

Correlation between Speaking Strategies of EFL Undergraduates and Their Thinking Styles

Mutiara Maharsi Mumpuni^{a,1*}

^aState University of Surabaya, Kampus Lidah JI Lidah Wetan, Surabaya (60213), Indonesia
¹mutiara.18029@mhs.unesa.ac.id

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ABSTRACT

This study was conducted to analyze the correlation between the speaking strategies of EFL undergraduates and their thinking styles. The researcher used a chi-square test analysis which 47 sophomore students (34 females and 13 males) in the English department at the State University of Surabaya. In collecting the data, this study used two adopted questionnaires that were developed from Oxford's LLS speaking 20 items (1990) and Sternberg and Wagner's (1992) TSI 65 items included among the side of background information on their gender. As concerns on the analysis, this study found that there was no significant correlation between the speaking strategies of EFL undergraduates and their gender ($X^2 = 1.736$), the thinking styles of EFL undergraduates and their gender ($X^2 = 1.043$), speaking strategies and thinking styles of EFL undergraduates and their gender ($X^2 = 2.839$).

I. Introduction

Richards & Rodgers (2001) stated that English is extensively considered an overseas language in the world. For instance, in Indonesia particularly the proficiency in English as a foreign language whose use minimal. Meanwhile, English Proficiency Index (EF EPI, 2021) was examined on more than 2 million controlled targets all over the world who took the EF Standard English Test (EF SET) which demonstrated that the English proficiency of Indonesian human resources was statically considered insignificant which Indonesia is ranked 80th out of 112 countries.

Moreover, there are numerous styles and strategies to enhance English performances. Everyone has their style of thinking, acknowledgment, and strategy. Sternberg (1997) believed that everyone has their own of thinking through socialization which can change during life and learning. Thinking style highlighted a person's characteristics in thinking, remembering, processing information, and dealing with and solving problems. Besides, thinking style is the preferred way of insight one's capabilities. The concept emphasizes that thinking styles deal with the activity where everyone has their pattern of thinking style which is described in 13 thinking styles in the five dimensions, namely: (1) functions including legislative, executive, and judicial; (2) forms included hierarchical, oligarchic, monarchical, and anarchic; (3) levels included global and local; (4) scopes included internal and external; and (5) leaning included liberal and conservative. In addition, this theory is the idea that people choose a style of managing the activities that they feel are appropriate. However, this is by learning strategies as students' explicit behaviors to guide their learning, to generate the learning obvious, appropriate, self-directed, effective, and impressive (Oxford, R. L., 1990). Besides, language learning strategies as an instrument for effective, and self-sufficient, which are necessitated for improving communicative competence (O'Malley & Chamot, 1990). Hence, students' language learning strategies are conceivably associated with thinking style variables.

Nevertheless, this study examines speaking skills which is an interactive process of developing context that implicates generating, getting, and managing the information (Brown, 1994; Burns & Joyce, 1997). It is generally impromptu, flexible, and evolving. Thus, the student learns about constructing ideas, organizing sentences, and communicating opinions in spoken form. Besides,

speaking is offering ideas, opinions, and perceptions understanding of deliberation. In addition, the proficiency of speaking in English was a preference for many ESL or EFL students. Consequently, they repeatedly appraise their performance in language learning, as well as the validity of improvement, considering their speaking competence (Richards, 2006). Hence, language learning strategies allow the student to take more responsibility and to increase progress in developing language skills which can facilitate learning (Chamot, 2005). This allows students to become independent learners which can manage to learn and achieve goals.

Further, O'Malley, J. M. & Chamot (1990) classified language learning strategies into three sub-categories subcategories. First, cognitive strategies are specific learning tasks and explicit learning which include repetition, resourcing, translation, grouping, note-taking, deduction, recombination, imagery, auditory representation, keyword, contextualization, elaboration, transfer, and inference. Second, metacognitive strategies apply to project learning advance organizers, directed attention, selective attention, self-management, functional planning, self-monitoring, delayed production, and self-evaluation. Third, the social strategy involved interacting with others. Meanwhile, the strategies based on Oxford (1990) that consist of cognitive strategy as a better approach to control emotions, metacognitive used to implement the control of the learning process, and social strategy as a response involving other people in the development.

However, in the previous study, the relationship between Iranian EFL students' thinking styles and language learning strategies had a significant correlation between male and female language learning strategies (Mahmood, 2013). Besides, correlational research (Apriani et al., 2017) had a relationship between thinking styles and language learning strategies of the English Education Study Program, FKIP Sriwijaya University in the 2013/2014 academic year.

Therefore, among the general information that has been explained, this study has formulated the research questions thusly: (1) Is there a significant correlation between the asking strategies of EFL undergraduates and their gender? (2) Is there a significant correlation between the thinking styles of EFL undergraduates and their gender? (3) Is there a significant correlation between speaking strategies and thinking styles of EFL undergraduates and their gender?

Moreover, this study proposed the hypotheses: (1) If the calculated chi-square value $>$ chi-square table, then H_0 is rejected. (2) If the calculated chi-square value $<$ chi-square table, then it fails to reject H_0 . Meanwhile, to determine the critical values of the chi-square distribution with degrees of freedom (df 0.05) which is the number of table columns minus one multiplied by the number of table rows minus one, or $(r-1)(c-1)$.

II. Review of Related Theory

a. Defining Speaking Strategies

Speaking indicates proficiency in conveying points of thought to other people orally. According to Nunan (2003), speaking is a dynamic lingual readiness that consists of constructing systematic verbal utterances to convey meaning. In a slightly different explanation, Brown (2004) mentioned that speaking is a given and taken action of composing in a context that links producing, receiving, and processing words. Hence, the student learns how to determine the idea, construct sentences, and communicate in spoken form with acceptable pronunciation and understandable language speaking.

However, language learners need language learning strategies in their learning process. Learning strategies are purposeful activities that students accept as easing the learning and recall of both linguistic and contextual contexts. Oxford, R. L. (1990) defines learning strategies as explicit processes taken by students' treatment of their learning as simple, rapid, amamusingfocused, efficient, and communication. In other words, language learning strategieassistts students in retrieving and storing materials, as well as facilitating and even accelerating their learning. O'malley, J. M., and Chamot (1990) classified language learning strategies into three sub-categories. First, cognitive strategies are more limited to specific learning tasks and involve more direct manipulation of the learning materials. The strategy includes repetition, resourcing, translation, grouping, note-taking, deduction, recombination, imagery, and auditory representation. Second, metacognitive strategies are applied to plans for learning and thinking about the learning process, monitoring production, and comprehension as well as evaluation after the completion of an activity. Among the main metacognitive strategies, it is possible to include advanced organizers, directed

attention, selective attention, self-management, functional planning, self-monitoring, and self-evaluation. Third, social strategy has to do with interacting with others.

Table 1. Theory of speaking learning strategies by Oxford (1

Strategies Categories	Strategy Set	Strategy	
Cognitive Strategies	Lowering your anxiety	Using progressive relaxation, deep breathing, or mediation	
		Using music	
		Using laughter	
	Encouraging yourself	Making positive statement	
		Taking risk wisely	
		Rewarding yourself	
	Taking your emotional temperature	Listening to your body	
		Using a checklist	
		Writing a language learning diary	
		Discussing your feeling with someone close	
Metacognitive Strategies	Centering your learning	Overviewing and linking with already known material	
		Paying attention	
		Delaying speech production to focus on listening	
	Arranging and planning your learning	Finding out about language learning	
		Organizing	
		Setting goals and objective	
		Identifying the purpose of a language task	
		Planning for a language task	
	Evaluating your learning	Seeking practice opportunities	
		Self-monitoring	
		Self-evaluating	
	Social Strategies	Asking question	Asking for correction
		Cooperative with others	Cooperating with peers
Cooperating with proficient user of the new language			
Emphasizing with others		Developing cultural understanding	
		Becoming aware of others' thoughts and feeling	

From the different states there are many students optimize their chances of success in achieving their aims in learning and using the language. Language learning strategies play a crucial role in the process of learning a language. In brief, learning strategies can be seen as special ways that are used by students to help them understand new information better and to help them solve language problems.

b. The Concept of Thinking Styles

Sternberg (1997) in mental self-governing theory classified 13 thinking styles under 5 dimensions functions, forms, levels, scopes, and learning. Further, he described these dimensions as follows. First, the function dimension includes the legislative which enjoys the freedom of using its ways of doing things, the executive which followed rules to solve problems, the and judicial were evaluated and analyze different views. Second, the form dimension consists of monarchic which only works on one task at a time, hierarchic which sets priorities for tasks, oligarchic like likes to work on multitasks and set equal prominence but may not enjoy preferences, and anarchic which does things in unsystematic and unable to set arrangements. Third, the level dimension has global which has pay attention to the overall picture and macro problem, and local which deals with details, microscopic and concrete problems. Fourth, the scope dimension covers internal which is introvert, who like to work alone, and external which is extrovertsert, who likes working with other people. Last, the two styles in the leaning dimension are liberal which likes tasks that consist of novelty, and conservative which sticks to the old rules and traditional methods.

Table 2. The categories and dimensions of thinking styles in the mental self-government theory of thinking styles that extracted from Stenberg & Wagner (

Thinking Styles	Characterizations	Implications
Legislative	People with this style enjoy the creative task.	Like doing science projects, writing poetry, stories, or music, and creating original art works.
Executive	Likes to follow directions, do what he or she told, be given structure.	Likes to solve problems, write papers on assigned topics, do artwork from models, build from designs, and learn assigned information.
Judicial	Likes analyze their academic task and solve their problem.	Likes to critique work of others, write critical essays, give feedback and advice.
Monarchic	Prefer to focus on one single goal at the time.	Likes to immerse self in a single project, whether art, science, history, and business.
Hierarchic	Prefer concerning his/her attention on task according to an order of importance.	Likes to budget time for doing homework so that more time and energy is devoted to Important assignments.
Oligarchic	Likes to do many things at once, but has trouble setting priorities.	Likes to devote sufficient time to reaching comprehension items, so may not finish standardized verbal-ability tests.
Anarchic	Likes to take a random approach to problems; dislike systems, guidelines, and practically all constraints	Writes an essay in stream of consciousness form; in conversations, jumps from one point to another; start things but doesn't finish them.
Global	Likes to deal with big picture, generalities, and abstractions.	Writes an essay on the global message and meaning of a work of art.
Local	Likes to deal with details, specifics, concrete examples.	Writes an essay describing the details of a work of art and how they interact.
Internal	Likes to work alone, focus inward, be self-sufficient.	Prefers to do science or social studies project on his or her own.
External	Likes to work with others, focus outward, be inter-dependent.	Prefers to do science or social studies project with other members of a group.
Liberal	Likes to do things in new ways, defy conventions.	Prefers to figure out how to operate new equipment even if it is not the recommended way; prefers open classroom setting.
Conservative	Likes to do things in tried and true ways, following conventions.	Prefers to operate new equipment in traditional way; prefers traditional classroom setting.

However, people think in different ways and to what extent other people think. Understanding thinking and learning styles can help people achieve a better understanding. Moreover, style is a preferred way of thinking. People may be practically identical in their abilities but have very different styles. Society doesn't always judge people with the same abilities as equals. On the other hand, people whose style is as expected in a given situation are judged to have a higher level of ability, despite that what is present is not ability, but a match between that person's thinking style and the task at hand. Therefore, the basic idea of the mental theory of self-government is the external reflection of what goes on in people's minds (Stenberg, 1997).

III. Method

Based on the formula of research questions, the researcher used a correlational study with chi-square test analysis by using Microsoft Excel 2013 as the research design, which has the time study to determine the correlation between the speaking strategies and thinking styles of EFL undergraduates and their gender. This study associated sophomore students (34 female and 13 male) in the English department at the state university of Surabaya who accomplished the online questionnaires.

However, the formula was to correlate surveyed frequencies which the observed frequency as actual frequencies and expected frequency as theoretical frequencies that would be observed when the null hypothesis is true. Meanwhile, to determine whether the difference between the expected and observed frequencies is statistically significant, apply the chi-square formula (Ary et al., 2014):

$$X^2 = \sum \left[\frac{(f_o - f_e)^2}{f_e} \right]$$

notation:

X^2 = value of chi-square

f_o = observed frequency

f_e = expected frequency

Furthermore, this study used two adopted questionnaires, namely Oxford's LLS speaking 20 items (1990) and Sternberg and Wagner's (1992) TSI 65 items included among the side around information on their gender. The questionnaires were shared online by dropping a Google form link through WhatsApp due to Corona Virus (Covid-19) pandemic. Besides, both of the questionnaires which the statement fits in varying degrees. The LLSQ were Likert scale questionnaires differing from 1 (Never or almrarelyue of me) and 5 (Always or almost always true of me), it involved cognitive strategies (items 1-10), metacognitive strategies (items 11-15), and social strategies (items 16-20). Meanwhile, the TSI was Likert scale questionnaires differing from 1 (Not at all well) and 7 (Extremely well), it classifies 13 thinking styles under 5 dimensions the following:

- 1) functions included legislative (items 5, 10, 14, 32, 49); executive (items 8, 11, 12, 31, 39); and judicial (items 20, 23, 42, 51, 57) styles
- 2) forms included hierarchic (items 4, 19, 33, 25, 56); oligarchic (items 27, 29, 30, 52, 59); monarchic (items 2, 43, 50, 54, 60); and anarchic (items 16, 21, 35, 40, 47) styles
- 3) levels included global (items 7, 18, 38, 48, 61) and local (items 1, 6, 24, 44, 62) styles
- 4) scopes included internal (items 9, 15, 37, 55, 63) and external (items 3, 17, 34, 41, 46) styles
- 5) leaning included liberal (items 45, 53, 58, 64, 65) and conservative (items 13, 22, 26, 28, 36) styles.

IV. Results

a. Speaking Strategies of EFL Undergraduates and Their Gender

This section showed the data according to the LLSQ (20 items) that has been answered by 47 sophomore students. This questionnaire presented the speaking strategies which involved cognitive strategies, metacognitive strategies, and social strategies, included among the side of background information on their gender.

Table 3. Contingency Table Speaking Strategies and Gende

Gender	Speaking Strategies			Total
	Cognitive Strategies	Metacognitive Strategies	Social Strategies	
Male	442	259	227	928
Female	1279	719	579	2577
Total	1721	978	806	3505

Table 4. Value of chi-squar

		f_o	f_e	$(f_o - f_e)^2$	$\frac{(f_o - f_e)^2}{f_e}$
Male	Cognitive Strategies	442	455.66	186.5956	0.4095062
	Metacognitive Strategies	259	258.94	0.0036	0.0000139
	Social Strategies	227	213.40	184.96	0.8667291
Female	Cognitive Strategies	1279	1265.34	186.5956	0.1474668
	Metacognitive Strategies	719	719.06	0.0036	0.0000050
	Social Strategies	579	592.60	184.96	0.3121161
X^2					1.7358371

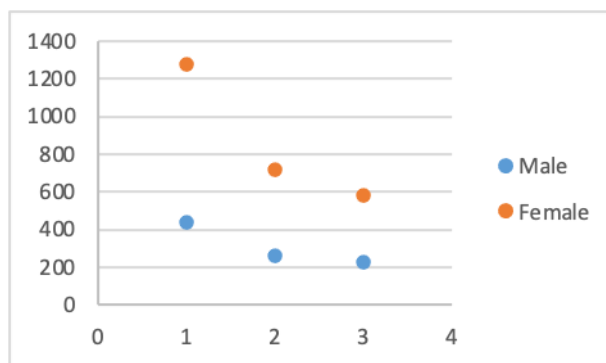


Fig. 1. Correlation between speaking strategies of EFL undergraduates and their gender

Based on the results, it was found that the X^2 value (1.736) < X^2 table (5.991). Then, it fails to reject H_0 or there was no significant correlation between the speaking strategies of EFL undergraduates and their gender.

b. Thinking Styles of EFL Undergraduates and Their Gender

This section showed the data according to the TSI (65 items) that has been answered by 47 sophomore students. This questionnaire classified 13 thinking styles belonging 5 dimensions consisting of functions (legislative, executive, and judicial); forms (hierarchical, oligarchic, monarchical, and anarchic); levels (global and local); scopes (internal and external); and leaning (liberal and conservative). Also, included the side background information on their gender.

Table 5. Contingency Table Thinking Styles and Gende

Gender	Thinking Styles					Total
	Functions	Forms	Levels	Scopes	Leaning	
Male	970	1275	602	606	625	4078
Female	2697	3501	1646	1705	1652	11201
Total	3667	4776	2248	2311	2277	15279

Table 6. Value of chi-squar

		<i>fo</i>	<i>fe</i>	$(fo - fe^2)$	$\frac{(fo - fe)^2}{fe}$
Male	Functions	970	978.731	76.225	0.0778812
	Forms	1275	1274.725	0.075	0.0000592
	Levels	602	599.996	4.015	0.0066912
	Scopes	606	616.811	116.882	0.1894933
	Leaning	625	607.737	298.028	0.4903908
Female	Functions	2697	2688.269	76.225	0.0283546
	Forms	3501	3501.275	0.075	0.0000216
	Levels	1646	1648.004	4.015	0.0024361
	Scopes	1705	1694.189	116.882	0.0689897
	Leaning	1652	1669.263	298.028	0.1785389
X^2					1.043

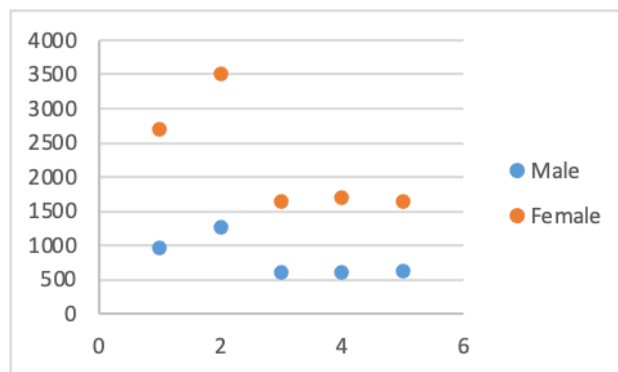


Fig. 2. Correlation between thinking styles of EFL undergraduates and their gender

Based on the results, it was found that the X^2 value (1.043) < X^2 table (9.488). Then, it fails to reject H_0 or there was no significant correlation between the thinking styles of EFL undergraduates and their gender.

c. Speaking Strategies and Thinking Styles of EFL Undergraduates and Their Gender

This section showed the data according to the LLSQ (20 items) and the TSI (65 items) that have been answered by 47 sophomore students. This questionnaire presented the speaking strategies which involved cognitive strategies, metacognitive strategies, and social strategies. Then, 13 thinking styles included 5 dimensions consisting of functions (legislative, executive, and judicial); forms (hierarchical, oligarchic, monarchical, and anarchic); levels (global and local); scopes (internal and external); and leaning (liberal and conservative). Also, included the side of background information on their gender.

Table 7. Contingency Table Speaking Strategies and Thinking Styles and their gender

Gender	Speaking Strategies			Thinking Styles					Total
	Cognitive Strategies	Metacognitive Strategies	Social Strategies	Functions	Forms	Levels	Scopes	Leaning	
Male	442	259	227	970	1275	602	606	625	5006
Female	1279	719	579	2697	3501	1646	1705	1652	13778
Total	1721	978	806	3667	4776	2248	2311	2277	18784

Table 8 Value of chi-squar

		f_o	f_e	$(f_o - f_e)^2$	$\frac{(f_o - f_e)^2}{f_e}$
Male	Cognitive Strategies	442	458.652	277.301	0.605
	Metacognitive Strategies	259	260.640	2.691	0.010
	Social Strategies	227	214.802	148.797	0.693
	Functions	970	977.268	52.824	0.054
	Forms	1275	1272.820	4.751	0.004
	Levels	602	599.100	8.412	0.014
	Scopes	606	615.889	97.800	0.159
	Learning	625	606.828	330.212	0.544
Female	Cognitive Strategies	1279	1262.348	277.301	0.220
	Metacognitive Strategies	719	717.360	2.691	0.004

Social Strategies	579	591.198	148.797	0.252
Functions	2697	2689.732	52.824	0.020
Forms	3501	3503.180	4.751	0.001
Levels	1646	1648.900	8.412	0.005
Scopes	1705	1695.111	97.800	0.058
Leaning	1652	1670.172	330.212	0.198
X^2				2.839

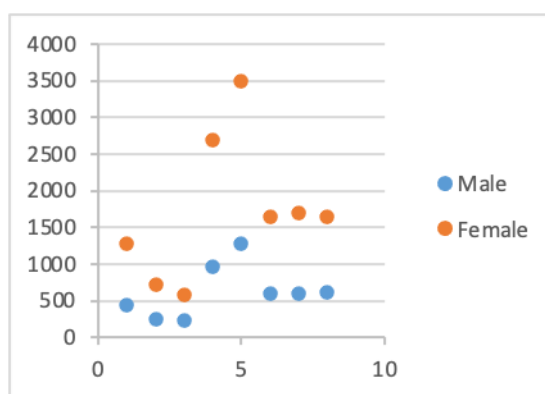


Fig. 3. Correlation between speaking strategies and thinking styles of EFL undergraduates and their gender

Based on the results, it was found that the X^2 value (2.839) < X^2 table (14.067). Then, it fails to reject H_0 or there was no significant correlation between speaking strategies and thinking styles of EFL undergraduates and their gender.

V. Discussion

There are multifarious aspects that impact the preferred language learning strategy, namely the language being studied; period; level of consciousness; age; gender; affective variables (essentially attitude, plan, motivation, personality characteristics, and general personality type); learning style; talent; career orientation; homeland; and language teaching methods (Oxford, 1989). For instance, there were studies explained the correlation between the preferred LLS and gender which showed that females have a greater propensity to used LLS than males (Oxford & Nyikos, 1989; Oxford, 1990; Green & Oxford, 1995; Sheorey & Mokhtari, 2001; Khalil, 2005; McMullen, 2009; Salahshour et al., 2013; Alhaysony, 2017). Besides, Wharton (2000) showed that males used further strategies than females. This is similar to the research conducted by Abu Radwan (2011) explained that there waswere significant gender differences in most of the strategy items which male students used more often than female. On the other hand, there was no difference between the use of LLS and gender (Nisbet et al., 2005; Gavriilidou & Papanis, 2010; Aliakbari & Qasemi, 2012; Alkahtani, 2016).

Moreover, the study of the relationship between Iranian EFL students' thinking styles and language learning strategies had a significant correlation where there were characteristics between males and female in language learning strategies (Mahmood, 2013). However, correlational research (Apriani et al., 2017) had a relationship between thinking styles and language learning strategies for students of the English Education Study Program, FKIP Sriwijaya University in the 2013/2014 academic year. Yet, more calculations applied multiple regression analysis showed that the grant of thinking styles to students' language learning strategies was only 38.5%, indicating that thinking styles did not make a major augmentation to students' language learning strategies. Also, there was a

positive relationship between language learning and thinking styles that affected the success of language learning (Negari & Solaymani, 2013).

Furthermore, in this study, the total voting strategy of speaking is classified into three sub-categories of cognitive strategy (Male; 442 and Female; 1279), metacognitive strategy (Male; 259 and Female; 719), and social strategies (Men; 227 and Women; 579). This means that cognitive and metacognitive strategies are exceedingly used as strategies by students whether male or female. However, this was comparable to research (Shan, C., 2009) entitled Language Learning Strategy Use and English Proficiency of University Freshmen in Taiwan which showed that the level of proficiency has a significant effect on the preferred and practiced strategies. Hence, the student which more experienced adopted learning strategies that regularly used metacognitive strategies and cognitive strategies.

Meanwhile, the Total voting of mental self-governing theory Thinking Styles Inventory (TSI) which classifies 13 thinking styles in 5 dimensions of functions (Male; 970 and Female; 2697), forms (Male; 1275 and Female; 3501), levels (Male; 602 and Female; 1646), scopes (Male; 606 and Female; 1705) and leaning (Male; 625 and Female; 1652). Specifically, the dimensions of forms (monarchy, hierarchical, oligarchic, and anarchic) and functions (legislative, executive, and judicial) as the most widely used thinking style by students whether male or female.

Thus, these previous studies contradicted the results of this study which showed that no correlation stated in the formulates of the research questions. This appears because the adoption questionnaire that has been tested in several previous studies has unequal sample sizes and variances to affect statistical results or perhaps errors that arise. Besides, in this study, the number of objects studied was unequal between males (13 students) and females (34 students). Keppel (1993) explained that a study did not expect a group that takes the same side to calculate significant statistic statistics, because some formulas or tools can regulate the variation.

VI. Conclusion

Thinking styles can be influenced by various factors. For instance, gender is relevant to thinking styles which is one of the factors studied by many researchers. The study regulated by Oxford (1993) presented that females tend to practice social strategies and discussion more constantly than males. However, gender differences are not always universal. Meanwhile, Sternberg (1997) stated that males use a higher frequency of thinking styles than females. Besides, there were 13 thinking styles belonging to 5 dimensions. First, the functions consist of legislative (using one's way of accomplishing), executive (use using the method at hand), and judicassessingssanalyzing analyzing different viewpoints). The second, consists of monarchic (do a single task at once.), hierarchic (framework of priorities), oligarchic (multitasking but may not enjoy priority), and anarchic (inadequate to schedule of priorities). Third, consists of global (awareness of the issue), and local (responsible person). Fourth, the-consist consists of internal (introvert, individualism), and external (extrovert, collectivism). Fifth, the leaning is liberal (likes try a new way) and conservative (using the old way). Moreover, language learning strategies are perhaps perhaps complementary to the variable of thinking style which is a pattern of habits that a person likes when doing something (Sternberg, 1993, 1997). In addition, thinking style was concerned with to the process of creative problem-solving, living living and decision making.

Thinking styles and language learning strategies are influential areas. Hence, the outstanding strategy for language learning is a program for active, independent engagement, and the development of communicative competence (Oxford, 1990). Thus, language learning strategy is conscious thought and behavior used by learners to increase knowledge of the purpose (Cohen, 1998). Moreover, learning strategies (O'Malley and Chamot, 1990) were classified consists metacognitive which deals with outlining and analyzing, cognitive which operates directly on incoming information, and social which involves interaction with others or control of ideas over environmental influences. Meanwhile, Oxford (1990) categorizes learning strategies as cognitive which relates recent information to previous information, metacognitive which consists of planning and evaluation, and social ial and affective which contributes to interaction with others and focuses on emotional regulation.

Further, thinking styles and language learning strategies are needed for the success of teaching and learning activities where the students have different ways of learning language considering their different characteristics and thinking styles. Therefore, it is crucial to realize the preferred ways of students to learn languages, expectedly that the information can help EFL teachers and students to be more effective in teaching and learning activities. In addition, it can benefit for the teacher to analyze their students' learning and thinking preferences and later on develop in a way that attractiveness towards achieving their goals. Moreover, the data perhaps deliver influence in designing systematic learning that suits students' thinking and learning. Meanwhile, this study was limited in several aspects, future researchers are advanced in the research otherwise. However, this study is small-scale which of sophomore students at the university level, the prospective research perhaps selected larger contributors in university or another.

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