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An Investigation of Cognitive and Metacognitive Strategy Use in EFL Reading Comprehension Test Performance: Focused on Trait Strategy Use vs. State Strategy Use

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This study reports on the use of the trait and state cognitive/metacognitive strategy use and the difference of the trait/state strategy use according to students' proficiency level. First of all, for checking up the trait strategy use, 119 first-grade male students in a high school completed the questionnaire on strategies which they thought they used during a reading test. Secondly, to find out their state strategy use, students took a fifteen-item reading comprehension test, followed by filling out questionnaires on cognitive and metacognitive strategies used in the test. This study employed quantitative data analysis. The results suggested that (1) the cognitive and metacognitive strategy use in the trait and state conditions are used the most by the high proficiency group and they are correlated respectively; (2) these strategies are used with statistically significant difference according to students' proficiency level, especially to the lower level students. The highly successful group uses the cognitive and metacognitive strategy in the actual test situation more than the lower proficient group; there is no difference in trait and state strategy use.

[the cognitive and metacognitive strategy use/the trait and state strategy/EFL reading comprehension test]

I. INTRODUCTION

In Korea, a reading comprehension component occupies to the extent of 66% in the English test of College Scholastic Ability Test (CSAT) - a national examination which can be regarded as a university entrance examination for students in their final year of the high

school. This means that the ability to read English and do the test task plays a major role in achieving high scores on the CSAT.

In fact, since test-takers are more likely to process information and use language knowledge strategically when they perceive difficulty in a given task, it is important to know how much strategy use accounts for the overall test performance variance. A test task that is identified as highly difficult may appear to be easy for some test-takers, but remain highly difficult for others. If this is the case, test-taking strategy focused on the cognitive and metacognitive strategy would be needed in difficult tasks but not in easy ones. Bachman (2002) argues that in order to advance our understanding of how test task characteristics affect test performance, we need to obtain empirical evidences test-takers strategically respond to test tasks.

According to Cohen (2007), test-taking strategy research can provide insights concerning the nature of lower-level vs. higher-level processing on a test and the more effective strategies for success on tests as well as the less effective ones. Cohen (2007) further points out that strategy data, particularly in validation research, are not usually collected in actual high-stakes testing situations. Those strategies actually used in responding to tests in high-stakes situations may differ from those identified under research conditions (Cohen, 2007), because there is no consequence for not answering test items. Kintsch (1998) points out that just because learners know or are aware of something about their strategy use in general does not mean that this knowledge is activated in a given cognitive process at a given time, although it can be relevant for that process. Phakiti (2003a) also suggests that the relationship between perceived strategy use across contexts and actual strategy use in a particular context has the potential to offer insights into an individual's mind.

We need to investigate further how much our students deploy the strategy use in the actual reading test. So in order to provide better understanding of the extent of using the strategy in the actual test situation, especially in the reading tests, this study shows the different extent of employing both (1) perceived knowledge of how one generally uses strategies that are free of contexts—the trait strategy use and (2) strategy use in an actual, specific context—the state strategy use. In addition, Purpura (1999) found that cognitive processing was a multi-dimensional construct consisting of a set of comprehending, memory, retrieval strategies. These complex cognitive strategies worked with one another to affect language performance. Metacognitve processing has significant, direct and positive effects on all three components of cognitive processing which directly impacted language test performance (Purpura, 1999). This finding suggests that the effect of cognitive strategies on test performance is mediated by metacognitive strategies. He also pointed out that metacognitive strategies were statistically positively related to cognitive strategies. In regards to the relationships between strategies and test performance, cognitive

and metacognitive strategy use was positively correlated with the reading test performance, explaining about 15-22 per cent of the test score variance.

To do the difficult test task and achieve higher scores, test-takers need to employ the cognitive and metacognitive strategy use in the actual reading test condition. In addition, students usually overestimate the extent of their reading strategy use and teachers are also likely to make an error in judging students' strategic competence, including the cognitive and metacognitive strategy, which leads them to instruct test-taking strategy in a wrong way. So, this study compares students' trait strategy use with their state strategy use in EFL reading performance focused on the cognitive and metacognitive strategy use. The proficiency levels—successful, moderately successful and unsuccessful are divided to check up the difference on the strategy use among three level groups and the discrepancy on the trait and state strategy use in one ability group.

II. LITERATURE REVIEW

1. Strategy Use in the L2 Reading Test

Oxford(1990) defines language learning strategies as "specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situation" (p. 8). Oxford (1990) also divides language learning strategies into direct and indirect strategies. Memory, cognitive, and compensation strategies were included in the direct category while metacognitive, affective, and social strategies were indirect strategies. Oxford (2003) pointed out that strategic processing, such as planning for language task completion and evaluating one's learning, helps learners improve their own perception, reception, storage, retention and retrieval of L2 information effectively. In regard to Oxford's (1990) strategy framework, however, Ellis (1994) pointed out that Oxford did not differentiate strategies for using the language from strategies for learning it.

According to Cohen (2008), within the L2 context, language learner strategies can be classified into two categories: *language learning* and *language use*. Language learning strategies are those that language learners draw upon to promote language learning and acquisition in general (Phakiti, 2003a). By contrast, language use strategies are those that language learners use to successfully achieve their goals in a specific context (e.g., to obtain better scores on a reading test in a time-constrained test setting). As Phakiti (2003b) puts it, language learning strategies can be regarded as continuing and incessant activities, in contrast to language use strategies which are setting-oriented.

Recently, there have been studies looking at strategies test-takers might use, focused on the cognitive and metacognitive strategy use, when taking a test. Closely related to the present study is the study conducted by Purpura (1997, 1998, 1999). Purpura (1997) stated the relationship between test-takers' cognitive and metacognitive strategy use and performance on L2 tests, using structural equation modeling and exploratory factor analyses. The 1382 subjects answered an 80-item cognitive and metacognitive strategy questionnaire before taking a 70-item standardized language test. The results indicated that cognitive strategies were directly and positively related to the test performance. Metacognitive strategies exert an executive function over cognitive strategies. Purpura (1997) also found that successful and unsuccessful test-takers or readers invoke strategies differently. Purpura comments that the amount of effort to use these strategies seems to depend upon the linguistic abilities needed to complete the tasks (Lee, 2005). That is, test-takers need a certain degree of language knowledge before they can make use of it. The cognitive and metacognitive strategy use function as the most effective factors of other language use strategies. Test takers seem to have a certain degree of language knowledge when they make use of strategies use (Lee, 2003).

Phakiti (2003b), through the use of a cognitive and metacognitive questionnaire investigated the relationship between 384 Thai learners' cognitive and metacognitive strategy use and their reading test performance. Phakiti (2003b) identified that metacognitive strategies were statistically positively related to cognitive strategies. In his qualitative data analysis, cognitive and metacognitive strategy use by successful test-takers was highly complex. For example, when they translated part of a text (cognitive strategy use), they aimed to see if it made sense (evaluating strategy use), and when they made efforts to summarize the passage (cognitive strategy use), they checked for comprehension (monitoring strategy use). In regards to the relationships between strategies and test performance, cognitive and metacognitive strategies were both positively correlated with the reading test performance (Phakiti, 2006).

Phakiti (2003b) also compared the differences in the strategy use and reading comprehension among successful, moderately successful, and unsuccessful learners. The highly successful learners reported significantly higher use of metacognitive strategies than the moderately successful ones, who in turn reported higher use of these strategies than the unsuccessful ones. The qualitative data analysis further supported such findings, suggesting that the successful learners approached the test tasks more strategically than the less successful ones.

Purpura (1998, 1999) investigated the effect that strategy use exerted on high- and low-ability test-takes' L2 test performance. Several differences were located. For instance, unlike that in the high-ability group, metacognitive strategy use exerted significant total effect on performance on all subtests in the low-ability group. Further, the high-ability test-

takers depended on self-evaluating strategies to pay attention to formal features of the language; thereby, they could perform well on grammar, vocabulary, and cloze subtests. However, the self-evaluating strategies displayed no effect on the low-ability test-takers performance. Finally, the high-ability test-takers, on the whole, reported utilizing strategies less frequently than the low-ability test-takers except for five strategies: monitoring, inferencing, self-evaluation, practicing naturalistically and linking with prior knowledge.

2. State Strategy Use vs. Trait Strategy Use

In psychology, traits and states refer to two different classes of individuals' psychological attributes which include (1) a relatively stable trait and (2) a transitory state. A trait facet of a construct is a relatively stable attribute of an individual across occasions (despite considerable variation in the range of settings and circumstances), whereas a state facet is transitory, fluctuating and unstable in a given context. Hence, a stable trait strategy use which we think we are generally using and a transitory state strategy in a particular context (i.e. testing situation) are considered for finding out the gap of strategy. According to Phakiti (2006), a trait strategy is a factor of strategic knowledge and a state strategy also is a kind of strategic regulation. Spielberger (1972) stated that the use of state and trait notions to classify two aspects of strategy use in strategic competence research is a way forward.

Barnett (1988) examined the interaction between actual strategy use-the state strategy and generally perceived strategy use free from context-the trait strategy among L2 readers. Barnett (1988) found that some stable knowledge of how to use reading strategies effectively interacts with the actual use of effective strategies in real time reading.

The concept of generally perceived strategy use (Purpura, 1999) is related to the assessment of trait strategic competence, whereas the concept of strategy use in a specific context (Phakiti, 2003b) is related to the assessment of state strategic competence. Strategic competence is hypothesized to underline strategic knowledge and strategic regulation. According to Phakiti's (2007), strategic knowledge is hypothesized to underline actual strategy use in a specific context. That is, strategic knowledge and strategic regulation serve as theoretical facets of strategic competence, whereas trait and state strategy use serve as operational definitions of strategic knowledge and strategic regulation, respectively.

3. Research Questions

Although previous studies on strategy use in EFL reading test performance have been significantly promoted our understanding of language strategy use, few studies have

investigated Korean high school students' strategy use in the actual reading test, especially with a view point of the trait and state strategy use. Thus, it is difficult to establish the proper questionnaires fitted to Korean students, which leads Phakiti's (2007) questionnaire to be employed in this study. Phakiti (2003a, 2003b, 2007) studied on Thai college students using the revised version of Purpura (1997). In Phakiti (2007), he suggested the total cognitive, metacognitive and affective strategy use questionnaires with two versions of the trait and the state type. The present study attempts to reveal that what extent of strategy Korean high school students who need better reading scores use in the actual test situation. In addition, it is necessary to find out the gap between the perceived strategy use and the actual strategy use. By examining quantitatively how strategy use is established, this study aims to provide answers to the following three research questions.

1. How much do Korean high school students perceive and deploy the trait and state strategy use?
2. How is cognitive strategy use correlated with the metacognitive strategy use in the trait and state conditions?
3. How differently are the trait and state strategy use deployed according to students' proficiency level?

III. METHOD

1. Participants

For the purpose of this study, one hundred twenty-eight students participated, who were from one public high school in Incheon, Korea. Students have been studying English in the public school for eight years, from the third grade in the elementary school to the first grade in the high school. They have participated in four English classes per week; three extra reading classes every two weeks. There were 119 out of 128 male students for quantitative data analysis, which were made up of 37 highly successful, 48 moderately successful, and 34 unsuccessful readers, based on the scores of the selected 15 items. They are between the ages of 15 to 16. Each student took a reading comprehension test, which was excerpted from a national examination implemented March, in 2008. Students' proficiency levels were divided according to the mean score of the reading comprehension test results. The mean score of 128 students' reading comprehension test results was 9.01 and the mean scores of the successful, moderately successful and unsuccessful groups are 13.45 (30.4 %), 9.06 (39.2%) and 4.50 (30.4%), respectively.

2. Measurement Instruments

There were three tests employed in the study: (1) a 15-item reading comprehension test; (2) a trait cognitive-metacognitive strategy use; (3) a state cognitive-metacognitive strategy use.

1) Reading Comprehension Test

The national academic ability test (NAAT) has been implemented regularly in Korea. This multiple choice test was developed by teachers who have a lot of experience of making test questions. The test consisted of 50 multiple choice questions which are divided into 17 listening items and 33 reading questions. The total test time was 70 minutes, which are divided into 20 minutes for listening part and 50 minutes for reading section. In this study, 15 questions were excerpted from a NAAT implemented in March, 2008 and these questions are as follows; what the given pronoun refers to; finding the purpose of the passage; filling in the blank with the adequate phrase; completing a summary; finding a gist or a topic; choosing a title; finding out the grammatical error in the context; choosing the correct or incorrect content; choosing unmatching sentence in the passage; finding out the writer's feeling; and finding the right place of isolated sentence. Appendix A provides the samples of the 15 items for checking up students' reading ability. These question formats mainly occupy a NAAT, which has the similar a CAST-type test. The reading comprehension test was analyzed using Cronbach's Alpha Coefficient for internal consistency or reliability.

2) A Trait and State Cognitive-metacognitive Strategy Use

This study used Phakiti's (2007) state and trait strategy questionnaires for analyzing a Korean high school students' strategy use. Phakiti(2003b) developed a questionnaire to measure cognitive and metacognitive strategies applying relevant research instruments, that is, in O'Neil and Abedi (1996); Oxford (1990); Purdie and Oliver (1999) and Purpura (1997, 1999). His categorization of cognitive and metacognitive strategies was derived from the theory of reading comprehension and metacognition. In particular, items used to measure these strategies were identified as similar to those in Oxford (1990) and Purpura (1999). According to Phakiti's (2003b), cognitive strategies are composed of (1) comprehending strategies (2) memory strategies and (3) retrieval strategies. Metacognitive strategies are made up of (1) planning strategies, (2) monitoring strategies and (3) evaluating strategies.

Based on the previous study, Phakiti (2007) suggests the trait and state questionnaires. The trait strategy use questionnaire is written using the Simple Present as it asks students about their general perceived strategy use, whereas the state strategy use questionnaire is written using the Simple Past as it asks students about their thinking during the test-taking. Phakiti's (2007) questionnaires on the trait/state cognitive and metacognitive strategy use addressed in this study were presented in Appendix A.

TABLE 1

Taxonomy of the Cognitive-Metacognitive Strategy Questionnaire

Processing	Strategies	No. of Items	Item Used
Cognitive strategies	Comprehending	10	6.7.8.9.10.11.12.13.14.15
	Memory	5	16.17.18.19.20
	Retrieval	5	21.22.23.24.25
	Planning	5	1.2.3.4.5
Metacognitive strategies	Monitoring	8	26.27.28.29.30.31.32.33
	Evaluating	7	34.35.36.37.38.39.40

The trait and state strategy composites in the questionnaire allowed the participants to mark their awareness of strategy use on a 6-point Likert scale: 0 (Never), 1 (Rarely), 2 (Sometimes), 3 (Often), 4 (Usually), 5 (Always). The strategy use scales defines a continuum of increasing levels of intensity, i.e. low scores indicate a low awareness level of strategy use during the test completion. In this study, the questionnaires were translated into Korean, so that the contents were comprehensible for all participants. The trait and state questionnaires consisted of 40 questionnaires which describe the 20 cognitive and 20 metacognitive strategies presented to students. And Table 1 presents taxonomy of the questionnaire with reliability estimates.

3) Data Analysis

The purpose of this analysis was to find out how the trait strategy use was correlated to the state strategy use and how much differently the trait and state strategy use are activated according to the students' proficiency level. To achieve this purpose, reliability analysis, frequency analysis, an analysis of variance (ANOVA), and correlational analysis. In this quantitative data analysis, to determine its significance, a 0.05 alpha ($p<0.05$) was set, thus indicating that a result would be statistically significant if its likelihood of occurring by chance alone was less than or equal to five times out of 100. SPSSWIN 12.0 version was used to compute descriptive statistics.

Reliability analysis on each category showed internal reliability to determine predictability and accuracy. Frequency analysis was performed to measure the achievement of reading comprehension test. Correlational analysis was performed to measure the correlation of reading proficiency and the trait and state cognitive and metacognitive strategies. One-way ANOVA was conducted to determine significant differences between highly successful, moderately successful and unsuccessful test takers on the trait and state strategy use and their reading test performance.

IV. RESULTS

1. Strategy Item Analyses

The scores from forty trait strategy use items and forty state ones which are composed of twenty cognitive strategy items and twenty metacognitive strategy items were treated for identifying students' actual strategy use. Since this research used six-point Likert scales, the highest score of each item was six and the lowest score was zero. The difference of each trait and state strategy use item 24 presents as the results. Out of the 128 students who were considered valid data for the strategy use results analysis, 9 students did not complete the questionnaire result analysis.

1) The Difference of the Trait and State Cognitive Strategy Use

Although the questionnaire items were arranged randomly, the statistical analysis was implemented based on the division of the cognitive and metacognitive strategy use. Appendix B provides the descriptive statistics of the trait and state strategy items. The mean and the standard deviation (SD) of all items of strategy use show which items are used the most.

Looking at the most used trait cognitive item in each section, item 9, *'I analyze what the author is trying to say'* (in the comprehending strategy), item 31, '*I know when I should read more quickly or carefully*' (in the memory strategy) and item 22, '*I relate the new information from the text to my prior knowledge about the topic being read*' (in the retrieval strategy) had the mean of 3.18, 3.24 and 3.24, respectively. In the case of metacognitive strategy use, item 1, '*I have a purpose in mind when I read'* (in the planning strategy), item 32, '*I notice when I am not sure I understand the text'* (in the monitoring strategy) and item 34, '*As I read, I ask myself questions to stay on track*' (in the evaluating strategy) had the value of 2.94, 3.60 and 3.45.

However, unlike the trait strategy use, the state strategy use shows the results as follows; In the case of the cognitive strategy use, item 8, '*I tried to understand the content of the text without looking up every word*' (in the comprehending strategy), item 19, *'I reread it several times to increase my understanding when the text becomes difficult to understand'* (in the state memory strategy) use item 24, '*I used grammar rules to understand the sentences in the context*' (in the retrieval strategy) had the mean score of 3.33, 2.84, and 2.37 respectively; in the actual situation the mean scores of the metacognitive item 1 (in the planning strategy), item 32 (in the monitoring strategy) and item 34 (in the evaluating strategy) are 2.56, 3.01 and 3.42 respectively.

TABLE 2

The Difference of the Trait Cognitive and Metacognitive Strategy Use

Strategies		Questionnaire	Mean	N	SD	t	Sig.
Cognitive	Comprehending	trait	26.19	119	8.116	3.515***	.001
		state	23.79	119	8.545		
	Memory	trait	13.11	119	4.305	4.051***	.000
		state	11.39	119	4.997		
	Retrieval	trait	11.69	119	4.720	2.214*	.029
		state	10.74	119	5.037		
Metacognitive	Planning	trait	12.26	119	4.423	2.988**	.003
		state	11.02	119	5.117		
	Monitoring	trait	19.61	119	6.661	2.353*	.020
		state	18.23	119	7.630		
	Evaluating	trait	16.45	119	6.136	-.070	.944
		state	16.49	119	7.103		

*p<.05, **p<.01, ***p<.001

Table 2 shows the gap between the trait cognitive and metacognitive strategy use according to each section. For this purpose, one-way ANOVA was performed, which showed the significant difference for the dependent variable. The level of significance for the test was set at .05, .01 or .001 revel. Descriptive statistics and the results of ANOVA are reported below in Table 2. Except trait evaluating strategy use, all sections show high statistically significant difference. According to Table 2, students can perceive that they more use strategies for gaining good scores in the reading test than they are using strategies in the actual test situation.

Since forty cognitive/metacognitive strategy items have two versions-the trait and state of the strategy use, which occupy too much space, only items showing significant difference were presented in Table 3 and Table 4. The original analysis table was presented as Appendix B.

As shown in Table 3, presented items were positively statistically significant except the comprehending strategy, item 8, '*I try to understand the content of the text without looking up every word*', which had negatively statistically significant difference. This means that there is not enough time to answer the questions reading the text in detail at the actual test situation, which makes students read the text more quickly than read for only comprehension in class. Most of items listed in the Table 3 were statistically significant at the .05 level, the .01 level or the .001 level (*p<.05, **p<.01, ***p<.001).

TABLE 3

The Difference of the Trait and State Cognitive Strategy Use according to Item

Cognitive strategy use	Item	Strategy	Mean	SD	t	Sig.
Comprehending	6	trait	3.19	1.525	2.775**	.006
		state	2.79	1.389		
	8	trait	2.98	1.466	-2.748**	.007
		state	3.40	1.290		
	10	trait	2.57	1.365	2.781**	.006
		state	2.15	1.346		
	11	trait	3.03	1.481	2.238*	.027
		state	2.69	1.639		
	13	trait	2.32	1.215	4.039***	.000
		state	1.77	1.192		
	14	trait	2.29	1.318	4.036***	.000
		state	1.73	1.366		
Memory	16	trait	2.19	1.501	2.866**	.005
		state	1.75	1.551		
	19	trait	3.27	1.366	2.719**	.008
		state	2.88	1.568		
	20	trait	2.82	1.243	3.099**	.002
		state	2.35	1.499		
Retrieval	21	trait	2.61	1.276	2.008*	.047
		state	2.33	1.378		
	22	trait	2.66	1.441	2.497*	.014

		state	2.36	1.477		
	24	trait	2.01	1.345	2.130*	.035
		state	1.74	1.346		

*p<.05,**p<.01,***p<.001

TABLE 4

The Difference of the Trait/State Metacognitive Strategy Use according to Item

Metacognitive strategy use	Item	Strategy	Mean	SD	t	Sig.
Planning	1	trait	2.94	1.410	2.898**	.004
		state	2.56	1.472		
	4	trait	2.78	1.498	3.445***	.001
		state	2.33	1.630		
Monitoring	27	trait	2.98	1.316	4.825***	.000
		state	2.26	1.328		
	29	trait	1.63	1.396	-3.647***	.000
		state	2.16	1.396		
	32	trait	3.59	1.352	3.996***	.000
		state	3.02	1.522		
Evaluating	37	trait	1.91	1.239	-3.181**	.002
		state	2.38	1.413		

p<.01,*p<.001

Table 4 shows the difference of the trait and state metacognitive strategy use according to the each item. In the table below, presented items were positively statistically significant except the monitoring strategy, item 29, '*I check/checked my comprehension as I move/moved along my reading*', which had negatively statistically significant difference at the value of -3.647. It seems that for making up for short test time, students try to understand the passage while reading. Since the actual test situation requires students to answer the questions more quickly, students are obliged to do this while reading, whereas they can read the text without any time limit in ordinary cases. Most of the items listed in the Table 4 were statistically significant at the .01 level or the .001 level (**p<.01, ***p<.001).

2) The Difference of Trait Strategy Use on the Students' Proficiency Level

Table 5 offered the discrepancy of the trait strategy use based on students' proficiency use. As shown in the Table 5, only planning strategy was not statistically significant, while the rest of strategies had the significant difference of the strategy use. The results indicated that the highly successful test takers thought that they generally more use these strategies than other groups and they also used more the strategy use in the actual EFL reading test performance. Especially comprehending and monitoring strategies have high statistical significance at the .001 level (***p<.001).

Looking at the Appendix C, the analysis of each item in the trait cognitive comprehending strategy use was offered. Item 6, 8, 9, 10, 12 and 14 has the value of 5.508, 6.468, 5.885, 3.514, 8.549, and 3.265, respectively. (*p<.05, **p<.01,***p<.001) and these items were statistically significant, whereas item 1 and 14 were more used in the moderately successful group than the highly successful group. In the case of the memory strategy use in the actual test, the highly proficient students more use item 18 than any other group, which was statistically significant with the value of 4.181 at the level of .018 (*p<.05).

The highly proficient students more use item 22 and 23 in the retrieval strategy than any other group, which was statistically significant and had the value of 9.843 and 9.881 at the level of .000 (***p<.001). However, item 24 was more used in the moderately successful group than highly successful group. Although there was no statistically significant planning item in the metacognitive strategy use, item 1, 2, 3, 4 and 5 were more used in the moderately successful group than highly one. The highly proficient students use more the monitoring strategy use item-30, 31 and 32 than any other group, which was statistically significant and had the value of 10.342, 3.257 and 6.657 at the level of .000, .042 and .002 (*p<.05,**p<.01,***p<.001) respectively. Instead, item 26 was more used in the moderately successful group than highly successful group.

TABLE 5

The Difference of the Trait Strategy Use on Students' Proficiency Level

Processing		Level	N	Mean	DUNCAN	SD	F	Sig.
Cognitive strategies	Comprehending	high	37	28.39	A	9.214	7.953***	.001
		mid	48	27.39	A	6.639		
		low	34	21.69	B	7.572		
		total	119	26.07		8.217		
	Memory	high	37	13.42	A	4.176	3.574*	.031
		mid	48	13.92	A	3.994		

	Retrieval	low	34	11.49	B	4.591	6.268**	.003
		total	119	13.07		4.317		
		high	37	13.21	A	4.894		
		mid	48	11.96	A	4.564		
		low	34	9.49	B	4.175		
		total	119	11.64		4.759		
Metacognitive strategies	Planning	high	37	12.18	A	4.537	1.371	.258
		mid	48	12.84	A	4.165		
		low	34	11.17	B	5.044		
		total	119	12.16		4.560		
	Monitoring	high	37	21.76	A	6.930	7.601***	.001
		mid	48	20.20	A	6.154		
		low	34	16.14	B	5.956		
		total	119	19.52		6.689		
	Evaluating	high	37	18.11	A	6.841	6.191**	.003
		mid	48	17.18	A	5.353		
		low	34	13.51	B	5.543		
		total	119	16.42		6.155		

*p<.05,**p<.01,***p<.001

In the case of the evaluating strategy use, the highly proficient students more use item 34, 38, 39, and 40 than any other group, which was statistically significant and had the value of 3.138, 3.716, 3.707 and 3.669 at the level of .047, .027, .027 and .028 (*p<.05), respectively, whereas, item 35 and 37 were more used in the moderately successful group than highly successful group.

3) The Difference of the State Strategy Use on the Students' Proficiency Level

In the table below, all of the state strategy use had the significant difference of the strategy use according to students' proficiency level. This result indicated that highly successful test takers used actually more these strategies than other groups. Especially comprehending and monitoring strategies have quite high statistical significance at the .001 level (***p<.001).

TABLE 6

The Difference of the State Strategy Use on Students' Proficiency Level

Processing		Level	N	Mean	DUNCAN	SD	F	Sig.
Cognitive strategies	Comprehending	high	37	29.63	A	7.145	26.706***	.000
		mid	48	23.78	A	7.409		
		low	34	17.41	B	7.124		
		total	119	23.67		8.627		
	Memory	high	37	12.84	A	5.112	10.165***	.000
		mid	48	12.29	A	4.387		
		low	34	8.43	B	4.537		
		total	119	11.31		4.999		
	Retrieval	high	37	12.95	A	5.051	16.916***	.000
		mid	48	11.49	A	4.369		
		low	34	7.19	B	3.964		
		total	119	10.65		5.024		
Metacognitive strategies	Planning	high	37	12.24	A	5.504	6.083**	.003
		mid	48	11.73	A	5.223		
		low	34	8.59	B	3.862		
		total	119	10.95		5.153		
	Monitoring	high	37	23.32	A	7.400	22.874***	.000
		mid	48	17.92	A	6.140		
		low	34	13.14	B	6.042		
		total	119	18.15		7.596		
	Evaluating	high	37	19.11	A	7.292	6.603**	.002
		mid	48	16.63	A	6.660		
		low	34	13.41	B	6.487		
		total	119	16.43		7.114		

p<.01,*p<.001

Similar to the trait strategy use, there is necessity for looking over the value of each item of the state strategy use. First of all, in the case of the state comprehending strategy use, all items were statistically significant except item 11. The highly proficient students more use most of comprehending items than any other group.

In the state memory strategy use, all items were statistically significant except item 16. The highly proficient students employ the most the memory strategy use. In the case of the

state retrieval strategy use, all items were statistically significant. So this result also shows that the highly proficient students more use most of memory items than any other group. The highly proficient students employ the planning strategy use item 1, 3 and 5 the most, which was statistically significant with the value of 3.226, 5.217 and 8.756 at the level of .043, .007, and .000 (*p<.05,**p<.01,***p<.001) respectively, whereas item 4 was more used in the moderately successful group than highly successful group. In the case of the monitoring strategy use, all items were statistically significant. So the highly proficient students more use most of monitoring items than any other group. However, on the evaluating strategy use, all items were statistically significant except item 14 and 36.

4) The Difference between the Trait Cognitive and Metacognitive Strategy Use on Students' Proficiency Level

Although the Table 7 presents the statistically significant difference on the strategy use between students' reading ability, there is a need to compare the extent of the trait and state strategy use within one group.

TABLE 7

The Highly Successful Students' Trait and State Strategy Use

Processing	Strategy		Mean	N	SD	t	Sig.
Cognitive strategies	Comprehending	trait	28.39	37	9.214	-1.024	.313
		state	29.63	37	7.145		
	Memory	trait	13.42	37	4.176	.930	.359
		state	12.84	37	5.112		
	Retrieval	trait	13.21	37	4.894	.385	.702
		state	12.95	37	5.051		
Metacognitive strategies	Planning	trait	12.18	37	4.537	-.084	.934
		state	12.24	37	5.504		
	Monitoring	trait	21.76	37	6.930	-1.252	.219
		state	23.32	37	7.400		
	Evaluating	trait	18.11	37	6.841	-.833	.410
		state	19.11	37	7.292		

**p<.01

As shown in the Table 7, the highly successful student group doesn't have any statistically significant difference between trait and metacognitive strategy use. The highly

proficient students don't have lots of change on the perceived strategy use and the actual strategy use in the test situation. Although they use more the cognitive and metacognitive strategy in the actual test time, there is no statistically significant difference. Especially comprehending, monitoring and evaluating strategy use were in the negative correlated but these strategies were not statistically significant.

Table 8 also shows the difference of the moderately successful students' trait and state strategy use. On the contrary of the highly successful group, the differences of the trait and state strategy use on comprehending, memory and monitoring sections are statistically significant. These students are inclined to use less the cognitive and metacognitive strategy in the actual test situation.

TABLE 8

The Moderately Successful Students' Trait and State Strategy Use

Processing	Strategy		Mean	N	SD	t	Sig.
Cognitive strategies	Comprehending	trait	27.39	48	6.639	3.845***	.000
		state	23.78	48	7.409		
	Memory	trait	13.92	48	3.994	2.203*	.032
		state	12.29	48	4.387		
	Retrieval	trait	11.96	48	4.564	.704	.485
		state	11.49	48	4.369		
Metacognitive strategies	Planning	trait	12.84	48	4.165	1.568	.124
		state	11.73	48	5.223		
	Monitoring	trait	20.20	48	6.154	2.709**	.009
		state	17.92	48	6.140		
	Evaluating	trait	17.18	48	5.353	.598	.553
		state	16.63	48	6.660		

*p<.05, **p<.01,***p<.001

As shown in the Table 9, except for the evaluating strategy use, all strategy use had the statistically significant difference and the significance probability is the level of .000, .001 and .007 (**p<.01,***p<.001) There is a big discrepancy on the trait and state strategy use in the unsuccessful group. This means that they deploy more most of all strategy use in the actual test situation. When this group was compared with the highly proficient group, this unsuccessful students obviously use less the strategy in the test. Unsuccessful students seem to have not enough cognition and metacognition to solve the questions, though they thought they could make a use of strategies sufficiently.

TABLE 9

The Unsuccessful Students' Trait and State Strategy Use

Processing	Strategy		Mean	N	SD	t	Sig.
Cognitive strategies	Comprehending	trait	21.97	34	7.493	3.493***	.001
		state	17.29	34	6.917		
	Memory	trait	11.56	34	4.640	3.890***	.000
		state	8.41	34	4.626		
	Retrieval	trait	9.62	34	4.163	2.892**	.007
		state	7.06	34	3.961		
Metacognitive strategies	Planning	trait	11.50	34	4.724	3.716***	.001
		state	8.59	34	3.710		
	Monitoring	trait	16.26	34	6.002	4.072***	.000
		state	12.88	34	6.114		
	Evaluating	trait	13.59	34	5.609	.320	.751
		state	13.29	34	6.497		

p<.01,*p<.001

5) The Correlation Analysis of the Trait Cognitive and Metacognitive Strategy Use

In the table below, the correlations of students' reading test scores, the trait cognitive strategies and metacognitive strategies are positively correlated with the comprehending, retrieval, monitoring, evaluating strategy use at the value of .260, .272, .250, and .252 (p<.01) respectively. That is, the highly proficient students are, the more comprehending strategy is considered as being used

TABLE 10

The Correlations of the Trait Cognitive and Metacognitive Strategy Use

Trait Strategy Use Questionnaire		Score	Cognitive			Metacognitive		
			Comprehending	Memory	Retrieval	Planning	Monitoring	Evaluating
	Score	1						
Cognitive	Comprehending	.260(**)	1					
	Memory	.147	.427(**)	1				
	Retrieval	.272(**)	.658(**)	.508(**)	1			

Metac	Planning	.055	.699(**)	.443(**)	.506(**)	1		
ogn-	Monitoring	.250(**)	.613(**)	.506(**)	.567(**)	.573(**)	1	
itive	Evaluating	.252(**)	.657(**)	.508(**)	.662(**)	.569(**)	.747(**)	1

*p<.05, **p<.01

As shown in the Table 11, the correlations of students' reading test scores, the state cognitive strategies and metacognitive strategies are positively correlated with the comprehending , memory, retrieval, planning, monitoring, evaluating strategy use at the value of .533, .312, .431, .240, .511, and .309(p<.01), respectively. That is, the more does students know, the more the state strategies are actually used.

TABLE 11

The Correlations of the State Cognitive and Metacognitive Strategy Use

State Strategy Use Questionnaire		Score	Cognitive			metacognitive		
			Compre-hending	Memory	Retrieval	Planning	Monitoring	Evaluating
Score		1						
Cogn itive	Comprehending	.533(**)	1					
	Memory	.312(**)	.565(**)	1				
	Retrieval	.431(**)	.661(**)	.512(**)	1			
Meta	Planning	.240(**)	.605(**)	.464(**)	.488(**)	1		
cogni	Monitoring	.511(**)	.778(**)	.514(**)	.639(**)	.525(**)	1	
tive	Evaluating	.309(**)	.698(**)	.525(**)	.601(**)	.566(**)	.786(**)	1

*p<.05, **p<.01

V. CONCLUSION AND DISCUSSION

The present study investigated the difference of the trait and state strategy use and further checked whether there was any difference between the highly successful group, the moderately successful group and the unsuccessful group on these two types of strategy use. According to Barnett (1988), the trait strategy use is referred as generally perceived strategy use free from the context; the state strategy use indicates the actual strategy use in the test.

Although students have actually these kinds of strategy use, the extent of their perceived strategy use and the actual strategy use is statistically different. Through descriptive statistics, frequency analysis, one-way ANOVA, and correlations, it is indicated that the degree of the perceived strategy use is bigger than that of the actual use of strategy in the reading performance. Although students would like to use more strategy, they often lack the time needed.

Each item in the questionnaire was analyzed, which shows that the cognitive strategy use was more statistically significant than the metacognitive strategy use. In addition, it should be indicated that there were the statistically significant difference between the groups on each strategy use and the difference of the trait and state strategy use within each proficient group. That is, most of the trait and state strategy use had the significant difference of strategy use according to the students' proficiency level. It is identified that the highly successful test takers used actually more these strategies than the other groups.

However, when the trait and state strategy use were compared within one proficient level, the highly successful group had not statistically significant difference. Instead, three categories of the strategy use were statistically significant in the moderately proficient group; five out of six categories were statistically significant in the unsuccessful group. The more insufficient their proficiency to understand the reading text is, the less the strategies are used in the actual test situation.

To conclude, it is hoped that this study has not only helped make a contribution to understand the difference of perceived strategy use and the actual strategy use in the real test time, but also offered the insights of the difference of the trait/state strategy use between proficiency groups and within one proficiency group. Through this study, the test-makers and teachers can get some information on the difference of strategy use according to students' proficiency level and instruct them the appropriate cognitive and metacognitive strategy use. Also, students should be aware of their own limitation while reading testing and prepare the reading test correctly in keeping with their proficiency.

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APPENDIX A

Trait and State Strategy Use Questionnaires (Phakiti, 2007)

Part 1: Trait Strategy Use Questionnaire

Student ID: _____ Name: _____
Age: _____
No. of year learning English: _____

Directions: A number of statements which people use to describe themselves when they were taking a reading test are given below. Read each statement and indicates how you normally think or do when you read the textbook in English. Choose 0 (never), 1 (rarely), 2 (sometimes), 3 (often), 4 (usually) or 5 (always) on each statement that best describes your thinking.

item	Your thinking	0	1	2	3	4	5
1	I have a purpose in mind when I read.						
2	I figure out my goals of reading and what I need to do accomplish them.						
3	I plan the steps of my action before I read.						
4	I take an overall view of the text to see what it is about before reading it.						
5	I note the characteristics of the text, such as length, organization, sequence of events or procedures.						
6	I try to identify the main idea in the text and the relationships between them.						
7	I summarize the main information of the text.						
8	I try to understand the content of the text without looking up every word.						

9	I analyze what the author is trying to say.						
10	I make sure I understand/understood hidden meanings in the text.						
11	I translate the text from English into my native language.						
12	I guess the meanings of unknown words from context.						
13	I distinguish facts from opinions.						
14	I think about what will happen next while reading.						
15	I draw logical inferences about the text.						
16	I take notes or underline the text while reading to help me remember what I have read.						
17	I try to simplify the information to remember.						
18	I use typographical features, such as bold face, italics, pictures, tables or figures in the text to identify key information and refer to later on.						
19	I reread it several times to increase my understanding when the text becomes difficult to understand.						
20	I go back and forth to the text to connect the relationships among important ideas.						
21	I think about what I know to help me understand what I read.						
22	I relate the new information from the text to my prior knowledge about the topic being read.						
23	I relate the new information with the previous information I have read.						
24	I use grammar rules to understand the sentences in the context.						
25	I use knowledge of word stems and prefixes or suffixes to guess meaning of unknown words.						
26	I think about whether the content of the text fits my reading purposes.						
27	I make sure I understand/understood what I am reading.						
28	I check my understanding when I come across new information from the text.						
29	I check my comprehension as I move along my reading.						
30	When I lose my concentration in reading, I tell myself to come back to reading.						
31	I know when I should read more quickly or carefully.						
32	I notice when I am not sure I understand the text.						
33	I double-check my comprehension when I encounter ambiguous information						

34	As I read, I ask myself questions to stay on track.						
35	I know when I feel stressed from reading.						
36	I evaluate the accuracy of the information presented in the text.						
37	I test myself and check to see if my understanding of the test is supported by evidence available in the text.						
38	I correct my understanding immediately with evidence to support my new understanding.						
39	I assess my confidence in the correctness of my understanding using various criteria such as specific information in the text and my prior knowledge.						
40	I estimate how much I understand/understood from my reading						

Part 2: State Strategy Use Questionnaire

Student ID: _____ Name: _____
Age: _____
No. of year learning English: _____

Directions: A number of statements which people use to describe themselves when they were taking a reading test are given below. Read each statement and indicates how you were aware of your thinking during the completion of this test. Choose 0 (never), 1 (rarely), 2 (sometimes), 3 (often), 4 (usually) or 5 (always) on each statement that best describes your thinking.

item	Your thinking	0	1	2	3	4	5
1	I had a purpose in mind when I read.						
2	I figured out my goals of reading and what I need to do accomplish them.						
3	I planned the steps of my action before I read.						
4	I took an overall view of the text to see what it is about before reading it.						
5	I noted the characteristics of the text, such as length, organization, sequence of events or procedures.						
6	I tried to identify the main idea in the text and the relationships between them.						
7	I summarized the main information of the text.						
8	I tried to understand the content of the text without looking up every word.						
9	I analyzed what the author is trying to say.						

10	I made sure I understood hidden meanings in the text.						
11	I translated the text from English into my native language.						
12	I guessed the meanings of unknown words from context.						
13	I distinguished facts from opinions.						
14	I thought about what will happen next while reading.						
15	I drew logical inferences about the text.						
16	I took notes or underline the text while reading to help me remember what I have read.						
17	I tried to simplify the information to remember.						
18	I used typographical features, such as bold face, italics, pictures, tables or figures in the text to identify key information and refer to later on.						
19	I reread it several times to increase my understanding when the text becomes difficult to understand.						
20	I went back and forth to the text to connect the relationships among important ideas.						
21	I thought about what I knew to help me understand what I read.						
22	I related the new information from the text to my prior knowledge about the topic being read.						
23	I related the new information with the previous information I have read.						
24	I use/used grammar rules to understand the sentences in the context.						
25	I use/used knowledge of word stems and prefixes or suffixes to guess meaning of unknown words.						
26	I think/thought about whether the content of the text fits my reading purposes.						
27	I made sure I understood what I was reading.						
28	I checked my understanding when I came across new information from the text.						
29	I checked my comprehension as I moved along my reading.						
30	When I lost my concentration in reading, I told myself to come back to reading.						
31	I knew when I should read more quickly or carefully.						
32	I noticed when I was not sure I understood the text.						
33	I double-checked my comprehension when I encountered ambiguous information						

34	As I read, I asked myself questions to stay on track.						
35	I knew when I felt stressed from reading.						
36	I evaluated the accuracy of the information presented in the text.						
37	I tested myself and checked to see if my understanding of the test was supported by evidence available in the text.						
38	I corrected my understanding immediately with evidence to support my new understanding.						
39	I assessed my confidence in the correctness of my understanding using various criteria such as specific information in the text and my prior knowledge.						
40	I estimated how much I understand/understood from my reading						

APPENDIX B

Reading Comprehension Test

1. 밑줄 친 This[this]가 가리키는 것으로 가장 적절한 것은? [1 점]

This is one of the most important things to learn, and school gives students many opportunities to practice it. Once you're out of school, you can't always work with the people you want to, so it's good to learn this. My teachers often gave us group projects so that we could learn to work together. Sometimes we argued or didn't get along with others in our group. That only brought us failure for our projects, so we learned how important this is for particular purposes. I believe that this is the key to doing well in and out of school.

① courage ② challenge ③ creativity ④ confidence ⑤ cooperation

2. 다음 글의 목적으로 가장 적절한 것은? [1 점]

Do you dream of being a stunt actor like Jackie Chan or Michelle Yeoh? Are you tired of always sitting in the audience watching others living your dream? If you answered "Yes!" to these questions and you are a teenager between the ages of 17 and 19, we want to hear from you. Don't wait for the next new program to fascinate you. Learn how to make your own dreams come true. In just 12 weeks, we will give you the many skills that you need to become a stunt actor. Sign up for our special course for teens today. The first twenty applicants will have a chance to star in a TV ad for our school.

① 스턴트 배우 공연을 홍보하려고

② 스턴트 배우 자격조건을 알리려고
③ 스턴트 배우 지망생을 모집하려고
④ 스턴트 배우 사인회에 초대하려고
⑤ 스턴트 배우 양성과정 강사를 초빙하려고

3. 다음 글의 밑줄 친 부분 중, 어법상 <u>틀린</u> 것은?

Although Earth's oceans are full of life, many sea creatures are in danger of ① <u>disappearing</u>. For example, populations of large fish, such as tuna and shark, ② <u>have dropped</u> by 90% since 1950. The drop is largely due to increasing fishing along with rising ocean temperatures. Many countries have passed laws ③ <u>which</u> limit fishing in certain areas and forbid the fishing of endangered species. The scientists involved in ocean science ④ <u>hopes</u> that by understanding and learning more about sea life, they can encourage even more people ⑤ <u>to protect</u> the species that live in the oceans. *species: (생물)종

4. 다음 글에서 전체 흐름과 관계 <u>없는</u> 문장은?

Information technology, or infotech involves putting things—words, music, sounds, etc—into digitized form, the language of computers. Infotech has already taken over our lives. ① Instead of writing a letter with pen and paper then mailing it, we send an e-mail. ② We read e-books, digital books whose format may be plain text, HTML, PDF, or any of a variety of digital formats. ③ Romance is one of the genres to become successful in the e-book field. ④ Music can also be stored digitally as MP3 or WAV files then changed back into sound that we can hear. ⑤ We enjoy watching movies with DVDs in which pictures and sounds are converted to digital data. Basically almost everything we see or hear today comes to us in digital form.

5. 다음 글의 빈칸에 들어갈 말로 가장 적절한 것을 고르시오.

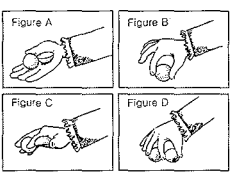
Pallas and Charlotte started a _____in San Jose, California. They knew that many women didn't find jobs because they didn't have the right clothes for a job interview. Poor women have to use their money to buy food and clothes for their children. They can't buy clothes for themselves. Pallas and Charlotte started their business in 1992 after they heard about a store like this in Chicago. Volunteers work in the store. Working women donate most of the clothes to the store. This makes it possible for the customers to get clothes for free. But clothes aren't the only things women get at the store. They also get confidence.

① local job center ② job training program ③ social club for women
④ free fashion design school ⑤ non-profit store to help women

6. Believe it or not, the circus has helped _____. In the late 1700s, few American people had ever seen lions, tigers, elephants, or other wild animals. In 1796, the first elephant was brought to America and became part of a circus in New York. Later other jungle animals were added. For the first time, millions of people got a chance to see and learn about these animals. Circuses also showed the light bulb just a few years after it was invented in 1879. Many people got their first view of a car in a circus, too. And in 1897, circuses were among the first to show a new invention called "the movies."

① make many modern inventions
② show new technology to America
③ introduce many things to America
④ keep endangered jungle animals safe
⑤ increase the population of wild animals

6. 다음 그림에 대한 글의 내용 중, 밑줄 친 낱말의 쓰임이 적절하지 않은 것은?



A magician is an actor who distracts the audience so he or she can do things unnoticed. One type of magic trick is called *sleight-of-hand*. The illustrations show a magician doing the trick. As shown in Figure A, this trick requires a rubber ball and a special metal ①half-shell that looks like a ball. In Figure B, when the two are put together, the audience sees only one ball. Secretly, as in Figure C, the magician ②separates the shell from the ball. Then holding up the rubber ball, and showing the shell from the ③innerside, it looks as though two balls have ④appeared as shown in Figure D. The magician makes it look as if one ball ⑤transforms into two balls.

7. 다음 글에 드러난 필자의 심정으로 가장 적절한 것은?

I recently began attending a famous high school in Oxford on scholarship. It takes two hours or more each way to commute. In the beginning, I was willing to accept the challenge and make it work. However, as the long days continue, I'm wondering if it's worth it. I don't seem to relate to any of my classmates and I'm not sure this school is right for me. Also, my relationship with my family has gotten worse since I started. I come home too tired to talk with them. I know this school will create a bright future for me, but should I drop out? Or should I exchange happiness in my life now for success in the future? *commute: 통학(통근)하다

① bored ② confused ③ excited ④ hopeful ⑤ ashamed

8. 다음 글에서 필자가 주장하는 바로 가장 적절한 것은? [3 점]

Sometimes we allow ourselves to get all worked up about things that aren't really that big a deal. We focus on little problems and concerns. A stranger, for example, might cut in front of us in traffic. Rather than simply let it go, we convince ourselves that we are justified in our anger. Many of us might even tell someone else about the incident later on. We can't get it out of our mind. There are many similar small stuff examples like this that occur every day in our lives. If we live like this, we will lose touch with the magic and beauty of life.

① 교통 법규를 잘 지켜라.
② 사소한 것에 집착하지 마라.
③ 주위 사람들에게 친절하게 대하라.
④ 일상생활에서 아름다움을 발견하라.
⑤ 사고가 발생했을 때 침착하게 대처하라.

9. 다음 글의 주제로 가장 적절한 것을 고르시오.

Each year about 715 million bills wear out. That's enough paper money to fill nearly 2,000 garbage trucks. In the past, old money was cut into small pieces and buried in landfills. *But now*, after being torn into very small thin pieces, old money is used to make new things. It may be used to make writing paper or cardboard. It can also become packing material. When mixed with cement, old money is used to make fire resistant roof tiles. The money makes the tiles stronger. Homes that use these tiles might just have million dollar roofs.

① ways of burying old money
② historic value of old money
③ new products from old money
④ amounts of old money for making tiles
⑤ quality of things made from old money

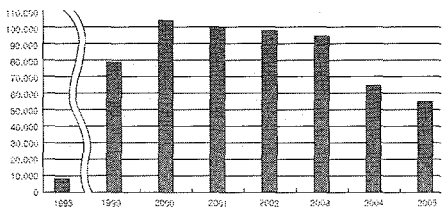
10. 글의 흐름으로 보아, 다음 주어진 문장이 들어가기에 가장 적절한 곳은?

The emperor found out about this and put the priest in prison.

Claudius, Emperor of Rome, wanted to increase the size of his army. (①) Therefore, he made a rule that no young man could marry until he had served a certain number of years in the army. (②) A priest named Valentine broke the rule and performed secret marriages for many young couples.

(③) Valentine remained there until his death on February 14. (④) After his death, Valentine was named a saint. (⑤) Later it became a custom for lovers to send each other messages on this day.

11. 다음 도표의 내용과 일치하지 <u>않는</u> 문장은?



Number of Foreign Industrial Trainees

The above chart shows the number of foreign industrial trainees staying in Korea from 1993 to 2005. Korean companies with foreign branches have been allowed to bring trainees into Korea since 1991. (1)In the first few years, the number of foreign trainee entrants was relatively small, about 8,000 in 1993. (2)However, we can see the remarkable increase in their number in 1999, approximately ten times as large as that of 1993. (3)The rising number of industrial trainees reached its peak in 2000. (4)Then, the number started to gradually decline between 2001 and 2003. (5)This was followed by a sudden rise in the next two years. *entrant: 입국자

12. Ice golf에 관한 다음 글의 내용과 일치하는 것은?

Some golfers like to play on ice near the Arctic. This allows them to enjoy beautiful views of the cliffs and peaks of ice mountains. Though golfers can enjoy beautiful scenery, they also face many difficulties. They have to wear goggles to protect their eyes from snow blindness. Of course, they cannot play golf with a white ball on an ice field because the ball would be too difficult to see. Many people use orange balls. The golfers also have to avoid being eaten by killer whales and polar bears, or falling into the freezing waters. Sometimes the ice field moves, so the course is different every day. Ice golf turns an otherwise leisurely sport into an extreme sport. *the Arctic: 북극

① 강한 바람 때문에 보호 안경을 쓴다.
② 눈처럼 하얀 공을 사용한다.
③ 야생동물로부터 안전한 경기이다.
④ 경기 중 물에 빠질 위험은 없다.
⑤ 코스가 매일 달라진다.

13. 다음 글의 제목으로 가장 적절한 것을 고르시오.

Peasants were people who farmed land that was owned by someone else. In return for the use of the land, the peasant farmers had to pay rent or give the owner half of what they grew. Peasants arose at sunrise to begin working, and they worked in the fields until sunset. Their homes were small, wet, cold, and with little furniture. At night, peasants would sit near the fire for warmth and do housework by candlelight. The food they ate was poor. Their main foods were thin soup and bread. Meat was served only on special days, often not more than once a month.

① Hard Life of Peasants
② Social Status of Peasant Farmers
③ Peasants' Meal, Symbol of Unequality
④ Severe Working Condition of Peasants
⑤ Relation Between Peasants and Land Owners

14. 다음 글의 내용을 한 문장으로 요약하고자 한다. 빈칸 (A)와 (B)에 들어갈 말로 가장 적절한 것은?

People usually choose their pet dogs according to their appearance. But you have to think over what kind of pet dog is good for you in order to live together in harmony. If you want to keep it in an apartment, it's not proper to choose a Golden Retriever which likes to play outside. If you are looking for a guard dog, you have to choose an aggressive dog such as a Great Dane. Showy dogs such as Puddles and Yorkshire Terriers are good for a person who has a marked individuality. For a person who has a lot of dogs already, sociable dogs like a Pug or a Bulldog are perfect.

➔ When you are looking for a __(A)__ pet dog for you, consider its __(B)__

(A)		(B)
① suitable	---	popularity
② faithful	---	character
③ cute	---	appearance
④ faithful	---	popularity
⑤ suitable	---	character

Appendix C

The Difference of Trait and Sate Strategy Use of Individual Items

A. The Cognitive Trait and Sate Strategy Use

Cognitive strategy use	Item	Strategy	Mean	SD	t	Sig.
Comprehending	6	trait	3.19	1.525	2.775**	.006
		state	2.79	1.389		
	7	trait	2.60	1.315	1.018	.311
		state	2.46	1.374		
	8	trait	2.98	1.466	-2.748**	.007
		state	3.40	1.290		
	9	trait	2.40	1.399	1.611	.110
		state	2.18	1.461		
	10	trait	2.57	1.365	2.781**	.006
		state	2.15	1.346		
	11	trait	3.03	1.481	2.238*	.027
		state	2.69	1.639		
	12	trait	3.01	1.332	1.045	.298
		state	2.85	1.526		
	13	trait	2.32	1.215	4.039***	.000
		state	1.77	1.192		
	14	trait	2.29	1.318	4.036***	.000
		state	1.73	1.366		
	15	trait	1.96	1.212	-.179	.858
		state	1.98	1.408		
Memory	16	trait	2.19	1.501	2.866**	.005
		state	1.75	1.551		
	17	trait	2.33	1.372	.889	.376
		state	2.19	1.414		
	18	trait	2.52	1.372	1.585	.116
		state	2.28	1.462		
	19	trait	3.27	1.366	2.719**	.008
		state	2.88	1.568		
	20	trait	2.82	1.243	3.099**	.002
		state	2.35	1.499		

Retrieval	21	trait	2.61	1.276	2.008*	.047
		state	2.33	1.378		
	22	trait	2.66	1.441	2.497*	.014
		state	2.36	1.477		
	23	trait	2.33	1.433	.363	.717
		state	2.27	1.442		
	24	trait	2.01	1.345	2.130*	.035
		state	1.74	1.346		
	25	trait	2.18	1.396	.566	.572
		state	2.10	1.399		

B. The Metacognitive Trait and Sate Strategy Use

Metacogitve strategy	item		Mean	SD	t	Sig
Planning	1	trait	2.94	1.410	2.898**	.004
		state	2.56	1.472		
	2	trait	2.40	1.214	.424	.672
		state	2.34	1.320		
	3	trait	1.74	1.294	1.458	.147
		state	1.55	1.408		
	4	trait	2.78	1.498	3.445***	.001
		state	2.33	1.630		
	5	trait	2.50	1.192	1.420	.158
		state	2.29	1.386		
Monitoring	26	trait	2.07	1.364	-.058	.954
		state	2.08	1.278		
	27	trait	2.98	1.316	4.825***	.000
		state	2.26	1.328		
	28	trait	2.02	1.310	-.976	.331
		state	2.17	1.261		
	29	trait	1.63	1.396	-3.647***	.000
		state	2.16	1.396		
	30	trait	2.91	1.602	1.266	.208
		state	2.69	1.678		

Evaluating	31	trait	2.55	1.566	1.190	.237
		state	2.35	1.592		
	32	trait	3.59	1.352	3.996***	.000
		state	3.02	1.522		
	33	trait	2.00	1.506	1.941	.055
		state	1.68	1.433		
	34	trait	3.45	1.443	.338	.736
		state	3.40	1.406		
	35	trait	2.55	1.571	-.447	.656
		state	2.63	1.646		
	36	trait	1.88	1.319	.857	.393
		state	1.76	1.396		
	37	trait	1.91	1.239	-3.181**	.002
		state	2.38	1.413		
	38	trait	2.34	1.281	.240	.811
		state	2.31	1.562		
	39	trait	2.26	1.369	.490	.625
		state	2.18	1.341		
	40	trait	2.20	1.487	.573	.568
		state	2.10	1.511		

*p<.05, **p<.01, ***p<.001

Examples in: English
Applicable Languages: English
Applicable Levels: Secondary

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