced English Teaching Styles (cont.)**

Item no.	Teaching styles	Category	Mean	Rank	Level of Practice
3	My teacher taught me in Thai because that helped me understand all he was teaching.	(3.06)	3.1990	3	Frequently practiced
7	My teacher told me the meanings of some unknown words.	(3.34)			
5	My teacher had me note down what was being taught.	(2.93)	2.9337	4	
20	My teacher assigned me to work on a class project.	Tactile (2.94)			
18	My teacher assigned me to work in pairs.	(2.59)	2.8878	5	
19	My teacher assigned me to work in groups.	Group (3.18)			
4	My teacher wrote what was being taught on the board.	(3.07)	2.8469	6	
23	My teacher gave me feedback on my language use through writing.	Visual (2.62)			
6	My teacher gave me a chance to ask what I didn't understand immediately.	(3.35)	2.8112	7	
13	My teacher had me compete for getting the answer in limited time.	Impulsive (2.28)			
14	My teacher gave me adequate time to finish an exercise and think of an answer.	(2.66)	2.5816	8	
24	My teacher had me summarize what had been taught at the end of each class by myself.	Reflective (2.50)			

**Table 5 Categories of Teachers' Practiced English Teaching Styles (cont.)**

Item no.	Teaching styles	Category	Mean	Rank	Level of Practice
8	My teacher gave some examples besides those given in the textbook.	(3.30) Global	2.4949	9	
10	My teacher used authentic materials in teaching, e.g., train timetables, menus, pictures, maps, etc.				
17	My teacher gave me individual work.	(2.30) Individual	2.4082	10	Moderately practiced
21	My teacher had me do my homework alone.				
16	My teacher taught me through songs.	(1.38) Auditory	2.1888	11	
22	My teacher gave me feedback on my language use through speaking.				
9	My teacher taught me through action.	(2.13) Kinesthetic	2.1429	12	
15	My teacher taught me by role-playing.				

### 2.1.1 The mostly practiced teaching styles ( $\bar{X} = 3.21-4.00$ )

Results show that mostly the teachers taught by using analytic and tolerant of ambiguity teaching styles.

**Analytic teaching style** ( $\bar{X} = 3.4694$ ; Item No.1 ( $\bar{X} = 3.59$ ): *My teacher gave me the course outline at the beginning of the course* and Item No.2 ( $\bar{X} = 3.35$ ): *My teacher taught me step by step e.g., had a leading stage, used transitional words before going to next the topic, explained how to do exercises clearly together with some examples, and summarized what has been taught.*) The students rated that the teachers mostly practiced this teaching style. The teachers let students know what they were going to learn, the objectives and the evaluation procedure of the course,

and how the students had to prepare themselves to achieve those objectives. The teachers probably believed that students knowing this would help them plan their study and set their learning goals. This style facilitated students' learning since it was easy for them to catch up with what was being taught. In summary, teachers with analytic teaching style, gave the students the course outline at the beginning of the course, and mostly taught step by step. They had a leading stage, used transitional words before going to the next topic, explained how to do the exercise clearly together with some examples, and summarized what had been taught.

**Tolerant of ambiguity teaching style** ( $\bar{X} = 3.3316$ ; Item No.11 ( $\bar{X} = 3.24$ ): *My teacher had me read though I couldn't read all correctly* and Item No.12 ( $\bar{X} = 3.42$ ): *My teacher had me guess the meanings of some unknown words.*) Even though the students could not read, the teachers frequently had them read. The teachers used this style because they might think that it was the best way to encourage the students to learn. It gave the students a chance to practice reading and to remember the lesson. Also, the teachers were able to know which words/sentences/texts were too difficult for them. By letting the students read, the teachers would know the students' performance and were able to solve their problems immediately. When the students did not know the meaning of some words, the teachers often had them guess the meanings. In short, teachers with tolerant teaching style encouraged the students to read, though the students could not read, and had the students guess the meanings of some unknown words.

### 2.1.2 The frequently practiced teaching styles ( $\bar{X} = 2.41-3.20$ )

Teachers under investigation frequently taught with intolerant, tactile, group, visual, impulsive, reflective, global, individual, auditory, and kinesthetic teaching styles.

**Intolerant of ambiguity teaching style** ( $\bar{X} = 3.1990$ ; Item No.3 ( $\bar{X} = 3.06$ ): *My teacher taught me in Thai because that helped me understand all he was teaching* and Item No.7 ( $\bar{X} = 3.34$ ): *My teacher told me the meanings of some*

*unknown words*.) The teachers frequently used this teaching style by instructing in Thai. They used this style for three possible reasons. First, the teachers were not familiar with giving instructions in English and might not be capable of using English fluently. Second, the students might not understand what they were learning if the teacher instructed them in English. Third, there was time constraint during teaching. There might have been other activities or official holidays, which delayed the teaching. Also, because of such a voluminous content to cover, the teachers then used teacher-oriented teaching styles. When the students found some unknown words, the teachers mostly told them the meanings of those words. The teachers mainly used this style when they taught difficult words and they had little time to finish the lesson. To sum this up, teachers with intolerant teaching style frequently taught the students in Thai because that helped the students understand what was being taught better and faster. The teachers also told the meanings of some unknown words, which was what the students' preferred (see page 28).

**Tactile teaching style** ( $\bar{X} = 2.9337$ ; Item No.5 ( $\bar{X} = 2.93$ ): *My teacher had me note down what was being taught* and Item No.20 ( $\bar{X} = 2.94$ ): *My teacher assigned me to work on a class project*.) The teachers frequently had the students write down what was being taught. While teaching, there are always some important points to be written down. For some students, if they did not write it down they would forget the points after the class ended. Their notes helped remind them of the lesson after the class. The teachers frequently assigned the students to work on a class project. The teachers thought that giving the students a project would get them to practice the language and they could apply what they had learned in the class. Also, it was a way to evaluate whether the students had understood the lesson or not. In summary, teachers who preferred tactile teaching style frequently had the students write down what was being taught and assigned the students to work on a class project.

**Group teaching style** ( $\bar{X} = 2.8878$ ; Item No.18 ( $\bar{X} = 2.59$ ): *My teacher assigned me to work in pairs* and Item No.19 ( $\bar{X} = 3.18$ ): *My teacher gave me group work*.) The teachers frequently assigned the students to work in pairs. Some students might work well with others and fail if they worked alone. The teachers had to plan lessons that included both pair work and group work. Teachers frequently had the students work in a group. Assigning students to work in a group helped decrease pressure and anxiety. When the students had a chance to form groups, plan working steps, and help one another, it was possible for them to learn how to solve problems on their own. In brief, teachers with group teaching style preferred pair or group work, so they frequently gave the students this opportunity.

**Visual teaching style** ( $\bar{X} = 2.8469$ ; Item No.4 ( $\bar{X} = 3.07$ ): *My teacher wrote what was being taught on the board* and Item No.23 ( $\bar{X} = 2.62$ ): *My teacher gave me feedback on my language usage through writing*.) The moderate practice of this style reflected that from time to time, the teachers wrote on the board what they were teaching. The teachers frequently gave the students' written feedback on their language usage. In a class, there were both visual and auditory learners. When the teachers gave feedback to the students, they had to find out whether feedback in writing or speaking form would suit their target students. For visual learners, they would be happy and felt better if they got the written feedback, which enabled them to remember it. Teachers with visual teaching style believed that the students learned better by seeing, so they frequently wrote what was being taught on the board and gave students' feedback on language usage in writing.

**Impulsive teaching style** ( $\bar{X} = 2.8112$ ; Item No.6 ( $\bar{X} = 3.35$ ): *My teacher gave me a chance to ask what I didn't understand immediately* and Item No.13 ( $\bar{X} = 2.28$ ): *My teacher had me compete for getting the answer in a limited time*.) The results as indicated by this mean, show that the teachers under investigation were concerned with what was going on in the class. The teachers sometimes gave the students a chance to ask immediately when the students did not understand what the

teachers were teaching. Doing this helped clarify what was unclear in the instruction and helped the students understand better. At times, the teachers had the students compete to get answers in a limited time. So, teachers with impulsive teaching style gave the students a chance to ask what they did not understand immediately, and had the students compete to get answers in a limited time.

**Reflective teaching style** ( $\bar{X} = 2.5816$ ; Item No.14 ( $\bar{X} = 2.66$ ): *My teacher gave me adequate time to finish an exercise and think of an answer* and Item No.24 ( $\bar{X} = 2.50$ ): *My teacher had me summarize what had been taught at the end of each class by myself*.) The study shows that the teachers frequently gave the students adequate time to finish exercises and to think of the answers. The teachers knew that some students were slower and some were quicker. Some needed more time to finish and some needed shorter time. So, they had to use the style that accommodated both groups, otherwise the students might not achieve their learning goals. Additionally, the teachers frequently had the students summarize what they learned by themselves. Having the students summarize what they have learned on their own was a way to check whether the students understood what the teachers taught or not. Some students preferred reflective teaching style, especially the low achievers, as they would feel secure when they were given more time to think of answers or to do their exercises. To sum this up, teachers with reflective teaching style gave the students an adequate amount of time to finish an exercise and think of an answer and had the students summarize what had been taught at the end of each class by themselves.

**Global teaching style** ( $\bar{X} = 2.4949$ ; Item No.8 ( $\bar{X} = 3.30$ ): *My teacher gave some examples beside those given in the textbook* and Item No.10 ( $\bar{X} = 1.69$ ): *My teacher used authentic materials in teaching, e.g., train timetables, menus, pictures, maps, etc.*) Teachers frequently gave some examples besides those given in the textbooks. This style of teaching made students understand the lesson better and they would have a clearer picture of how the language concepts were used. Also, sometimes the teachers used authentic materials, such as train timetables, menus,

pictures, and maps when they were teaching. The students would see and understand the lesson better and they would understand the real use of the language. The visual learners might be happy learning with authentic materials. In short, teachers with global teaching style gave some examples besides those given in the textbooks and used authentic materials in teaching.

### 2.1.3 The moderately practiced teaching styles ( $\bar{X} = 1.60-2.40$ )

Individual teaching style ( $\bar{X} = 2.4082$ ; Item No.17 ( $\bar{X} = 2.30$ ): *My teacher assigned me to work individually* and Item No.21 ( $\bar{X} = 2.52$ ): *My teacher had me do my homework alone*) The teachers, from time to time, gave the students individual work. Though some students did not prefer individual work, it was impossible to avoid individual work. Activities in the classroom included both individual and group work. In this study, the teachers had the students do their homework individually at some time. Some students did better if they worked alone. For other students, working in a group might make the work progress slowly especially if there were conflicts among the group members, it was not easy to finish their work. To accommodate all students' needs, the teachers needed to plan a lesson that suited both group and individual work. It is impossible to please all students with different preferences either with classes, with groups or with individuals. In summary, teachers practiced individual teaching style moderately, which means that they sometimes gave the students individual work and had them do their homework alone.

**Auditory teaching style** ( $\bar{X} = 2.1888$ ; Item No.16 ( $\bar{X} = 1.38$ ): *My teacher taught me through songs* and Item No.22 ( $\bar{X} = 3.00$ ): *My teacher gave me feedback on my language use through speaking*) The teachers moderately taught the students through songs. Being restrained by time, the teachers could not always teach by using songs even though many students preferred this style ( $\bar{X} = 2.84$ ). Also, because the curriculum did not include teaching through songs, teachers could not use songs in their teaching as frequently as their students wanted them to. As for feedback, the teachers frequently gave feedback on the students' language use through speaking,

which was an easy way to communicate with the students because communicators saw each other. If the students were not clear on any point, they could ask and the teacher could explain it right away. However, this style was more suitable for auditory than for visual learners. In summary, teachers used this style moderately and gave the students' feedback on their language use orally.

**Kinesthetic teaching style** ( $\bar{X} = 2.1429$ ; Item No.9 ( $\bar{X} = 2.13$ ): *My teacher taught me through action* and Item No.15 ( $\bar{X} = 2.14$ ): *My teacher taught me by role-playing*). The teachers moderately practiced this style. Some teachers might use this when the content needs clarification by body movement. The teachers moderately used role-playing. The teachers might use it to serve the nature of the language activities given to the students. The teachers could not use this kind of activity so often in class because the shortness of time they had. In short, teachers used kinesthetic teaching style through action and by role-playing moderately.

In conclusion, the results presented in this section point to the fact that, the teachers under investigation were of mixed teaching styles: **analytic** ( $\bar{X} = 3.4694$ ), **tolerant** ( $\bar{X} = 3.3316$ ), **intolerant** ( $\bar{X} = 3.1990$ ), **tactile** ( $\bar{X} = 2.9337$ ), **group** ( $\bar{X} = 2.8878$ ), **visual** ( $\bar{X} = 2.8469$ ), **impulsive** ( $\bar{X} = 2.8112$ ), **reflective** ( $\bar{X} = 2.5816$ ), **global** ( $\bar{X} = 2.4949$ ), **individual** ( $\bar{X} = 2.4082$ ), **auditory** ( $\bar{X} = 2.1888$ ), and **kinesthetic** ( $\bar{X} = 2.1429$ ) teaching styles respectively.

## 2.2 Correlates of Teaching Styles

On the basis of the findings presented above, the teachers' practiced teaching styles may be grouped into four correlates of teaching styles: analytic, concrete, communicative, and authority-oriented. The correlates of teachers' teaching styles are presented starting from the one with the highest mean to the one with the lowest mean.



### 2.2.1 Correlate One: Authority-oriented teachers ( $\bar{X} = 3.19$ : intolerant of ambiguity)

These teachers mostly used intolerant teaching style. They gave clarification in all aspects of language learning. They not only explained the meanings of some unknown words but also gave lecture in Thai. They also had students learn by reading and gave enough time for their students to guess unknown words in a class competition.

There are four main reasons why the teachers mostly practiced authority-oriented teaching styles: students' proficiency, teachers' previous learning experience, teachers' English proficiency, and time limitation.

*Students' proficiency:* As the language proficiency of the students under investigation was rather low, the teachers had to explain what they were teaching clearly. If the students were not clear on the language points, teachers had to re-teach them, tell them the unknown words, etc. Explaining or teaching in Thai helped students understand better than in English.

*Teachers' previous learning experience:* Teachers in the study might like to teach in the way which they were taught. The teachers remembered the methods their teachers used and they applied those methods with their present students. They might not initiate any new methods. It was easier to imitate what their own teachers did in the past.

*Teachers' English proficiency:* The teachers' proficiency might not be sufficiently high to teach in English, so they spoke Thai with their students. And this helped the students understand better. Low-achievers might like this method, but high-achievers might not, as it was not challenging.

*Time limitation:* Generally, the teachers had little time to complete the course and they wanted to cover what would be in the final test. So, they gave instructions in Thai to make the students understand better and faster.

### **2.2.2 Correlate Two: Analytic teachers ( $\bar{X} = 2.81$ : analytic, reflective, and individual)**

These teachers liked teaching grammar and focusing on rule learning. They knew that some learners could not follow the lesson if they went on quickly. So, analytic teachers would teach step by step and with more organized presentation to set a secure atmosphere for the students. If the analytic teachers wanted to have the students play games or any other activities to compete among the groups, they would give enough time for the students to prepare or to understand the rules (reflective). These teachers liked to have their students work individually.

Teachers under this profile might not be familiar with teaching English by communicative approach or their own personality may facilitate teaching by analytic styles. So, their preferred teaching styles were analytical. Another possibility may be the fact that the courses under investigation (01-320-205 and 01-320-206) were grammar based and focused on writing skills. So, it was easier for the teachers to teach the students by analytic teaching styles.

### **2.2.3 Correlate Three: Communicative teachers ( $\bar{X} = 2.79$ : group, kinesthetic, impulsive, and toierant)**

Communicative teachers would give lessons by using socially interactive and communicative events. They would use English in class and communicate with students in English. They would have students work in groups or do role-play. Students would learn from the group members and social interaction took place when they exchanged information. The communicative teachers did not think their students' mistakes were serious. They accepted whatever the students performed if it could make sense and they believed that the students would learn from their mistakes. The students needed more time to think and prepare themselves for guessing or competing in games. So, the teachers would allow them to do it in the way they liked.

The rather low practice of this profile suggested that the teachers taught the students by communicative approach less than what was desirable. This might be

because there were other factors hindering their communicative teaching, for example, the students' proficiency, the teachers' previous learning experience, the teachers' English proficiency, and the time limitation as mentioned in profile one.

#### **2.2.4 Correlate Four: Concrete teachers ( $\bar{X} = 2.61$ : visual, global, auditory, and tactile)**

These teachers tried to write what they were teaching on the board. Some learners, especially the visual ones, might not have clear understanding without any visual aids, such as pictures, maps, train timetables, etc. The teachers had the students listen to songs and do class projects. They might believe that these teaching styles helped them to perform good teaching and the students were learning better when they saw visuals and listened to songs and did class projects.

Although the teachers under investigation taught through visual, global, auditory, and tactile methods as discussed above, the level of their practice was relatively moderate. This may be because the school did not have enough budget to invest in more visual aids even though they realized that visual aids and such materials facilitated learning.

### **2.3 Teachers' Teaching Style Profile**

The profile of the teachers' teaching styles in this study contained four correlates of teaching styles: authority-oriented, analytic, communicative, and concrete as presented in Table 6.

**Table 6 Teachers' Teaching Style Profile**

<b>Components (Correlates of Teaching Styles)</b>	<b>Level of Practice</b>	
	<b>Mean</b>	<b>Percentage</b>
1. Authority-oriented	3.19	27.98
2. Analytic	2.81	24.65
3. Communicative	2.79	24.47
4. Concrete	2.61	22.90
<b>Total</b>		<b>100</b>

## 2.4 Discussion

The results presented in Table 6 shows that the teachers in this study used more authority-oriented and analytic teaching styles than other teaching styles which suggests that the teaching taking place was still teacher-centered. This may be due to the fact that most lessons still focus on grammar. Training teachers to teach English by communicative approach and to make use of teaching aids which encourage students' learning through various channels needs to be taken into account.

## 2.5 Comparison of the Students' Learning Styles and Their Teachers' Teaching Styles

Table 7 presents the means of students' preference for learning styles and those of the teachers' practice of teaching styles at different levels.

**Table 7 Learning and Teaching Styles**

Learning Styles	Mean	Teaching Styles	Mean
<b>Strongly preferred</b>		<b>Mostly practiced</b>	
1. Analytic	3.8418	1. Analytic	3.4694
		2. Tolerant of ambiguity	3.3316
<b>Preferred</b>		<b>Frequently practiced</b>	
1. Visual	3.1684	1. Intolerant of ambiguity	3.1990
2. Intolerant of ambiguity	3.1480	2. Tactile	2.9337
3. Global	3.1480	3. Group	2.8878
4. Group	3.0714	4. Visual	2.8469
5. Auditory	2.9541	5. Impulsive	2.8112
6. Tactile	2.9235	6. Reflective	2.5816
7. Tolerant of ambiguity	2.8520	7. Global	2.4949
7. Impulsive	2.8316		
8. Reflective	2.7092		
9. Kinesthetic	2.5816		
<b>Moderately preferred</b>		<b>Moderately practiced</b>	
1. Individual	1.9235	1. Individual	2.4082
		2. Auditory	2.1888
		3. Kinesthetic	2.1429

The results in Table 7 show that not only the students but also the teachers had mixed styles. The students under investigation strongly preferred to learn by using *analytic* ( $\bar{X} = 3.8418$ ) learning style. They preferred to learn by using these styles: *visual* ( $\bar{X} = 3.1684$ ), *intolerant* and *global* ( $\bar{X} = 3.1480$ ), *group* ( $\bar{X} = 3.0714$ ), *auditory* ( $\bar{X} = 2.9541$ ), *tactile* ( $\bar{X} = 2.9235$ ), *tolerant* ( $\bar{X} = 2.8520$ ), *impulsive* ( $\bar{X} = 2.8316$ ), *reflective* ( $\bar{X} = 2.7092$ ), and *kinesthetic* ( $\bar{X} = 2.5816$ ). They moderately preferred to learn by *individual* ( $\bar{X} = 1.9235$ ) learning styles. Their teachers mostly

taught in a few styles: *analytic* ( $\bar{X} = 3.4694$ ) and *tolerant* ( $\bar{X} = 3.3316$ ) and frequently taught in *intolerant* ( $\bar{X} = 3.1990$ ), *tactile* ( $\bar{X} = 2.9337$ ), *group* ( $\bar{X} = 2.8878$ ), *visual* ( $\bar{X} = 2.8469$ ), *impulsive* ( $\bar{X} = 2.8112$ ), *reflective* ( $\bar{X} = 2.5816$ ), and *global* ( $\bar{X} = 2.4949$ ) teaching styles. *Individual* ( $\bar{X} = 2.4082$ ), *auditory* ( $\bar{X} = 2.1888$ ) and *kinesthetic* ( $\bar{X} = 2.1429$ ) were moderately employed by the teachers.

These preferred learning and teaching styles were then grouped into correlates of learning and teaching styles which together form the learning and teaching style profile as shown in Table 8.

**Table 8 Comparison of Learning and Teaching Style Profiles**

Learning Style Profile	Level of Preference		Teaching Style Profile	Level of Practice	
	Mean	%		Mean	%
1. Authority-oriented	3.14	26.55	1. Authority-oriented	3.19	27.98
2. Concrete	3.04	25.70	2. Analytic	2.81	24.65
3. Communicative	2.83	23.92	3. Communicative	2.79	24.47
4. Analytic	2.82	23.83	4. Concrete	2.61	22.90
<b>Total</b>		<b>100</b>	<b>Total</b>		<b>100</b>

Both the students and the teachers had two sets of correlates at the same preference order. The students' correlates of learning styles ranged from the most preferred correlate to the least preferred one were **authority-oriented** ( $\bar{X} = 3.14$ , 26.55%), **concrete** ( $\bar{X} = 3.04$ , 25.70%), **communicative** ( $\bar{X} = 2.83$ , 23.92%), and **analytic** ( $\bar{X} = 2.82$ , 23.83%). The teachers' correlates of teaching styles in order of level of practice were **authority-oriented** ( $\bar{X} = 3.19$ , 27.98%), **analytic** ( $\bar{X} = 2.81$ , 24.65%), **communicative** ( $\bar{X} = 2.79$ , 24.47%), and **concrete** ( $\bar{X} = 2.61$ , 22.90%). These results reflected that, to some extent, the students under investigation learned in

the ways they preferred. However, some of the congruence between the students' preferred ways of learning and the teachers' practiced ways of teaching found here seemed undesirable. Let's consider the authority-oriented teaching and learning correlates which perfectly matched in terms of ranking as the most highly-favored. This meant that students liked to get help from their teachers and needed more structured presentation. In other words, students mostly liked to be spoon-fed because they did not have to think or find the answer by themselves and usually preferred to wait for help from their teachers who did teach them the way they liked to learn. From the students' perspective, this was an easy way to be a student, though it was not the way to be a good one. From the teachers' perspective, there are two possible reasons for the choice of these styles. First, they mostly taught with authority-oriented correlate of teaching styles because in their class, they might have more low-achievers who needed more help from the teachers than high-achievers who worked more independently. Another possible reason might be due to the large number of students in the class. The class with many students was easier to teach by authority-oriented style. However, students could have been better language learners if they learned in a more communicative way than in an authority-oriented way. The other correlate of teaching and learning styles which matched perfectly in terms of rank was communicative one. This congruence was desirable but communicative correlate of teaching styles should probably be practiced more frequently. Fortunately, the results showed that it was possible for the teacher to teach the students by the communicative way because they themselves, to some extent, taught through this style. Nevertheless, training on how to teach English communicatively may be needed and also the class should consist of a smaller number of students to facilitate the use of communicative approach.

Analytic correlate of teaching styles that was practiced frequently by the teachers was preferred least by the students. This showed that the teachers tried to teach step by step and had the students do individual activities or play games in an

adequate time. However, it was preferred least because the students' proficiency was rather low. Moreover, they were not able to cope with individual work or play games that required certain language ability. Nonetheless, the teachers should still try to teach more by analytic correlate because this way of teaching correlate may lead the students to be more independent learners.

Concrete correlate of teaching styles was practiced less despite the high preference of the students. The students preferred to learn through visual aids, liked to listen to songs and to do class projects. The teachers should practice this concrete correlate of teaching styles more to match with the students' preference because this correlate of teaching styles would facilitate their learning. The students would have better understanding if they see pictures or do English related activities in which they have a chance to use all the five senses.

### **3. Congruence between the Learning and Teaching Styles**

To answer Research Question 3: *Is there any congruence between the learning and teaching styles?*, three sets of computation were done. First, the coefficient of the correlation between the students' levels of preference for each learning style and their teachers' levels of practice of each teaching style was computed. Second, the coefficient of the overall correlation between the students' levels of preference for learning styles and the teachers' levels of practice of teaching styles was computed. Third, the coefficient of the overall correlation between each student's levels of preference for learning styles and their teacher's levels of practice of teaching styles was computed.



### 3.1 Learning and Teaching Style Correlation

How much did the learners learn in the ways they wanted to learn? How much did the teachers' teaching styles directly match with the students' learning styles? The results presented in the following table answer these two questions.

**Table 9 Learning and Teaching Style Correlation**

Learning Styles	Teaching Styles											
	Visual	Auditory	Tactile	Kinesthetic	Individual	Group	Analytic	Global	Reflective	Impulsive	Tolerance	Intolerance
r												
Visual	.102											
Auditory		.239*										
Tactile			.313**									
Kinesthetic				.371**								
Individual					.271*							
Group						.230*						
Analytic							-.030					
Global								.195				
Reflective									.224*			
Impulsive										.221*		
Tolerance											.169	
Intolerance												.163

\* =  $p < 0.05$       \*\* =  $p < 0.01$

**Table 9** shows that to some extent the students under investigation had learned in the ways they liked and to some extent the teachers had taught in the ways their students preferred. Based on the results of the correlation coefficients computation presented in **Table 9**, the styles may be grouped into significantly and non-significantly congruent styles.

### 3.1.1 Significantly congruent styles

#### 3.1.1.1 Significant Correlation at 0.01 Level

*Kinesthetic:* The correlation ( $r = 0.371$ ,  $p < 0.01$ ) shows that there was a weak but significant correlation between kinesthetic learning and teaching styles at 0.01 level ( $p < 0.01$ ). The students preferred their teachers to teach them through action and by role-playing ( $\bar{X} = 2.581$ ) and their teachers had taught them by employing this style ( $\bar{X} = 2.142$ ) at moderate level. This may be because the teachers themselves might not be familiar with using this teaching style or the students were not used to learning through this style.

*Tactile:* The correlation ( $r = 0.313$ ,  $p < 0.01$ ) shows that there was a weak but significant correlation between tactile learning and teaching style at 0.01 level ( $p < 0.01$ ). The students preferred to write what they were learning in their notebooks and they liked to work on a class project ( $\bar{X} = 2.923$ ) and the teachers responded to their preference by allowing them to write what they were learning and assigning them to work on a class project ( $\bar{X} = 2.933$ ).

#### 3.1.1.2 Significant Correlation at 0.05 Level

*Individual:* The correlation ( $r = 0.271$ ,  $p < 0.05$ ) shows that there was a weak but significant correlation between the individual learning and teaching style at 0.05 level. The teachers moderately assigned the students to work alone and do their homework themselves ( $\bar{X} = 2.408$ ). This teaching style quite corresponded with the students preference as they moderately preferred to work alone and do their homework by themselves ( $\bar{X} = 1.923$ ). Obviously, the teachers practiced this style at a higher degree than the students' degree of preference. It may be possible that the high achievers who had more knowledge of the language liked to work alone but the low achievers liked to work with others or to study in a safer situation.

*Auditory:* The correlation ( $r = 0.239$ ,  $p < 0.05$ ) shows that there was a significant correlation between auditory learning and teaching style at 0.05 level. The teachers taught the students through songs and gave feedback on their language use

through speaking ( $\bar{X} = 2.188$ ) less often than that preferred by the students ( $\bar{X} = 2.954$ ). Maybe, it was not always possible for the teachers to teach the students through songs as the curriculum used did not include the use of songs. And in some language activities like writing, the teachers, instead of giving spoken feedback, needed to give written feedback to create a clear understanding with the students.

*Group:* The correlation ( $r = 0.230$ ,  $p < 0.05$ ) shows that there was a significantly weak correlation between the group learning and teaching style at 0.05 level. The students preferred to work in pairs and groups ( $\bar{X} = 3.071$ ) and the teachers practiced this style a little less frequently than what the students preferred ( $\bar{X} = 2.887$ ). In teaching situation, it may not be easy to get the students to work in groups because it takes time but the students like it. Also, pair and group work did not serve all teaching purposes.

*Reflective:* The correlation ( $r = 0.224$ ,  $p < 0.05$ ) shows that there was a significant and weak correlation between the reflective learning and teaching style at 0.05 level. The students preferred to have adequate time to finish exercises and think of answers and to summarize what had been taught at the end of the each class by themselves ( $\bar{X} = 2.709$ ). The teachers practiced this style a little less often than what the students preferred ( $\bar{X} = 2.581$ ). This may be due to the time limitation, the teachers could not dedicate much time to do exercises and had to have the students do their own summary of what the teachers had taught.

*Impulsive:* The correlation ( $r = 0.221$ ,  $p < 0.05$ ) shows that there was a significant and weak correlation between the reflective learning and teaching style at 0.05 level. The students preferred to compete to get answers in a limited amount of time and to have a chance to ask what they did not understand immediately ( $\bar{X} = 2.831$ ). The level of teachers' practice is roughly equal to the level of the students' preference ( $\bar{X} = 2.811$ ). Noticeably, the level of preference and practice were not high. This may reflect the fact that in teaching, the teachers did not ask many questions, and like most Thai students, the students were afraid to answer questions.

They also did not like to be in an uncertain situation when they were competing to get the answers. The teachers might give students a chance to ask, but they did not ask.

### 3.1.2 Non-Significantly congruent styles

#### 3.1.2.1 Global and Analytic Styles

In *global* styles, the correlation ( $r = 0.195$ ) shows that there was a positive but not significant correlation. The students preferred their teachers to give some examples besides those given in the textbook and to use authentic materials in teaching, e.g., train timetables, menus, pictures, maps, etc. ( $\bar{X} = 3.148$ ). The teachers practiced this style less often than what the students preferred ( $\bar{X} = 2.494$ ). The difference between the preference and the practice of the style may indicate that in most cases, these teachers in this study used only the textbook and they did not bring in any materials to the class because it was easier and more convenient to only teach what was in the books. For *analytic* styles, the correlation ( $r = -0.030$ ) shows a non-significant negative congruence between the analytic learning and teaching styles. The non-significantly negative congruence suggests that the students liked this style of learning but the teachers did not use this style. The students preferred their teachers to give them the course outline at the beginning of the course, to teach them step by step, and to have a leading stage, to use transitional words before going to the next topic, to explain how to do exercises clearly together accompanied by some examples, and to summarize what had been taught ( $\bar{X} = 3.841$ ). The teachers had practiced this style less frequently than the students preferred ( $\bar{X} = 3.469$ ). The correlation shows that the level of practice was so low that the students felt they did not learn in the ways they preferred to. In some classes, the teachers had less time to teach so they taught as quickly as possible to finish the course. They had not taught the student according to the plan they initially set. Some students missed the class when the teachers distributed the course outline and they did not get it afterwards. That might result in a negative correlation.

### 3.1.2.2 Tolerant of Ambiguity and Intolerant of Ambiguity Styles

The correlation ( $r = 0.195$ ) between tolerant of ambiguity teaching and learning styles shows that the teachers had the students read though they could not read effectively and guess the meanings of some unknown words ( $\bar{X} = 3.331$ ) more often than what preferred by the students ( $\bar{X} = 2.852$ ). The teachers may believe that this was the right way to practice the language and the good language learners had to possess this style. The students were embarrassed if they could not read. They did not want to take risk and they did not want to work out the meanings of unknown words by themselves. This may explain why Thai learners are not successful in language learning. For *intolerant* styles, the correlation ( $r = 0.163$ ) shows that the students preferred their teachers to teach them in Thai and to tell them the meanings of some unknown words ( $\bar{X} = 3.148$ ). The teachers practiced this style almost as often as the students preferred ( $\bar{X} = 3.199$ ). Teaching by using Thai made the students, especially the low achievers, understand the lessons better. When the students encountered difficult words, the teachers told them the meanings. This helped the students feel better than in a situation when they had to struggle to find the meaning of the difficult words themselves. However, the effectiveness of this style of teaching depends on the situation. The teachers have to judge when to use intolerant teaching style. If that particular class has more high achievers than low ones and if they previously have used this style very often, the teachers have to do the opposite.

### 3.1.2.3 Visual Styles

*Visual*: There was no significant correlation ( $r = 0.102$ ) between the visual learning and teaching style. The students preferred their teachers to write what was being taught on the board and to give feedback on their language use through writing ( $\bar{X} = 3.168$ ) and the teachers did this less often than what the students preferred ( $\bar{X} = 2.846$ ). The teachers themselves might not like to write on the board or it might depend on what they were teaching. If they were teaching listening and speaking, they would write only the words or phrases which were difficult on the board.

Regarding the feedback, if the teachers were teaching listening and speaking, it was possible to give oral feedback. So, this made the students feel they did not get to learn in the way they preferred to learn.

### 3.2 Overall Learning and Teaching Styles Correlation

The data obtained from the Learning Style Questionnaire and Teaching Style Questionnaire was computed for the overall correlation coefficient between the students' levels of preference for learning styles and the teachers' levels of practice of teaching styles as shown in Table 10.

**Table 10 Overall Learning and Teaching Styles Correlation**

<b>Pearson Correlation</b>	<b>Learning Styles</b>	<b>Teaching Styles</b>
Learning styles	1.00	
Teaching styles	0.475**	1.00

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

The results show that there was a significantly moderate correlation between learning and teaching styles ( $r= 0.475$ ,  $p<0.01$ ). That is, there was a moderate relationship between the teachers' teaching styles and the students' preferred ways of learning. It indicates that to some extent the teachers had employed the styles preferred by the students or the students had a chance to learn in the ways they preferred in a moderate level.

### 3.3 Levels of Congruence between Learning and Teaching Styles

The coefficient of the overall correlation between each student's levels of preference for learning styles and their teacher's levels of practice of teaching styles was computed. All of these correlation coefficients were then classified into congruence groups based on the following criteria for categorizing three levels of matching between learning and teaching styles. Then, the number of students in each congruence group was counted.

**Table 11 Number of Students in Congruence Groups**

<b>Correlation</b>	<b>Congruence</b>	<b>No. of Students (%)</b>
0.100 - 0.390	Moderate match	38 (39%)
0.400 - up	High match	31 (32%)
below - 0.099	Low match	29 (29 %)
<b>Total No. of students</b>		<b>98 (100%)</b>

This table shows the number of the students in each level of congruence between learning and teaching styles. Thirty-eight students (39%) had their preferred learning styles moderately matched with their teachers' teaching styles. Twenty-nine students (29%) had their preferred learning styles lowly matched with their teachers' teaching styles. Thirty-one students (32%) had their preferred learning styles highly matched with their teachers' teaching styles. Based on the findings presented in tables 10 and 11, it can be concluded that the congruence between learning and teaching styles was found to be mostly moderate and this level of congruence was found to be significant at the level of 0.01 ( $r= 0.475$ ).

#### 4. Congruence between the Learning and Teaching Styles and Its Relationship to the English Language Achievement

The number of students in each achievement group and the number of student in each congruence group was tested by Chi-square for the relationship of congruence between the learning and teaching styles to the English language achievement.

##### 4.1 Achievement Groups

The finding that there was a significantly moderate congruence between learning and teaching styles led to the analysis of the relationship of congruence between the learning and teaching styles to the English language achievement. The differences between the scores of course 01-320-205 and course 01-320-206 were put into four groups to see whether the subjects with different levels of achievement had different levels of congruence between their learning styles and their teachers' teaching styles.

Table 12 shows four groups of students, classified by their levels of achievement which ranged from -7 to 25 (32 points divided by 4).

**Table 12 Achievement Groups**

Achievement Groups	Differences in Scores between Course 01-320-205 and 01-320-206
A	17-25
B	9-16
C	1-8
D	-7-0



## 4.2 Congruence Groups

In the analysis of the relationship of the congruence between learning and teaching styles to the English language achievement, two variables were taken into account: the number of students in each group of congruence and the number of the students in each group of achievement. Chi-square ( $p < 0.05$ ) was employed to investigate whether there was any relationship between the level of congruence and the level of achievement.

**Table 13 Number of the Students in Congruence and Achievement Groups**

Achievement Groups	9-25	1-8	-7-0	Total (%)
	(A+B) Above Average (%)	(C) Average (%)	(D) Below Average (%)	
<b>High</b> (0.400-up)	6 (22%)	17 (35%)	8 (37%)	31 (32%)
<b>Moderate</b> (0.100-0.390)	10 (37%)	18 (37%)	10 (45%)	38 (39%)
<b>Low</b> (below-0.099)	11 (41%)	14 (28%)	4 (18%)	29 (29%)
<b>Total</b> (%)	27 (27%)	49 (50%)	22 (23%)	98 (100%)

Table 13 shows the levels of congruence between learning and teaching styles and the students' English language achievement. In this study, the overall congruence between the students' learning styles and the teachers' teaching styles was found to be significant at a moderate level. Thirty-nine percent of the students had

moderate match between their preferred learning styles and their teachers' teaching styles which thirty-two percent of the students had a high match, and twenty-nine percent of the students had a low match.

However, if students were divided into three ability groups: above average (A+B), average (C), and below average (D), it can be easily seen that a small number of students in the above average group had a chance to learn in their preferred ways while most did not. 22% of this group had high congruence between learning and teaching styles, 37% had moderate congruence, and 41% had low congruence. The average group had roughly the same number of students in three levels of congruence (35% had high congruence, 37% had moderate congruence, and 28% had low congruence). In contrast, the below average group had learned in their preferred way most frequently when compared with the other two groups. 37% had high congruence, 45% had moderate congruence, and 18% had low congruence. What can be inferred from this study is that the teachers' teaching styles mostly served the average and below average group who were the majority of the class. However, though the low achievers had learned in their preferred ways, this did not effectively help increase their achievement. This may be due to the fact that their English ability was low. Hence, their learning could progress only slowly. Obviously, the above average group's learning styles correspond less to their teachers' teaching styles, yet they still achieved in a greater extent than the low group. This probably means that the teachers' most frequently used correlates of teaching styles and the students' strongly preferred correlates of learning styles (authority-oriented) in this study may not promote better results in learning English. So, by the end of the course, the students in below average group scored less in course 01-320-206 ( $\bar{X} = 47.09$ ) than in course 01-320-205 ( $\bar{X} = 49.81$ ). For the high achievers, their achievement improved much though they did not get to learn in their preferred ways. That might be the result of their higher proficiency or certain facilitative behaviors. Thus, at the end of the study, we could see differences in scores ( $\bar{X} = 12.8$ ). Since the high achievers could

progress in spite of the low congruence and the low achievers could not progress positively despite the higher congruence, we have to postulate no significant relationship between the congruence of learning and teaching styles and the English language achievement.

### **4.3 Relationship of the Congruence between Learning and Teaching Styles to the English Language Achievement**

Table 14 presents the result of Chi-square test of the relationship of the congruence between learning and teaching styles to the English language achievement.

**Table 14 Relationship of the Congruence between Learning and Teaching Styles to the English Language Achievement**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-square	4.553	6	.602
N of Valid Cases	98		

Our postulation that there exists no relationship of the congruence between learning and teaching styles to the English language achievement is confirmed by the application of Chi-square test. The test shows that the congruence between learning and teaching styles was not related to the English language achievement at 5% level of significance ( $p = 0.602$ ). So, we can conclude that there is no relationship between the congruence of learning and teaching styles to the English language achievement.

## **4.4 Discussion**

No relationship between the congruence of learning and teaching styles and the English language achievement was found though there was a moderate match between learning and teaching styles. The small number of the high achievers and the level of congruence between learning and teaching styles found in this study can explain such results.

### **4.4.1. The Small Number of the High Achievers in the Study**

When divided into three groups, 22 students were below average, 49 students in average, and 27 students in the above average. Though the below average students had learned in their preferred ways, their achievement did not improve much. This might be due to their rather low ability which caused them to make little progress in their learning. Also, the students in average group moderately achieved when learning in their preferred ways. In contrast, the above average groups had less opportunity to learn in their preferred ways. Still, they benefited more than other two groups. If the high achievers had more chance to learn in their preferred ways, the relationship between the congruence of learning and teaching styles and the achievement may have been found.

### **4.4.2. Levels of Congruence between Learning and Teaching Styles**

Although it is found that thirty-nine percent of the student had moderate congruence between learning and teaching styles, thirty-one percent had high congruence and twenty-nine had low (see Table 11), the students' achievement in course 01-320-206 was not significantly higher than their achievement in course 01-320-205. That is, the congruence between learning and teaching styles was not

significantly related to students' achievement. This, perhaps, is due to the fact that their average level of proficiency was rather low. In contrast, as can be seen in the case of the high achiever group, whose congruence between learning and teaching styles is low, they achieved better at the end of the course because of their higher proficiency.