CORRELATION BETWEEN METACOGNITIVE STRATEGY, FOREIGN LANGUAGE APTITUDE AND MOTIVATIONS IN LANGUAGE LEARNING

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Abstract:

Language learning belief and language learning strategies are two essential predictors that have significant effect toward students' language proficiency. Learners' belief is dealing with what comes from inside the learners in learning the language, such as foreign language aptitude; difficulty of language learning; nature of language learning; learning and communication strategies; and motivation. Meanwhile, language learning strategies are learners' plan in achieving certain goals or mastering the target language. A preliminary research was conducted in order to find what strategy mostly used by the learners. It turned out that the strategy mostly used by them was metacognitive strategies. Thus, this study aims to investigate about the correlation between metacognitive strategies and certain belief' variables in students' language learning which are foreign language aptitude and motivation. Moreover, twenty postgraduate students of English education department participated in this study. This study used correlational research, in which the BALLI (Beliefs about Language Learning Inventory) and SILL (Strategies Inventory for Language Learners) questionnaires were adopted as the instruments in collecting the data. The findings of this study indicated that there is negative linear correlation between metacognitive strategy and foreign language aptitude ($r_{XY} = -0,049$) while there is significant positive linear correlation between metacognitive and motivation ($r_{XY} = +0,79$) in students' language learning. Furthermore, this study also

provide some recommendations, which is it is expected that there will be more researches use studies using different respondents with various contexts. Secondly, the further research will use both of quantitative and qualitative data relating to this issue in order to make a more accurate data.

Language learning process can be more effective if the learners can put their strategies and beliefs in a good harmony. Language learning strategies are the learners' maps or plans in achieving certain goals in learning a language. As language learners, we can't deny the importance of strategies in helping us to accommodate our learning process. Rubin (1975) defines language learning strategies as "the techniques or devices which a learner may use to acquire knowledge (p. 43). Besides, Weinstein & Mayer (1986) stated in Ruba et. al. (2014) that learning strategies are defined as specific behaviors or thought processes used by the learner to facilitate acquisition, storage, or retrieval of information. It is supported by Oxford (1990) that language learning strategies contribute to all parts of the learning acquisition continuum (p. 4). So, basically learning strategies are valuable activities chosen by learners in helping them to achieve goals and solving certain problems in their language learning. In this case, learners should be aware of what their level, need, and goal so they can choose the appropriate strategies. Learning strategies are steps taken by students to enhance their own learning (Oxford, 1990, p. 1). Appropriate language learning strategies caused in improved proficiency and increase learner's self-confidence.

There have been many books and researchers found various strategies that can help learners in learning language. According to Dörnyei and Skehan (2003) in Griffiths (2008), the term of strategy is in favor of self-regulation, which refers to the degree to which individuals are active participants in their own learning. At this point, Oxford (1990) categorizes language learning strategies into six groups (memory, cognitive, compensation, metacognitive,

affective, and social), in which one of them is metacognitive strategy. Oxford also states that metacognitive strategy includes three strategies sets: Centering Your Learning, Arranging and Planning Your Learning, and Evaluating Your Learning (p. 136). As Anderson cited in Griffith (2008, p. 99), strong metacognitive skills empower language learners: when learners reflect upon their learning, they become better prepared to make concious decision about what they can do to improve their learning. (see also Harmer (2007, p. 84), (Kato, 2005) and Griffith (2008)).

Moreover, learners' belief also has a significant effect toward students' learning process. As Wenden cited in Li (2010) that language learning belief is the knowledge held by language learner about various factors in language learning process, about how to learn a language, language skills, and communicative competence (p. 858). Belief is notions that language learning that adolescents have acquired before receiving instruction and may have changed while continuing their instruction (Kuntz, 1999, in Yuen & Gary, 2002, p. 7). According to Altan (2006), the beliefs of second and foreign language learners' beliefs have examined different learning settings in different cultures (p. 46). In short, learners' belief is dealing with something that comes from the inside of the learners in learning the target language. By having this belief, learners can determine their ideal concept for their language learning such us learning situation, strategies, and many other aspects that suitable to them. It has been recognized that beliefs about language learning are context-specific and learners from different cultures may have different attitudes, approaches to and opinions about learning a new language (Nikitina & Furuoka, 2006, p. 209). As Horwitz cited in Li (2010), belief in language learning is divided into five categories, which are: Foreign language aptitude; Difficulty of language learning; Nature of language learning; Learning and communication strategies; and Motivation (p. 858).

Relating to this study, the writer would be focus on *foreign language attitude* and *motivation* variables.

Dörnyei (2005, in Tellier & Brackin, 2013) defines language learning

aptitude as a set of abilities which enables some learners to acquire new language material more quickly and with greater ease than others (p. 2). Carol (1981, in Darabad, 2015) highlights that that aptitude reflects a prediction for proficiency and a potential rate of acquisition by older learners as well; quality of instruction, opportunity, and motivation can guarantee such a prediction under optimal conditions (p. 70). Caroll also proposes that the language aptitude constructions comprised four constituent abilities:

a. *Phonetic coding ability*, which is considered the most important component and is defined as 'an ability to identify distinct sounds, to form associations between these sounds and symbols representing them, and to retain these associations'.

b. *Grammatical sensitivity*, which is 'the ability to recognize the grammatical functions of words (or other linguistic entities) in sentence structures'.

c. *Rote learning ability*, which is the 'ability to learn associations between sounds and meaning rapidly and efficiently, and to retain these associations'.

d. *Inductive language learning ability*, which is 'the ability to infer or induce the rules governing a set of language materials, given samples of language materials that permit such inferences'.

Meanwhile, motivation is perhaps one of the most important elements in the process of second/foreign language learning (Lai, 2013, p. 90). As Gardner cited in Lai (2013), motivation includes three elements—effort (the effort to learn the language), desire (wanting to achieve a goal) and positive affect (enjoy the task of learning the language). On the other side, perhaps motivation still could give another impact toward students' learning. In a general sense, motivation is a propellant power that emerges with the desire and effort of students, driving them to reach a certain object or condition, and a process that starts, sustains and directs mental and physical activity (Uyulgan & Akkuzu, 2013, p. 24). To summarize, aptitude and a motivation measure in a research paradigm has typically been seen as a fairly comprehensive

characterization of the learner's contribution to the SLA process (Dörnyei, 2010, p. 248).

In addition, many researchers have been conducted studies regarding the relation between learning beliefs and learning strategies in language learning. Correlation analysis between the language learning belief and the strategy use revealed that Language Learning Belief was significantly and positively correlated with Language Learning Strategies in general (Li, 2010, p. 864). (See also (Altan, 2006), (Fujiwara, 2011), and (Yuen & Gary, 2002).

Considering that students have accumulated a great deal of experience over the course of their education up to university, they are most likely to form certain beliefs about what constitutes effective or ineffective learning (Kayanoglu, 2013, p. 36). Based on the preliminary research, it was found that advanced learners tended to use metacognitive strategy, since they seemed more concerned about the strategies for organizing their learning.

Hence, the writer decided to investigate in depth about the correlation between metacognitive strategy and certain belief variables which seemed much related to advanced students' learning process, which are aptitude and motivations.

Therefore, the writer formulated the research question as follows:

a. *Is there any significance correlation between metacognitive strategy and foreign language aptitude in advanced learners' language learning?"*

b. *Is there any significance correlation between metacognitive strategy and motivations in advanced learners' language learning?"*

In addition, the hypotheses applied in this present study are the *null hypothesis* and the *alternative hypothesis*.

H_{01}: There is no relationship between metacognitive strategy and foreign language aptitude toward advanced learners' in language learning.

H_{02}: There is no relationship between metacognitive strategy and motivations toward advanced learners' in language learning.

By doing this study, the writer expected could find the correlation between metacognitive strategy, foreign language aptitude and motivations toward advanced learners' language learning.

METHOD

This study was a quantitative study, under correlational research design. It was aimed to investigate the correlation between metacognitive strategy and foreign language aptitude, as well as motivations in students' language learning. In correlation studies, researcher is interested in determining the degree of relationship between pairs or two or more variables (Hatch & Farhady, 1982, p. 192).

Respondents

The respondents of this study were taken randomly from one class of the first semester of postgraduate students, which consisted of twenty students. It was conducted at one of universities in Bandung.

Instruments

In this study, the data were collected by adopting and using SILL (Strategy Inventory for Language Learners) and BALLI (Beliefs about Language Learning Inventory) questionnaires. SILL questionnaire was designed by Oxford (1990) and contained 50 statements about learning English, using *Likert scale*. It was divided into six parts (Memory, Cognitive, Compensation, Metacognitive, Affective, and Social). The purpose of this instrument was to find out the strategy mostly used by the respondents. This version has been widely used worldwide for major studies, theses, and dissertations. The SILL questionnaire is organized into six strategy groups, which are categorized according to Oxford's (1990, p. 293):

a. Part A: Memory strategies (*remembering*) – 9 items, covering strategies such as grouping, imagery, structured reviewing.

b. Part B: Cognitive strategies (*mental processes*) – 14 items, the largest strategy group with the greatest variety, covering practice-related strategies, and deep processing by which learners analyse

new information and monitor comprehension.

c. Part C: Compensation strategies (*compensating*) – 6 items, with strategies such as guessing meaning from context and using gesture or synonyms to convey meaning when language is limited.

d. Part D: Metacognitive strategies (*organising*) – 9 items, including strategies such as paying attention, planning language tasks, seeking out practice opportunities, self-evaluation.

e. Part E: Affective strategies (*managing feelings*) – 6 items, covering strategies such as anxiety reduction, and self encouragement and reward.

f. Part F: Social strategies (*learning with others*) – 6 items, including asking questions, cooperating with peers, becoming culturally aware.

The second instrument was BALLI questionnaire, which was consisted of 34 items (randomly stated in the questionnaire). It was conducted from 5 categories, they were; foreign aptitude; the difficulty of language learning; nature of language learning; learning and communication strategies; and motivations and expectations (Horwitz, 1988). This questionnaire used *Likert* scales from 1-5 rating of assessment. The questionnaire was divided into five components, which are:

a. Foreign Aptitude: Items 1, 2, 6, 10, 11, 16, 19, 30, and 33.

b. Difficulty in Language Learning: Items 3, 4, 5, 15, 25, and 34.

c. Nature of Language Learning: Items 8, 12, 17, 23, 27, and 28.

d. Learning and communication strategies: Items 7, 9, 13, 14, 18, 21, 22, and 26.

e. Motivation: 20, 24, 29, 31, and 32.

Procedures

Furthermore, several steps were taken in order to collect the data of the study. Those can be described as follows:

a. Distributing SILL Questionnaire to the respondents.

The first step was distributing the SILL questionnaire to the

respondents. The aim of this action was to find out what kind of strategy that mostly used by the advanced learners. It was done as a preliminary research of this study.

b.   Distributing BALLI Questionnaire to the respondents.

After that, BALLI questionnaire was handed out to the respondents in order to find out the scores regarding their believes abut language learning, especially toward foreign language aptitude and motivation.

c.   Calculating the respondents' SILL scores

After the questionnaire was distributed, the collected data would be analyzed to find out the respondents' favored strategy in learning the target language.

d.   Calculating the respondents' BALLI scores

The same action also was implemented that the collected data from BALLI questionnaire would be calculated to find out the score of the respondents' believes toward language aptitude and motivation in language learning.

e.   Analyzing data using Pearson Product Moment.

The last step was analyzing the collected data using Pearson Product Moment that aimed to discover the correlation among the variables, language learning strategy (metacognitive) and two believes in language learning (aptitude and motivation).

Data Analysis

In analyzing the data, it was done quantitatively. A quantitative research is done through explanation of a phenomenon by controlling numerical data that are analyzed by using statistically based methods (Malik & Hamied, 2016). Each rate of the *Likert scale* was valued. This data would be used to find out their most concerned strategy, as well as scores of their believes in term of language aptitude and motivation in language learning. After that, the collected data from the students' raw scores would be analyzed manually to find out whether there is r_{XY} correlation between two variables

using formula as follows:

$$r_X = \frac{n(\sum X \;) - (\sum X).(\sum Y)}{\sqrt{\{n.\sum X^2 - (\sum X)^2\}.\{n.\sum Y^2 - (\sum Y)^2\}}}$$

The variables would be correlate if (correlation coefficient) is between -1 and 1, and there will no correlation if rXYis 0. The null hypotheses were rejected or accepted, depending on whether the calculated of rXY was significant of the probability level of 0.05 (or 5%). Lastly, the data would be described with the intention of answering each research question of this study.

FINDINGS AND DISCUSSION

The participants of this study were asked to do the self-report of SILL and BALLI questionnaires. The scores of students' questionnaires were calculated from each statement. The means for each part in the SILL questionnaire can be seen in table 1:

Table 1. Average Strategy Usage for All Participants by Classification

Learning Strategies	Mean	Classification
Memory	3,1	Sometimes used
Cognitive	3,7	Usually used
Compensation	3,8	Usually used
Metacognitive	3,9	Usually used
Affective	3,2	Sometimes used
Social	3,4	Sometimes used

As the data presented, it showed the overall language learning strategies used by the respondents. They used all of the strategies, but different in term of frequency usage. Based on the results of this study, the most commonly used by them is metacognitive strategy. The respondents seemed to prefer to use strategy relating to organizing and evaluating their learning. It might be influenced by the reason because they are adult, which refer to advanced learners. As we know that the characteristics of adult learners are they can understand abstract things and tend to be more critical about their learning process. Higher level learners frequently use a wide variety of language learning strategies (Griffiths, 2008, p. 93). Also, as Anderson cited in Griffith

(2008, p. 99) that strong metacognitive skills empower language learners: when learners reflect upon their learning, they become better prepared to make concious decision about what they can do to improve their learning. (see also Harmer (2007, p. 84),Kato (2005), and Griffith (2008)).

After the result of the respondents' favored strategy revealed, then the next step was to calculate the respondents' answers from each statement in the BALLI questionnaire. After that, the collected data were analyzed using Pearson Product Moment to find out the correlation coefficient between metacognive strategy the two variables of learners' belief in language learning (foreign language aptitude and motivations). Therefore, the data showed as follows:

Table 2. Correlation between Metacognitive Strategy and two Variables of Language Learning Belief

Beliefs Strategy	Foreign Language Aptitude	Motivations	p-value	Df= (N-2)
Metacognitive R	-0,049	0,79	0,05	13

(Calculation see Appendix 3 & 4)

Based on the result above, it is revealed that the correlation coefficient (r_{XY}) between metacognitive strategy and foreign language aptitude is -0,049. It indicates that there is negative linear correlation between the variables. Furthermore, the finding shows r_{XY} = -0,049, with p = 0,05 ($r_{XY} < r_{critical}$),then it means that H_{01} is accepted and the correlation is not significant. From this result of study, it can be implied that there is no correlation between students' preference of metacognitive study with their foreign language aptitude. It seemed that most of the advanced learners chose the metacognitive strategy based on their needs in learning the target language, not merely due to their foreign language aptitude. Since they were adult learners, they seemed to be more concerned about self-direct learning like planning for learning or self-evaluation of learning. Adult language learners tend to believe the notion that 'what you got is what you are fighting for'. So, they prefer to

organize their strategy and put their best efforts in language learning to be as effective as possible. Additionally, there is a similar study regarding this issue, where the correlation between beliefs about foreign language aptitude and metacognitive strategies was the weakest (r = -.11) (Suwanarak, 2012). She further explains that the rationale behind this result was metacognitive strategy included the students were monitoring their own learning processes and setting learning goals, being confident and fearless of making mistakes when learning to speak, and seeking exposure to English as often as possible (p. 9).

On the other hand, derived from the calculation above, it was found out that the correlation coefficient (r) between metacognitive strategy and motivations is +0,79. It means that there is positive linear correlation between the variables. Furthermore, the finding shows $r_{XY} = +0,79$, with $p = 0,05 (r_{XY} > r_{critical})$, then it means that H_{02} is rejected. According to this data, we can interpret that there is highly correlation and significance between students' preference of metacognitive study with their motivations in language learning. As we know that metacognition deals with learners' awareness in language learning, how they manage their learning to be as effective as possible. Due to this reason, there is possibility for them to have a strong motivation in learning the target language. It is in line with Landine & Stewart (1998, p. 208) that students' use of metacognitive strategies is significantly related to intrinsic motivation and high levels of self-efficacy. Yang (1999) cited in Kartal (2013) states that self-efficacy is effective on metacognition. In addition, metacognition is basically defined as thinking about thinking (Harputlu & Ceylan, 2014, p. 125). Logically, a language learner are willing to think critically if there is a drive inside him to do so, that is called as motivation. Motivation is a factor of prime importance in piquing students' interest, encouraging them to actively participate in lessons, and enabling them to be constructive, creative, and productive individuals (Uyulgan & Akkuzu, 2013, p. 24). According to Magaldi (2010, in Harputlu & Ceylan, 2014), the actual use of metacognition can only be achieved by supporting the

use of metacognitive strategies which in turn will lead to learner autonomy.

CONCLUSION

The current study was intended to find out the correlation between metacognitive strategy and the certain variables of learning belief of postgraduate students' language learning. The finding showed that most of students have strong beliefs toward their learning. Since the participants of this study were postgraduate students that the majority of them using metacognitive strategy, the writer decided to highlight the foreign language aptitude and motivations. For the first research question, it is answered by there is negative linear correlation with r_{XY} = - 0,049, p=5% (H_{01} is accepted). It means that metacognitive strategy and foreign language aptitude have negative linear correlation and not significant. Meanwhile, the second finding indicated that there is positive linear correlation between metacognitive strategy and motivations in postgraduate students' language learning with r_{XY} = +0,79, p=5% (H_{02} is rejected). So, there is significant correlation between these variables. Based on the results of this study, it is stated that basically both of foreign language aptitude and motivations have correlation with strategy metacognitive. But what makes it different is the positive or negative relationship between them.

From the above findings, this study presents several recommendations related to the concerned issue. Since this study was conducted to investigate the first semester postgraduate student of one of universities in Bandung, it is expected that there will be more studies should be undertaken using participants from different learning context. Then, this study only used metacognitive variable and didn't investigate the correlation about the whole learning beliefs and learning strategies. So, perhaps the further study can explore more about these issues. In addition, this study was conducted under quantitative research design. It is also expected that further research can use both of quantitative and qualitative data in conducting the research dealing with this issue in order to make a more accurate data.

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