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How Language Learners Employ Effective Learning Strategies in EFL Setting in Asian Context

Abstract

Many studies have been conducted to correlate the use of language learning strategies and language performance and the studies have contributed to different perspectives of teaching and learning a foreign language. Some studies have also revealed that the students learning a foreign language in Asian contexts have been proved to different learning strategies compared to students that learn the same language in Western countries. The criteria on reliability internal consistency for the 80 items of the measurement were very high with the Cronbach's Alpha .92 so that the strategies were justified to be grouped into a scale. The empirical data in this study shows that different language skills were significantly correlated with the use of different learning strategies. The skill-based categories of language learning strategies introduced in this study, which covers cognitive, metacognitive and social strategies in each category, can be used to portray learners' use of language learning strategies when learners learn the four language skills of English as a foreign language in Asian context.

Keywords: learning strategy measurement, skill-based strategy, Asian context, language performance.

1. Introduction

Different instruments have been developed to identify what learning strategies that language learners employ in learning a foreign language. Instruments that have been validated and extensively used for language learning strategies may not measure all strategies that learners employ in learning English as a foreign language, especially in the context of EFL settings. To identify language learning strategies of learners of EFL in an Indonesian setting, it seems to be justified to use a measurement that has been developed based on the setting where students in the country learn English foreign language.

Some studies have revealed that learners from different cultures may learn a foreign language in different ways. The students learning a foreign language in Asian contexts have been proved to use different learning strategies compared to students that learn the same language in Western countries. Therefore, a measurement of language learning strategies that considers the context of EFL students in Asia, especially in Indonesia, is needed in order to portray the learning strategies more thoroughly in their context.

By identifying how the use of English learning strategies is correlated to their language skills, language teachers in the country may expect their students to learn a foreign language more successfully. Language teachers can condition their teaching processes in order their students to use their effective strategies or training their students to use the strategies when they learn English skills.

The purpose of this article is to identify language learning strategies employed by EFL learners in Indonesia, and to determine how learning strategies are correlated to language performance. The following two research questions are addressed:

1. How reliable is a skill-based category of strategy questionnaire in identifying the use of learning strategies in Asian context?
2. How is the correlation between the skill-based categories of learning strategies and their language skills?

Previous Studies on language Learning Strategies

Many studies have determined that the use of language learning strategies significantly predicts success in learning English, and that some individual strategies are more predictive of success than are others. Studies by Bidabadi and Y. at (2011), Dreyer and Oxford (1999), Ghafournia (2014)) and Md Yunus, Sulaiman and Z. (2013) provide evidence on a significant relationship between strategy use and ESL proficiency. Another study suggesting that learning strategies affect language achievement was also conducted by Bialystok and Frohlich (1978). Their study, which explored variables of classroom achievement in second language learning, showed that many factors were correlated with language achievement, but only two of them: aptitude and strategy use were statistically significant in predicting performance. A similar study on the effect of language learning strategies on achievement conducted by Park (1997) also indicates that the use of language learning strategies accounted for 13 to 14% of the total variation of the achievement scores.

An important issue is to what extent language learning strategies contribute to the success of EFL learning. It is assumed that the students who have employed certain strategies would report better language achievement. In Bialystok's study (1981), the strategy most responsible for achievement on all tasks was

53 naturalistic practice or practice for communication, and formal practice or practice for learning appeared to show
54 less relationship to achievement. Huang and Van Naerssen (1987) also conducted a study using a similar
55 classification of language learning strategies introduced in Bialystok (1981). The strategy measurement used to
56 investigate learning strategies in oral communication by Chinese students in Huang and Naerssen's study was
57 derived from Rubin's inventories (1975). The finding of their study also supported the finding of the previous
58 study of Bialystok (1981), which suggested the superiority of functional practice to the other two strategies:
59 formal practice and monitoring. In another study by Md Yunus, Sulaiman and Embi (2013), which used the
60 Strategy Inventory for Language Learning (SILL) developed by Oxford (1990), it was found that gifted students
61 used more indirect strategies: metacognitive, affective, social, compared to direct strategies: memory, cognitive,
62 compensation. Another similar study that used the SILL was conducted by Park (1997). His study, which
63 involved Korean University students, indicated that cognitive strategies were more predictive of language
64 achievement scores than were metacognitive strategies (p.216). A study conducted by Kamran (2013) also
65 revealed that a statistically significant and positive relationship exists between Iranian EFL learners' overall
66 reading strategy use and their scores of their reading comprehension test; to assess the use of language learning
67 strategies this study used Survey of Reading Strategy or SORS developed by Mokhtari and Sheorey's (2002)
68 measurement. Another study that identified the relationship between the use of listening strategies and listening
69 proficiency levels in the Iranian learning context by Bidabadi and Yasmat (2011) also indicates that the Iranian
70 EFL freshman university students of three different listening proficiency groups employ meta-cognitive
71 strategies more frequently than cognitive and socio-affective strategies. In their study the strategy
72 questionnaire developed by Vandergrift was used to measure the use of students' listening strategies (p. 28).

73 Different classification schemes and instruments have been developed for assessing the use of language
74 learning strategies. The most widely used measurement for language learning strategies is the SILL, which was
75 reported to have high validity in several studies (Oxford & Burry-Stock, 1995). The version 7.0 of SILL, which
76 consists of 1950 items to measure the use of learning strategies in learning English as a foreign language, consists of
77 memory strategies, cognitive strategies, and compensation strategies, metacognitive strategies, affective
78 strategies, and social strategies (Hsio & Oxford, 2002). The SILL has been used in different countries with
79 different contexts. Ahmad Shah, Ismail, Esa and Muhamad (2013) used the SILL to measure the use of
80 language learning strategies for specific purposes in Malaysia. In another study conducted in Asian
81 context, the SILL was used to measure the use of language learning strategies by college students in Philippines
82 (Querol, 2010). Radwan (2011) also used the SILL to identify the relationship between the use of language
83 learning strategies (LLS) and gender and English proficiency of university students in Oman. In Iran Saeb and
84 Zamani (2013) also used the SILL to investigate learning strategies and beliefs about language learning in
85 high-school students and students attending English institutes (see also Takallou, 2011). Chang (2011) also used
86 the SILL to find out the profile of learning strategy use of students in Taiwan and Yu and Wang (2009) used the
87 measurement to identify the use of learning strategies in China. The SILL was also used in Botswana to
88 identify the types of language learning strategies the students use in learning and the relationship between the
89 language learning strategies chosen and their age/level of schooling, their proficiency, and their self-efficacy
90 beliefs (Magogwe & Oliver, 2007).

91 However, Grainger (1997) suspects the inadequacy of the SILL since he found that the students of
92 Asian backgrounds do not follow traditional patterns of strategy use as identified in other major studies of
93 language learning strategies. Park (1997) also provides an argument that not all strategies the students employed
94 in learning English in his study were inventoried in Oxford's SILL (p.217). In another study Park (2011) also
95 found out that the classification of the SILL proposed by Oxford (1990) did not fit the data of his research which
96 was analyzed through confirmatory factor analysis (CFA) to test a priori factor structures in the relationships
97 between observed and latent variables. He suggests that classification system of the SILL should be
98 reinvestigated to understand better the structures of the measurement and the psychometric properties of the
99 instrument including the construct validity. His suggestion is in line with the findings of a study by Hsio and
100 Oxford (2002), which involved 534 undergraduate EFL students in Taiwan. The studies with the participants
101 from the Asian students provide empirical evidence that suggests reevaluating the SILL even though the findings
102 of their studies seem to be contradictory with the findings in a study by Ardasheva and Tretter (2013), whose
103 data was collected from ESL students in the United States.

104 Language learners from different cultures may learn the same language in different ways (Woodrow,
105 2005). Students learning a foreign language in Asian contexts may use different learning strategies compared to
106 students that learn the same language in Western countries as suspected by Park (1997, 2011), whose study was
107 conducted in Korea, Grainger (1997), who conducted a research with students from Asian backgrounds, and Gan
108 (2004) and Nisbet, Tindall, and Arroyo (2005), whose participants of their studies were Chinese students.

109 Therefore, a study on how EFL students in Asia learn English by language skills is needed in order to portray
110 their use of learning strategies in their cultural settings. *Name (2014)* has proposed an alternative measurement
111 for language learning strategies for Indonesian students in learning English in the EFL tertiary setting. The
112 measurement, which is named the *Language Learning Strategy Questionnaire* or the LLSQ, was used in this
113 study. Different from the SILL of Oxford (1990), in the LLSQ language learning strategies are classified under
114 skill-based categories and each skill category consists of three groups of strategies: cognitive, metacognitive and
115 social strategies. The three **38** ps of strategies are common strategies among researchers on language learning
116 strategies (Fillmore, 1979; O'Malley, Stewner-Manzanares, Kupper & Russo, 1985; Oxford, 1990; Politzer &
117 Groarty, 1985). The grouping consisting cognitive, metacognitive and social strategies is also supported with the
118 CFA indicated in a study by Woodrow (2005), which used Schmidt and Watanabe's (2001) classification. In her
119 study most of the participants were Asian students, including students from Indonesia, where the present study
120 was conducted.

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122 **2. Method**

123 **2.1 Subjects**

124 The present study was **1** conducted with 73 students of the seventh semester of an English Department in the
125 Faculty of Education in Indonesia. The reason for selecting such a sample was that all subjects had been
126 employing learning strategies in an EFL setting in an Asian context. The age of the students ranged from 19 to 21.
127 Almost all of the participants could communicate in English both in a written form and orally. Because the
128 **18** participants' field of this study was English from a department of a university in the country, the result of the
129 study might not generalize to language learners from a larger set of disciplines or from different parts of the
130 country.

132 **2.2 Instruments**

133 The data **36** this study were collected by administering two instruments, namely a questionnaire and tests. The
134 LLSQ was used to measure the use of language learning strategies. The **1** LLSQ includes 4 categories of learning
135 strategies: speaking strategies, listening strategies, reading strategies and **35** g strategies and each category
136 consists of 20 items. In total the LLSQ has 80 items and each **30** ory has learning strategies that are grouped
137 under cognitive, metacognitive and social strategies. Following Oxford's (1990) *Strategy Inventory of Learning*
138 *Strategies (SILL)*, the use of their learning strategies provided in the LLSQ is arranged in five-Likert Scale,
139 ranging from 1= never used, to 5= always used.

140 Regarding proficiency level of the learners, a version of a retired ITP-TOEFL test, was considered as an
141 appropriate test. The test was a standardized test used by the university in which the participants were studying
142 to test English proficiency of its students as prerequisite before their graduation. The test consists of three parts,
143 namely: listening, structure, and vocabulary and reading. In the listening section, there are 50 items to be
144 completed in 30 minutes. The structure section has 40 items (60 minutes) while the vocabulary and reading
145 section has 60 items (60 minutes). Since this study focuses on language skills, only two parts of the test were
146 considered, namely the listening and reading parts, and the score of structure and grammar usage was not
147 considered in this study. To gain the scores the other two language skills: speaking and writing, the learners were
148 given relevant tests. Their writing skill was measured on the basis of unity, coherence, accuracy and vocabulary
149 use while their speaking skills was measured based on their ability of fluency, pronunciation and grammar use.
150 To get more reliable scores of the last two tests, which were developed for the purpose of this study, the mean
151 scores of two raters were calculated.

153 **2.3 Data analysis**

154 As mentioned earlier, in the LLSQ the students were provided with 80 items with 20 items in each skill-based
155 category (speaking, listening, reading, and writing). Each skill-based category of strategies consisted of 3 groups
156 of strategies, namely: cognitive strategies, metacognitive strategies, and social strategies. The data obtained **1**
157 with the questionnaire were first computed-coded with the help of SPSS 16.0 for Windows. To measure the internal
158 consistency of the hypothesized scales, Cronbach's alpha coefficients of internal **24** consistency were computed for
159 each category. Alpha coefficient scores for each category were obtained and the results are presented in Table 1.

161 **Table 1: Cronbach's Alpha Values for Subscales and Total Scale**

Multi-item scale	Number of items	Cronbach's Alpha (n = 73)
Learning strategies of listening category	20	.787
Learning strategies of speaking category	20	.758

Learning strategies of reading category	20	.795
Learning strategies of writing category	20	.771
All strategies of language learning	80	.922

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In order to find out how the learners' strategy use and their performance of each skill were correlated, Pearson Product-Moment correlation analysis was undertaken. Before running the correlation analysis, scores for the three strategy groups in each skill were obtained by summing across items and then dividing by the number of items. The learning strategy use was grouped based on the language skill and in each skill there were three groups of language learning strategies. The analysis was run to correlate the use of cognitive, metacognitive, and social learning strategies in each skill with the score of the skill.

3. Results

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As a single measurement the LLSQ has been developed based on a theory- driving decision related to the four language skills, the measurement needs to be supported with empirical data to identify how the developed strategies measure the hypothesized scales. The finding of this study shows that all items of the LLSQ are highly correlated with the Cronbach's alpha at 0.92 and the alphas of the skill – based strategies are .78, .75, .79 and .77 for strategies for listening, speaking, reading and writing respectively. As a result of the reliability analyses the strategies used by the students were justified to be grouped under one single measurement to assess the learning strategies used by the language learners involved in this study. The items included under the language skill categories in the questionnaire, which consists of 20 items in each skill, also represent scales with high internal consistency and they meet the criteria the reliability of the scales.

Table 2: Pearson Correlation Coefficients among Skill-Based Strategies

	A	B	C	D
Listening strategies (A)	1.00**			
Speaking strategies (B)	.753**	1.00**		
Reading strategies (C)	.599**	.656**	1.00**	
Writing strategies (D)	.573**	.613**	.665**	1.00**

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* $p < 0.05$
** $p < .01$

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The data in Table 2 indicates that Pearson r correlation revealed how the strategies have inter- correlations among them. The four strategies were positively and significantly correlated and share substantive amount of variance. The correlation analysis between the strategies uncovers a close relationship among strategies that were used in learning the four language skills.

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Listening strategies and speaking strategies turned out to be the highest correlated among the four strategies ($r = .75, p = .00$), followed by the correlations between reading strategies and writing strategies ($r = .66, p = .00$). The inter-correlations among the categories mean that increased frequency of strategy use under one category is associated with an increase in the use of those of the other categories. To the degree that they correlate, strategies share variance, and the magnitude of r^2 indicates the amount of variance that is interrelated (Hatch & Lazaraton, 1991, p.440-1). Since the correlation between listening and speaking strategies is .75, it could be said that the two categories of language learning strategies overlap to the extent of r^2 (or .562). This suggests that the overlap of the two strategies is 56.2%, or, more than one half of the variance in listening strategies can be accounted for by the variance of speaking strategies and vice versa. The variance of reading and writing strategies that overlap is 43% ($r = .66$) while the other strategies overlap lower.

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The rank correlation among the strategies of the four skills may also imply that use of strategies under a certain category is related to the use of other strategies under another certain category. In this study the use of listening strategies was more closely correlated to that of speaking strategies ($r = .75, p = .00$) than the use of reading strategies ($r = .59, p = .00$) or writing strategies ($r = .57, p = .00$). On the other hand, the use of reading strategies was more closely correlated to that of writing strategies ($r = .66, p = .00$) than that the use of speaking ($r = .61, p = .00$) or that of listening strategies ($r = .57, p = .00$).

Table 3: Pearson Correlation Coefficients between Skill-Based Categories and Language Skills

	Cognitive strategies	Metacognitive strategies	Social strategies
Listening	.376**	.126	.286*

Speaking	.257*	.200	.343**
Reading	.448**	.248*	-.056
Writing	.035	.381**	.226

208 * $p < 0.05$

209 ** $p < .01$

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211 To identify the correlation between the use of the language learning strategies under cognitive, metacognitive
 212 and social strategies with the language skills, correlation analyses were undertaken. Table 3 summarizes the
 213 correlation between the mean score of learning strategies under each category with the score of every language
 214 skill. The correlation analysis indicates that the frequency of the strategy use under the cognitive and social
 215 categories were significantly and positively correlated with the scores of listening and speaking. The frequency
 216 of strategy use of the cognitive and metacognitive categories of reading was significantly and positively correlated
 217 with the reading score while the use of social strategies turned out to be negatively correlated with the score of
 218 reading. The strategies of writing under the three categories were positively correlated and the use of
 219 metacognitive strategies was the only category of learning strategies significantly correlated with the score of
 220 writing.

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223 4. Discussion

224 4.1 Skill-based category of learning strategy as an alternative

225 In assessing internal consistency, the Cronbach alpha reliability is the most appropriate reliability index to be
 226 used on continuous data, such as that produced by a Likert-type scale (Oxford & Burry-Stock, 1995). The
 227 criteria on reliability of internal consistency of each category in this study were met so that the strategies under
 228 the categories were justified to be grouped into skill-based categories, namely: language learning strategies
 229 grouped under listening, speaking, reading and writing categories. The criteria on reliability internal
 230 consistency for the 80 items of the measurement were very high with the Cronbach's Alpha .92 so that the
 231 strategies were justified to be grouped into a scale. The classification system that a learning strategy
 232 measurement consists of skill-based categories and each category covers cognitive, metacognitive and social
 233 strategies may contribute classification schemes of learner strategies.

234 The validity of individual predictor instrument and combinations of predictor instruments is determined
 235 by correlational analysis and extensions of correlational analysis to multivariate analysis (Nunnally, 1978). The
 236 validity of the instrument in the present study, especially its predictive validity, was determined by measuring
 237 predictive relationship between the use of the instrument and language performance. As indicated in Table 3, all
 238 of the skills of language were significantly correlated with the use of certain groups of language learning
 239 strategies. It implies that the skills of language can be predicted by the use of certain language strategies; if
 240 language learners use more frequently certain strategies in learning one language skill, their skill will increase
 241 better. The correlations between the use of language learning strategies and the language skills may be
 242 interpreted that the questionnaire has predictive validity to the success in learning the language skills of English
 243 as a foreign language.

244 In line with the findings by Purpura (1997) and Wenden (1991), the intercorrelation among the
 245 strategies as shown in Table 2 may be interpreted as a sign of mutual conceptual dependence among strategies.
 246 This provides evidence that learners employ all strategies under the four language skills and they do not rely on a
 247 single category or certain strategies in learning foreign language. The finding of this study seems to answer a
 248 concern that various classification systems of language learning strategies have been developed for research
 249 purpose but little attention has been paid to students' learning goals or teaching a new language (Chamot, 2004).
 250 The skill-based categories of language learning strategies introduced in this study can be considered to portray
 251 learners' use of language learning strategies when learners learn a foreign language and to identify effective
 252 learning strategies for each language skill. The equal numbers of language learning strategies between the
 253 spoken and written language and between the receptive and productive skills developed in this questionnaire
 254 may be a response to the limitations of some studies, as suggested in a study by Tragant, Thompson, and Victori
 255 (2013). They have developed a new measurement for language learning strategies in foreign language contexts
 256 and provided a thorough analysis of their measurement but the analysis of their study does not include oral
 257 production strategies (p.105). Many institutions, especially in Asian countries, provide language learners with
 258 classes based on skill instruction, namely listening, speaking, reading, and writing classes. By identifying what
 259 strategies of the skills contribute to the success in learning a foreign language, language teachers can teach these

260 strategies to less successful learners when they learn the language by skills as suggested by Rivera-Mills and
261 Plonsky (2007) that a learning strategy category can be used to identify what successful learners do so that these
262 strategies can be taught to less successful learners.

263 The rank correlation as shown in Table 2 may imply that learning strategies for the oral communication
264 of English proficiency (speaking skill) have closer processes to the other oral communication of the proficiency
265 (listening skill). On the other hand, the written English proficiency (reading skill) has closer processes to the
266 other written proficiency (writing skill). To some extent, it may support the natural order hypothesis of Krashen
267 (1985) that there may be a natural order which relatively exist learners in acquiring a foreign language, even
268 though Krashen and Terrel (1983) refer it to the acquisition of grammatical rules. In the present study there is
269 indication that the learners acquire listening and speaking skills through a closely correlated process, and they
270 acquire reading and writing skills through another closely correlated way. It may be argued that the process of
271 speaking takes place after language learners acquire listening skill and the process of writing takes place after the
272 acquisition of reading skill. This may also be argued that the process of learning a foreign language begins with
273 the spoken language and, then, the process will be followed with the written language. In the acquisition of the
274 spoken language listening seems to play a role as the first process and is continued with speaking while in the
275 acquisition of the written language reading comes first and is followed with writing.

276 277 4.2 Language Learning Strategies in relation to language performance

278 Many studies have been conducted to correlate the use of language learning strategies and language performance
279 and the studies have contributed to different perspectives of teaching and learning a foreign language. To
280 mention some, Magogwe and Oliver's (2007) study, which involved students primary, secondary and tertiary
281 levels, indicated that in general there was no significant interaction between proficiency and learning strategies
282 though there was an indication of interaction between them at the primary level, and Nisbet, Tindall and Arroyo
283 (2005) found out that only minimal correlation between learning strategies and proficiency existed. To correlate
284 between strategy use and proficiency Hong-Nam and Leavell's (2006) study only indicated in their study that
285 language learning strategies develop along continuum from novice learners to expert.

286 A study by Wong and Nunan (2011), however, indicated that different frequency of strategy use was
287 significantly different between the more effective and the less effective students and the finding in a study by
288 Jurkovic (2010) metacognitive strategies proved to be significantly correlated with language performance.
289 However, there is little literature which specifically focuses on the roles of language learning strategies in
290 relation to the language skills separately. This present study partly confirms previous studies on how learners'
291 learning strategies were correlated to each language skill.

292 293 4.3 The Role of Learning Strategies in Listening

294 The data in Table 3 indicates that the frequency of the strategy use under two categories: the cognitive category
295 and the social category were significantly correlated with the skill of listening. Studies on the role of learning
296 strategies in relation to the skill of listening, separated from the other skills of language, are not easily found in
297 the literature. A study that demonstrated the learner's perceptions towards the use of meta-cognitive processes
298 while listening to a spoken text in English was conducted by Bidabadi and Yamat (2013). It was found in their
299 study that the learners believe that metacognitive strategies play an important role to help them become good
300 foreign language listeners but there was no evidence whether the metacognitive strategies was significantly
301 correlated with their listening skill; in their study only the perceptions of the students towards the use of
302 metacognitive strategies were measured.

303 In the present study it can be argued that in learning English as a foreign language the learners
304 benefitted from the cognitive and social strategies in listening. It may be easily understood that by using the
305 social strategies, which trigger them to communicate with other people, and cognitive strategies, which make
306 them practice using the language, the students will develop their skill of listening. Practicing using the language
307 both with other people (social strategies) and practicing the language by themselves (cognitive strategies) seems
308 to be the key to their success in listening. It is not irrational that in developing the skill of listening learners rely
309 on social interaction in the context of English learning.

310 311 4.4 The Role of Learning Strategies in Speaking

312 Similar to the correlation analysis in listening as indicated in Table 3, in speaking two groups of categories:
313 cognitive and social strategies were significantly correlated with the score of speaking. The finding is similar to
314 the finding in Murray's study (2010), which showed cognitive strategy use to have the strongest correlation to
315 the skill of speaking in acquiring Korean as a foreign language; different from the findings in Murray's study, in

316 this study social strategy use was also significantly correlated with speaking. This may be argued that speaking is
317 a language skill which involves an interlocutor(s) so that the process of involving other people improves the
318 acquisition of the skill. In an investigation on the preference of using learning strategies learning by Liyanage,
319 Bartlett, Birch and Tao (2012) it was found that Chinese EFL learners reported more use of metacognitive
320 strategies for speaking and listening but in their study it was not explored whether the frequency of the strategy
321 use was correlated to their proficiency.

322 In present study it is understood that the power of the social and cognitive strategies in improving the
323 skill of listening also works in improving the skill of speaking. In developing the skill of speaking it is also the
324 case that the learners in the present study benefitted from practicing the language both through their social
325 interaction and practicing it by themselves. It may be argued that the two skills of the spoken language: listening
326 and speaking have relatively similar language learning strategies that play an important role to develop learners'
327 skills.

328 329 *4.5 The Role of Learning Strategies in Reading*

330 The correlation analysis as shown on Table 3 that the learning strategies under the cognitive and metacognitive
331 categories play an important role in reading comprehension; they were significantly correlated with the skill of
332 reading. The finding of this study is in line with the finding of a study by Yu and Wang (2009) which was
333 conducted with Junior High Schools in China. Their study proved that cognitive and metacognitive strategies
334 significantly correlated with language achievement. However, in their study it is not clear whether reading
335 comprehension was tested or not. A similar study which was correlated with the reading skill was conducted by
336 Zhang and See (2013), which explored only metacognitive strategy use in reading comprehension in China.
337 In their study it was found that there was significant positive correlation between the overall metacognitive
338 strategies and the reading achievement and the high proficiency students demonstrated higher frequency in using
339 most of metacognitive strategies than the low proficiency students.

340 That the cognitive strategies, as well metacognitive strategies were significantly correlated with the
341 reading score in this study generates the interest for further discussion. It may be understood that the function of
342 the metacognitive strategies is a powerful "tool" in learning English and directs the execution of learning
343 processes. These findings seem to support the notion that metacognitive processes refer to the control or
344 executive processes that direct cognitive processes and lead to efficient use of cognitive strategies
345 (Forrest-Pressley & Waller, 1984).

346 The data on Table 3 indicates that not only were social strategies insignificantly correlated but they
347 were negatively correlated with the reading score. Social strategies are commonly found in a language learning
348 context and these strategies are not well explored in general education. These strategies were investigated and
349 explicitly stated in studies on language learning conducted by Fillmore (1979), O'Malley, Stewner-Manzanares,
350 Kupper and Russo (1985), Oxford (1990) and Politzer and Groarty (1985). The social category includes not only
351 all processes that take place in groups, but also includes individual activities in social settings aimed to acquire
352 another language. Related to reading in the present study, strategies that involve other people seem not to play an
353 important role in acquiring the skill. From the empirical data shown in Table 4 there was negative
354 correlation between the use of social strategies and the reading score, it may be understood that the more learners
355 use social strategies, the less successfully they will acquire the reading skill. It may be argued that reading,
356 which refers to a problem-solving task and background experience is required in the task (Richardson & Morgan,
357 1997), involving other people in this process of acquiring a foreign language is not essential.

358 359 *3.1 The Role of Learning Strategies in Writing*

360 It is interesting to note that, consistent with the other skill of the written language: reading, in writing the
361 frequency of metacognitive strategy use was significantly correlated with the writing skill. Different from
362 reading, in writing the significant correlation of the frequency of metacognitive strategy use is not followed by
363 the significant correlation of cognitive strategy use. This needs a further discussion why the learners have
364 succeeded in acquiring the skills of the written language by the strengths of the metacognitive and cognitive
365 strategies only in reading but it was not found that the use of the cognitive strategies contributes to the success in
366 developing their writing skill. Even though the relationship between the use of metacognitive strategies and
367 performance has been investigated in numerous studies (Magogwe & Oliver, 2007; Nisbet *et al.*, 2005; Sun,
368 2013), studies on the specific relationship between the use of metacognitive strategies and writing performance
369 can be hardly found in the literature. A study which identified the use of writing strategies and writing
370 performance was conducted by Chien (2012), in which the data on the writing strategies were collected through
371 think-aloud protocol, uncovered strategies employed by students from the time they began to read the writing

372 prompt until they had completed their writing. The finding in the study revealed that the two groups reported
373 their thoughts about the use of writing strategies and the strategies between the two groups proved to be
374 significantly different. Actually, various studies investigated the correlation between the use of language learning
375 strategies with language achievement or performance but the skill of writing was not tested in their studies
376 (Murray, 2010; Nisbet *et al.*, 2005; Wong & Nunan, 2011).

377 As the empirical data shown on Table 3 indicate that only metacognitive strategies were significantly
378 correlated with the skill of writing, it can be hypothesized that the function of the metacognitive strategies in
379 directing and controlling cognitive processes will work effectively when language learners make use of their
380 background knowledge while they are reading. When they are concerned with expressing their ideas in a written
381 form, namely writing, it seems that the learners use avoidance strategies and they do not rely very much on their
382 schemata or background knowledge which functions to direct their cognitive processes and lead to efficient use
383 of the cognitive strategies. Different from the skill of reading, the effectiveness of the metacognitive strategies
384 seems not to be followed by the power of the cognitive strategies in the skill of writing. It may be argued that the
385 power of metacognitive strategies to control or execute processes that direct cognitive processes in learning
386 another language will be effective when the process of learning needs learners' schemata as it happens to reading
387 process. Similar to the relationship between the strategy use and learners' proficiency of the spoken language, in
388 the written language it may also be argued that the two skills of the written language: reading and writing have
389 relatively similar language learning strategies that play an important role to develop the skills, namely the
390 metacognitive strategies.

391 In sum, the empirical data in this study shows that different language skills were significantly correlated
392 with the use of different learning strategies. It may be concluded that some language learning strategies will be
393 more effective for improving certain skills while some others will be better for other skills. Language teachers
394 should condition the process of teaching and learning in order for their students to use language learning
395 strategies accordingly when teaching English as a foreign language by skills.

396 397 **Study Limitations**

398 As with other self report survey questionnaire, the measurement for language learning strategies used in this
399 study may have limitations. The limitations include the fact that learners may not fully understand how to
400 respond to the questions of the questionnaire or they may not answer the questions in a frank manner. Further
401 research with different ways of collecting data need to conduct to verify how the use of language learning
402 strategies grouped under the language skills contribute to language performance as the findings of this study
403 indicate.

404 This study has proposed taxonomy of language learning strategies consisting of skill-based categories.
405 This classification is not final; further studies need to be done to replicate the findings related to this newly
406 developed measurement so that more consistent findings become available within and across populations.
407 Particularly important is more information on how students from different age levels and different cultural
408 backgrounds use language learning strategies in EFL contexts.

409 In this study internal consistency estimates of reliability of the questionnaire have been described as
410 high for the total instrument (Cronbach's alpha .92) and relatively high for the subscales: listening, speaking,
411 reading and writing (Cronbach's alphas 0.78, .75, .79 and .77 respectively. Studies with further analyses need to
412 explore factor structures underlying the newly developed instrument and related psychometric characteristics of
413 the instrument to determine other types of validity of the instrument.

414 Another limitation of this study is that the number of the students participated in this study is small and
415 they were not randomly chosen, hence making difficult to generalize the findings of this study to any Asian
416 context. However, the participants involved in this study share important common attributes with language
417 learners in other Asian settings, mainly that they learn English as a foreign language by separated language skills.
418 It would be worthwhile conducting other studies in EFL tertiary settings to explore whether the language
419 learning categories provided in this study also contribute to similar success as the findings of this study indicate.

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