

***A Comparative Study in the Use of Cognitive and
Metacognitive Strategies by Freshmen and Seniors English
Majors in Learning English***

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Introduction and Theoretical Background

The process of learning is recognized as a major axis in the field of educational psychology. So, the educational psychologists consider learning skills as a central domain to all human beings. These learning skills are put under investigation, analysis and interpretation. Many Researches performed in the field of language learning has focused on the processes through which a second / foreign language is learned as well as the learner's production of the target language. In this respect, Block (2001) indicates that teachers enter the classroom with two different goals: First, goals concern with the products of learning, or what students should know or be able to do as a result of learning. Second, goals concern with the processes of learning, or the techniques and the strategies students use to accomplish the learning task. The two goals reveal that EFL learners are the center of the learning process.

As a matter of fact, Research into the area of language learning strategies began in the 1970s as part of the movement away from teaching-oriented perspective, to the interest in how the action of learners might affect their acquisition of language. In this domain, researchers (Rubin, 1975; Stern, 1975; Naiman, 1987; Prokop, 1989) realized that aptitude is not the only factor which indicates language learning success. On the other hand, language achievement depends vastly on learners' endeavors and efficiency. This leads to a great interest in how individual learners approach and control their own learning and use of language. In this sense, learning strategies are defined as thinking, problem-solving processes that the learner deliberately initiates, incorporates and applies to construct meaning" Routman (2000: 130).

The idea of using strategies in language learning is emerged from the Information-processing model (IPM), which is recognized as the learners' unique method of receiving and processing the learned

material and the way learners generalize, discriminate, transfer or retrieve the information. In other words, the processing of the information indicates functioning learners' mental effort and using big deal of correlations between the components of learned material and the cognitive construction in the learners' long-term memory which leads to a permanent and effective learning (Slavin, 2000).

The recognition of language learning strategies (LLS) is derived from researchers' and educators' realization that students are not passive subjects who respond to what is taught. On the contrary, some students seem to be successful no matter what teaching methods or techniques are used while others seem unsuccessful despite the efforts applied (Prokop, 1989; Cohen, 2000). This situation occupies researchers' thinking who assumes that some of the students' success could be attributed to particular sets of cognitive and metacognitive strategies which learners engage in (Rubin, 1998). Accordingly, significant shift has taken place in the field of education resulting in greater stress on learners' learning than on teachers' teaching. Hence, recent researches in the field of ESL/EFL acquisition (Bertolait-Fuller, 1997; Grainger, 1997; Herzog, 1995) have focused on learning as a goal for identifying the appropriate LLS that will enable students to acquire the language and become successful learners.

Learning strategies play an important role in the process of second/foreign language, and the use of these strategies is considered as an important factor in the success of language learning. In this sense, Yang (1993;1) states that better understanding of learning strategies is important for several reasons:

- *Students who are successful language learners use strategies regularly; good learners know how to organize and use information most effectively for acquiring more skills.*
- *Many students who do not yet use the strategies can learn how to use them.*
- *Students who have acquired learning strategies can better store and retrieve vocabulary and important concepts in the new language.*
- *Students can use learning strategies when a teaching strategy is not working or the material is too difficult.*

The significance of language learning strategies is derived from being "tools for active, self-directed involvement which is essential for developing communicative competence"(Oxford, 1995: 5). Appropriate

language learning strategies can improve learners' proficiency and their self-confidence. Pei-Yu (1995) claims that cognitive and compensation strategies will lead to a high proficiency level. , Graham (1997) also proves that the major factor that can influence successful transition to advanced level is the language learning strategies that the students either develop themselves or have been taught. The use of language learning strategies can also give a new way of organizing or approaching difficult tasks, provide the students with additional resources for gaining greater competency in important skills and focus their attention on learning tasks(Ploetz, 1999; Stewner-Manazaneres et al, 1985). Oxford (1994: 5)acknowledges that clusters of learning strategies related to particular skills or tasks have more impact on language learning than single strategies; exactly the same as cognitive and metacognitive learning strategies often support each other and therefore aid the process of language learning. Moreover, Oxford et al (1989: 35) claims that learning strategies help language learners participate actively in the realistic communicative situations found in the classroom: various metacognitive strategies are instrumental in situations where information must be obtained, compensation strategies help learners overcome inadequate linguistic knowledge, cognitive strategies aid learners in using their cognition to understand and produce language, social strategies help elicit information and encourage communication and affective strategies give learners the courage and determination to cope with and overcome difficulties in communication. In the same perspective, Rubin (1987) indicates that language learning strategies help learners learn more about how to learn and what they want to learn; they become focused in their objectives and in their approach to these objectives, and they can continue to learn even in the absence of the teacher. Specifically, the importance of learning strategies lurks in its ability to be trainable. In this domain, researches (Cohen, 1990; Vance, 1990; Oxford & Croocall, 1989; Chamot et al, 1988) suggest that training students to the use of learning strategies can help them become better language learners. Moreover, Walqui(2000) argues that students' sense of autonomy can be developed through the teaching of strategies that enable students to approach different tasks successfully. She elaborates that the teaching of metacognitive strategies is a way of handing responsibility to the learners as they acquire skills and knowledge. Agreeing with Walqui's view, Anstrom(2000: 6) insists on the importance of integration of strategy training into the curriculum,

reporting, “even those students who know how and when to apply learning strategies can benefit from thinking strategies use and learning new strategies”. Similarly, Gilbert (1986), who encourages researchers to explore the trainability system of cognitive learning strategies, assures that metacognitive strategies appear to be highly trainable and they are more influential than lower level strategies. He elaborates that although poor learners cannot spontaneously use metacognitive strategies, it seems very easy for them to get both their significance and application when they are specifically trained. The importance of language learning strategies training enthuses researchers such as Chamot and O’Malley (1994: 27) to construct instructional models depending on language learning strategies teaching; the cognitive academic language learning approach (CALLA) is one but rather most famous models that is constructed by Chamot and O’Malley, aiming at integrating learning strategies with instruction in academic language and content, believing that students will learn academic language and content more effectively by using learning strategies; besides, incorporating the use of learning strategies within the content enables students see the relationship between the strategies they use and their own learning effectiveness, and gain greater autonomy as a learner.

Researchers’ efforts did not stop at the extent of identifying strategies for language learning. They proceeded further to investigate variables that affect the use of learning strategies. A study by Bertolait-Fuller (1997) indicates that students who demonstrate a higher degree of motivation would tend to employ more strategies than students who lack this motivation. Oxford (1989) adds that learning style has a significant influence on students’ choices of learning strategies. Moreover, differences in gender have their own effect. Female students use relatively more strategies than do male students (Kaylany, 1996). Researchers have also classified language learning strategies into different categories according to various criteria such as whether they contribute directly or indirectly to language learning (Rubin, 1987; Oxford, 1990); whether they are cognitive or metacognitive and whether they meet the requirements of the language tasks they practice in the classroom, in individual study or during interaction with others (Poltzer, 1999; Mccarthy, 2000). While taxonomies and inventories are comprehensive, they often vary in terminology and definitions; yet, most investigators refer to three types of strategies: cognitive, metacognitive and social-affective (Oxford & Crookall, 1990)

One major strategy classification is attributed to Oxford (1990:16). She classified strategies into two classes: direct and indirect, with the former including memory, cognitive and compensation strategies, whereas the latter encompasses metacognitive, affective and social strategies. These strategies were defined according to Oxford as follows (1990:38):

- 1. Memory strategies, or as sometimes called mnemonics, are “powerful mental tools” which include techniques that help the learners store new information in memory and retrieve it when it is needed.*
- 2. Cognitive strategies, as defined by Ehrman & Oxford (1990: 312), refer to skills that involve manipulation or transformation of the language in some direct way. Cognitive strategies are essential in learning a new language. Cognitive strategies consist of practicing, sending and receiving messages, analyzing and reasoning and creating structure for input and output.*
- 3. Compensation strategies enable learners to use the new language for either comprehension or production despite limitation in knowledge. (Oxford, 1990)*
- 4. Metacognitive strategies or “beyond-the-cognitive” strategies are actions which go beyond purely cognitive device, and which provide a way for learners to coordinate their own learning processes. Metacognitive strategies include centering your learning, arranging and planning your learning and evaluating your learning.*
- 5. Affective strategies are techniques which help learners gain better control over their emotion, attitudes and motivation related to language learning.*
- 6. Social strategies refer to actions concerning other people in the language learning process.*

Background of the Problem:

English major students are facing serious difficulties in coping with lectures where English is the medium of instruction. As a result, many of these students withdraw from English major and switch to another, while others are successful and are able to overcome language learning difficulties. This situation supports what is proved by the previous studies that successful learners use learning strategies that can improve their performance. A quick glance on the table below indicates the number of students enrolled in English major in the last two years. It also shows the number of students who failed and the number of students who dropped out

Table I. Failure and Withdrawal of EFL students

| Students on Roll | | | Students Left | | | Balance | Percentage |
|------------------|---------------|-------|---------------|-----------|-------|---------|------------|
| New | From Previous | Total | Failure | Drop-outs | Total | | |
| 307 | 100 | 407 | - | 107 | 107 | 300 | 26.3% |
| 172 | 300 | 472 | 212 | 73 | 285 | 187 | 60.4% |

The rates of students' failure and withdrawal to the total number of the new students indicates a serious problem that could be attributed to the inappropriate use of language learning strategies, for Buehl(2001) has assured that successful learners use appropriate learning strategies that can help in improving their performance. In addition, Al-Saeed(1995) has proved that learners' success is referred to the appropriate use of language learning strategies that are suitable to their own stage of language learning, personality type, age, and purpose of learning the language.

Statement of the Problem:

Previewing the results indicated by the previous studies, it is found that many of these studies have recommend the need for investigating the use of cognitive and metacognitive strategies by college students (Abu Ghararah, 1996) while others have recommend the need for comparative studies between beginners and advanced students in the use of language learning strategies (Chen, 1995 & Torut, 1994 & Al Saeed, 1995). On the other hand, it is indicated through surveying the Saudi universities that there are few studies which handle the topic of language learning strategies despite the fact which reveals that developing the process of learning a language should be preceded by the identification of learning strategies (Abu Maghli et al, 1997). Accordingly, this study intends to identify the uses of cognitive and metacognitive strategies by freshmen and seniors English majors while learning English grammar and vocabulary and to detect the distinction in the relationship between the application of the categories of cognitive and metacognitive strategies used by the freshmen and seniors while learning grammar and vocabulary.

Questions of the Study:

The problem of the study will be specified through the following major questions:

First: What cognitive and metacognitive strategies that are used by the freshmen and the seniors' English majors to learn grammar and vocabulary?

Second: What are the correlations between the application of the categories of cognitive and metacognitive strategies used by the freshmen and the seniors' English majors while learning grammar and vocabulary?

The following sub- questions can be emerged:

- 1. What kinds of cognitive strategies do freshmen and seniors' English majors use while learning grammar and vocabulary?*
- 2. What kinds of metacognitive strategies do freshmen and seniors' English majors use while learning grammar and vocabulary?*
- 3. What is the correlation between the application of the categories of cognitive and metacognitive strategies used by the freshmen and the seniors' English majors while learning grammar?*
- 4. What is the correlation between the application of the categories of cognitive and metacognitive strategies used by the freshmen and the seniors' English majors while learning vocabulary?*

Hypotheses of the Study:

The following hypotheses were tested in this study:

- 1. There are no statistically significant differences in the kinds of cognitive strategies used by the freshmen and the seniors' English majors while learning English grammar and vocabulary.*
- 2. There are no statistically significant differences in the kinds of metacognitive strategies used by the freshmen and the seniors' English majors while learning English grammar and vocabulary.*
- 3. There are no statistically significant correlation between the application of the categories of cognitive and metacognitive strategies used by the freshmen and the seniors' English majors while learning English grammar and vocabulary.*

The purpose of the Study:

The current study was of twofold purpose:

- 1. It aimed at identifying the cognitive and metacognitive strategies used by the freshmen and the seniors' English majors to learn grammar and vocabulary.*
- 2. It aimed at exploring the relationship between the applications of the categories of cognitive and metacognitive strategies used by the freshmen and the seniors' English majors while learning grammar and vocabulary.*

Significance of the Study:

The study has both theoretical and practical significances:

The theoretical significance:

- 1. Language learning strategies domain is considered as an important issue for research because it allows students to be actively involved in the learning process.*
- 2. The use of language learning strategies facilitates and enhances language learning especially for adults who must constantly be prepared to face life's changing circumstances.*
- 3. Language learning strategies are considered as one of the promising learned capabilities which cause positive changes in the learners' learning ability.*

The practical Significance:

- 1. To the best knowledge of the researcher, this study is one of the few studies that attempt to investigate the use of language learning strategies by college EFL learners.*
- 2. It will present some pedagogical implications that give EFL teachers an insight into the learning behavior of the students in order to teach them effectively.*
- 3. Supervisors, curricula designers as well as textbook writers will benefit from the results of this study. Supervisors will vary their supervising activities to raise the teachers' awareness about the importance of LLS instruction. Curricula designers and textbook writers will produce EFL texts and teaching aids in a way that may suit students' learning behavior and improve their achievements in English.*
- 4. The research instrument for gathering data may function as a tool for drawing students' attention to acquire other learning strategies that they do not know about.*
- 5. Many researchers (Torut: 1994; Al-Saeed: 1995, Chen: 1995) have recommended that more studies are needed to detect the correlations in the use of language learning strategies among EFL college students.*
- 6. Teachers outside the language field may find practical ideas within the LLS since these strategies can be applicable to other subject areas.*

Research Design:

The study is descriptive and analytic in its nature. Through this descriptive analytic research, students' uses of cognitive and metacognitive strategies in learning English grammar and vocabulary are identified by using self-reported questionnaire. In addition, the correlation between the uses of cognitive and metacognitive strategies and the learning of English grammar and vocabulary are also explored as a matter of finding out how these strategies work with language tasks.

Subjects of the Study:

The subjects, who represented the population of the study, consists of (426) female freshmen and seniors' English majors. The subjects are ranged from 19 to 22 years of age. The entire subjects, whose native language is Arabic, had studied English for six years in both intermediate and secondary schools. The subjects are divided into two groups. The first group includes 211 freshmen (66.8%) out of 313 enrolled in the same academic year. The second group consists of 105 seniors (33.2%) out of 113 of the same grade. The decrease of numbers of students was due to their absence on the day of administrating the questionnaire.

Instrumentation:

For the purpose of the current study, a questionnaire, entitled as "Cognitive and Metacognitive Strategies Questionnaire in Learning Grammar and Vocabulary" (CMSQ), is designed by the researcher to obtain the needed data for the study. The questionnaire consists of five sections. The first section of the questionnaire package is a letter to introduce the topic of the study to the students, to explain the purpose of the study and to instruct the students to how to respond to the statements of the questionnaire. The second section of the questionnaire package consists of 19 statements concerned with the uses of cognitive strategies in learning English grammar. The third section of the questionnaire package includes 21 statements concerned with the uses of cognitive strategies in learning English vocabulary. The fourth section encompasses 20 statements pertained to the uses of metacognitive strategies in learning English grammar. The last section includes 20 statements focused on metacognitive strategies in learning English vocabulary.

Questionnaire's Reliability:

Two basic methods are used to estimate the reliability of the questionnaire: Cronbach's alpha through which the overall internal consistency of the questionnaire appeared to be highly reliable (.92) and split half which also emphasizes the high consistency and reliability of the questionnaire (.91).

Questionnaire Validity:

In order to estimate the questionnaire's validity, content validity and face validity are utilized. Achieving content validity, the questionnaire is submitted to ten professors in English education, applied linguistics and teaching methodology to examine the accuracy and the suitability of the statements. The panels of experts are also requested to find the relation of the statements to the objectives of the study. Suggestions are given to omit 14 statements because they are unrelated to the topic, and 13 statements are modified to make them understandable and within the level of the students.

To check the face validity of the questionnaire, 6 statements are dropped from The section of cognitive strategies in learning grammar, 18 statements are omitted from the section cognitive strategies in learning vocabulary, 17 statements are excluded from the section of metacognitive strategies in learning grammar while 6 statements are dropped from the section of metacognitive strategies in learning vocabulary. The reason for the elimination of the statements is due to the recommendations of the panels of experts who found that the overall number of the statements of the questionnaire is too big (127 statements). Accordingly, the statements of the questionnaire are reduced to 80 items.

Statistically, discriminative validity is achieved to detect the validity of the questionnaire (see Table 2). T- testis utilized to explore the comparison and therefore to obtain the significance (Al-Tabib, 1999).

The results of the t-test, as shown in Table 13, indicates that the questionnaire is valid except for statements 16, 18, 28, 33, 36, 39 and 40. Therefore, these items are excluded from the questionnaire in order to enhance its validity.

Data Analysis:

Data treatments are carried out using the Statistical Package for the Social Science (SPSS). The treatments covered four analyses as follows:

Table 2. Relationship between the Means of Two Groups Using T. test

| IT | M | | STD. | | T. | SIG | IT | M | | STD. | | T. | SIG |
|----|------|------|------|------|-------|------|----|------|------|------|------|-------|------|
| | H | L | H | L | | | | H | L | H | L | | |
| 1 | 3.73 | 2.74 | 1.15 | 1.06 | -3.56 | .001 | 2 | 3.52 | 2.35 | 1.03 | 1.31 | -3.92 | .000 |
| 3 | 3.21 | 2.10 | 1.34 | 1.16 | -3.56 | .001 | 4 | 3.48 | 2.26 | 1.20 | 1.29 | -3.92 | .000 |
| 5 | 4.52 | 3.42 | .83 | 1.18 | -4.27 | .000 | 6 | 3.36 | 2.10 | 1.39 | 1.08 | -4.10 | .000 |
| 7 | 3.33 | 2.00 | 1.29 | 1.06 | -4.52 | .000 | 8 | 3.15 | 2.16 | 1.39 | 1.29 | -2.95 | .001 |
| 9 | 2.24 | 1.48 | 1.35 | 1.00 | -2.57 | .01 | 10 | 1.97 | 1.42 | 1.33 | .62 | -2.13 | .01 |
| 11 | 3.52 | 2.52 | 1.12 | 1.12 | -3.56 | .001 | 12 | 4.79 | 4.26 | .48 | 1.00 | -2.67 | .01 |
| 13 | 4.70 | 3.77 | .53 | 1.41 | -3.43 | .001 | 14 | 4.18 | 3.58 | 1.18 | 1.15 | -2.06 | .01 |
| 15 | 3.73 | 2.71 | 1.18 | 1.19 | -3.43 | .001 | 16 | 3.39 | 3.10 | 1.52 | 1.47 | -7.79 | N.S |
| 17 | 4.06 | 3.10 | 1.32 | 1.47 | -2.75 | .001 | 18 | 3.82 | 3.74 | 1.57 | 1.37 | -2.20 | N.S |
| 19 | 4.27 | 2.97 | .94 | 1.17 | -4.89 | .000 | 20 | 4.55 | 3.68 | .71 | 1.05 | -3.86 | .000 |
| 21 | 4.30 | 3.61 | .95 | 1.12 | -2.65 | .01 | 22 | 4.70 | 3.13 | .59 | 1.12 | -2.96 | .000 |
| 23 | 3.97 | 2.45 | 1.05 | 1.12 | -5.59 | .000 | 24 | 4.18 | 3.10 | .73 | 1.04 | -4.79 | .000 |
| 25 | 3.88 | 2.16 | 1.17 | 1.34 | -5.44 | .000 | 26 | 4.52 | 3.84 | .80 | 1.18 | -4.07 | .000 |
| 27 | 3.88 | 3.03 | 1.27 | 1.49 | -2.43 | .01 | 28 | 4.64 | 4.29 | .74 | 1.19 | -1.38 | N.S |
| 29 | 4.15 | 3.52 | 1.00 | 1.06 | -2.45 | .01 | 30 | 4.12 | 2.32 | .93 | 1.25 | -6.50 | .000 |
| 31 | 4.42 | 3.61 | .90 | 1.38 | -2.76 | .001 | 32 | 2.61 | 1.68 | 1.22 | .94 | -3.41 | .001 |
| 33 | 3.73 | 3.39 | 1.18 | 1.12 | -1.18 | N.S | 34 | 4.12 | 2.97 | .96 | 1.40 | -3.81 | .000 |
| 35 | 4.00 | 2.52 | 1.12 | 1.29 | -4.90 | .000 | 36 | 3.06 | 2.97 | 1.46 | 1.30 | -.26 | N.S |
| 37 | 3.94 | 2.71 | 1.03 | 1.07 | -4.67 | .000 | 38 | 4.30 | 3.61 | .81 | 1.26 | -2.59 | .01 |
| 39 | 3.48 | 3.00 | 1.00 | 1.15 | -1.78 | N.S | 40 | 4.06 | 3.65 | 1.06 | 1.08 | -1.55 | N.S |
| 41 | 3.33 | 2.03 | 1.11 | .91 | -5.1 | .000 | 42 | 4.58 | 3.39 | .79 | 1.23 | -4.56 | .000 |
| 43 | 4.18 | 3.35 | .92 | 1.23 | -3.0 | .001 | 44 | 4.73 | 3.23 | .52 | 1.06 | -7.15 | .000 |
| 45 | 4.76 | 3.94 | .56 | 1.12 | -3.7 | .001 | 46 | 4.39 | 2.77 | .75 | 1.02 | -7.19 | .000 |
| 47 | 4.48 | 3.13 | .67 | 1.09 | -4.0 | .000 | 48 | 2.88 | 1.58 | 1.17 | .67 | -5.49 | .000 |
| 49 | 2.61 | 1.55 | 1.32 | .77 | -3.9 | .000 | 50 | 3.30 | 1.61 | 1.31 | .76 | -6.35 | .000 |
| 51 | 3.09 | 1.87 | 1.26 | 1.02 | -4.3 | .000 | 52 | 3.09 | 1.61 | 1.53 | .80 | -4.88 | .000 |
| 53 | 3.18 | 1.74 | 1.33 | 1.03 | -4.8 | .000 | 54 | 3.67 | 1.87 | 1.19 | 1.02 | -6.48 | .000 |
| 55 | 4.39 | 3.26 | .75 | 1.48 | -3.8 | .000 | 56 | 4.55 | 3.35 | .62 | 1.05 | -5.48 | .000 |
| 57 | 4.82 | 3.68 | .46 | 1.17 | -5.1 | .000 | 58 | 4.61 | 3.35 | .56 | 1.05 | -5.90 | .000 |
| 59 | 4.58 | 2.94 | .66 | 1.09 | -7.2 | .000 | 60 | 4.36 | 3.16 | .74 | 1.19 | -4.82 | .000 |
| 61 | 4.61 | 3.45 | .56 | 1.21 | -4.9 | .000 | 62 | 4.45 | 3.42 | .71 | 1.12 | -4.38 | .000 |
| 63 | 4.42 | 3.23 | .71 | .96 | -5.7 | .000 | 64 | 4.70 | 3.39 | .53 | 1.20 | -5.58 | .000 |
| 65 | 3.33 | 2.26 | 1.45 | 1.18 | -3.3 | .001 | 66 | 3.94 | 2.71 | 1.25 | 1.27 | -3.90 | .000 |
| 67 | 3.91 | 2.65 | 1.18 | 1.25 | -4.1 | .000 | 68 | 3.82 | 2.32 | .98 | 1.28 | -5.23 | .000 |
| 69 | 3.30 | 2.06 | 1.29 | 1.15 | -4.1 | .000 | 70 | 3.21 | 1.90 | 1.36 | 1.01 | -4.37 | .000 |
| 71 | 4.48 | 3.74 | .91 | 1.21 | -2.8 | .001 | 72 | 3.73 | 2.32 | .88 | 1.01 | -5.91 | .000 |
| 73 | 3.70 | 2.29 | 1.40 | 1.40 | -4.0 | .000 | 74 | 3.70 | 1.90 | 1.19 | .94 | -6.71 | .000 |
| 75 | 4.45 | 3.26 | .71 | 1.06 | -5.3 | .000 | 76 | 4.03 | 2.48 | 1.16 | 1.18 | -5.28 | .000 |
| 77 | 4.76 | 3.55 | .44 | 1.06 | -5.9 | .000 | 78 | 4.45 | 3.19 | .87 | 1.08 | -5.13 | .000 |
| 79 | 4.36 | 2.52 | .93 | 1.15 | -7.0 | .000 | 80 | 4.15 | 2.97 | .94 | 1.33 | -4.09 | .000 |

- Descriptive statistics analysis such as means and standard deviation.*
- Pearson correlations.*
- Cronbach's Alpha and split half.*
- Parametric statistic test of significance such as t- test.*

In order to answer the questions on determining the kinds of cognitive and metacognitive strategies used by the subjects of the study, the collected data are tabulated and analyzed by means and standard deviation and ranking, known as descriptive statistics analysis.

On the five-point rating scale, statements with scores from 3.5 to 5.0 are in the highest-ranking group; those with scores from 2.5 to 3.4 are in the medium-ranking group; and statements with scores 2.4 to 1.0 are in the lowest-ranking group.

To test the research hypotheses which attempted to detect the relationship between the uses of cognitive and metacognitive strategies by the subjects to learning grammar and vocabulary, t-test and Pearson Correlation are utilized. A significance level of 0.05 was set for rejection or no rejection of null hypotheses.

Findings of the Study:

The current study has reached the following findings

- 1. Freshmen English majors employed cognitive and metacognitive strategies with moderate average (m. 3.4). However, their uses of cognitive strategies in learning vocabulary were more frequent.*
- 2. Freshmen uses of cognitive strategies in learning grammar were also moderate (m. 3.2). Specifically, they used transferring and analyzing and reasoning with high frequency while practicing was used with moderate pace.*
- 3. Unlike the uses of cognitive strategies in learning grammar, freshmen's uses of cognitive strategies in learning vocabulary were relatively higher (m. 3.6).*
- 4. Strategies such as highlighting, transferring and imagery while learning vocabulary were all scored with high frequency whereas grouping has scored the least frequency.*
- 5. Comparing practicing while learning grammar (m. 3.1) and while learning vocabulary (m. 3.7), it is quite clear that this strategy was used with higher frequency while learning English vocabulary than while learning English grammar.*
- 6. Freshmen uses of metacognitive strategies while learning grammar and vocabulary were equally moderate (m. 3.4).*
- 7. In learning grammar, self-monitoring was the most frequently used of strategies (4.1) followed by self-management and centering your learning (3.8). In learning vocabulary, centering your learning was the most frequently used of strategies (m. 4.0) followed by self-monitoring and self-management (3.8).*
- 8. Comparing with freshmen's uses of strategies, it appeared quite obvious that the senior English majors in Girls' College of Education used cognitive and metacognitive strategies with high frequency (m.3.5).*
- 9. Although seniors' uses of cognitive strategies in learning vocabulary was higher (m.3.6) than their uses of the same strategies in learning grammar (3.3), seniors' uses of transferring while learning grammar and vocabulary was with high frequency.*

10. *Even though the seniors dealt with practicing in the same way as the freshmen's, the former group used wider variety of cognitive strategies with high frequency while learning vocabulary such as elaboration, auditory representation, imagery and highlighting.*
11. *The same as the freshmen, grouping was the least frequently used of strategies.*
12. *The seniors' uses of metacognitive strategies while learning grammar were scored the same as their uses of metacognitive strategies while learning vocabulary (m. 3.6).*
13. *It is found that the most popularly used of strategies in learning English grammar was respectively self-monitoring, centering your learning and self-management. However the arrangement of these categories differed slightly in learning vocabulary, starting by centering your learning, self-monitoring and self-management.*
14. *Overall, the total uses of cognitive and metacognitive strategies by the freshman English majors were moderate (m. 3.4) while the uses of these strategies by the senior English majors were high (m. 3.6).*
15. *Using Pearson Correlation and t. test, the results indicated that there were significant relationships between freshmen use of cognitive and metacognitive strategies while learning grammar and vocabulary. This relationship became stronger when metacognitive strategies were used while learning both grammar and vocabulary. On the other hand, freshmen use of cognitive strategies correlated highly with learning vocabulary rather than with learning grammar. Similarly, metacognitive strategies were used more while learning vocabulary than while learning grammar.*
16. *There were significant relationships between the uses of cognitive and metacognitive strategies by the seniors while learning grammar and vocabulary in favor of the uses of metacognitive strategies while learning both skills. However, there was non-significant relationship in the uses of cognitive strategies while learning grammar and while learning vocabulary. On the Contrary, there was significant relationship in the uses of metacognitive strategies while learning grammar and vocabulary on behalf of vocabulary learning.*
17. *Comparing both groups in their uses of strategies indicated that there was no relationship between the freshmen and the seniors uses of cognitive and metacognitive strategies while learning grammar and vocabulary, except for their uses of cognitive strategies while learning grammar which showed significant relationship at level ($p = .05$)*

Conclusion of the Study:

The main finding of the study led to the following conclusions

- 1. Freshmen uses of cognitive strategies while learning vocabulary were more frequent than their use of cognitive strategies while learning grammar. However, their uses of metacognitive strategies while learning grammar and vocabulary were with equal frequency.*
- 2. Although the seniors' uses of cognitive and metacognitive strategies were with high average, their uses of both strategies were strongly correlated with vocabulary than with grammar.*
- 3. Besides the use of wide variety of strategies, there was significant relationship between seniors' uses of cognitive and metacognitive strategies and the learning of grammar and vocabulary. This relationship became stronger with the uses of metacognitive strategies while learning vocabulary. The broad uses of strategies specially the uses of metacognitive strategies are a good sign that this group is successful learners.*
- 4. At a more specific level, both freshmen and seniors used practicing more frequently in learning vocabulary than in learning grammar while their use of grouping was the least frequent. However, within their use of metacognitive strategies, it was found quite clear that both groups inclined to use self-monitoring, self-management and centering your learning the most.*
- 5. There was no existing relationship between the uses of cognitive strategies by the seniors and their learning of grammar and vocabulary. Similarly, the relationship was vanished when comparing the two groups in their uses of cognitive and metacognitive strategies while learning grammar and vocabulary.*
- 6. The use of deduction, induction within cognitive strategies and directed and selective attention within metacognitive strategies were quite popular among the subject of the study. This may imply that students focus on test- passing process rather than communication process.*

Implication:

Given the limitation of this study, its main findings seem to have the following theoretical, methodological and pedagogical implication:

Theoretical Implication

Research on language learning strategies has suggested that whether aware or unaware of strategy use, all Second /foreign language learners employ learning strategies in language learning. However the degree of strategy use differ according to learners' level

of proficiency. In this study, it was found that the seniors used most of the strategies in the two categories, cognitive and metacognitive, with high frequency. On the other hand, the freshmen did use cognitive and metacognitive strategies, yet their use was with moderate frequency.

Moreover, learning strategy choice is influenced by number of factors including duration, motivation and the type of tasks. The factor of duration has affected the use of strategies by the advanced group of this study. It was found that the use of metacognitive strategies in learning grammar and vocabulary was high while the use of cognitive strategies in learning the same skills was decreased. Besides there were some strategies that were used with grammar learning while others were used with vocabulary learning, yet some strategies were used with both tasks such as self-monitoring, selective attention, directed attention and self-management. This may support the fact that metacognitive strategies are applicable to all language tasks while cognitive strategies are related to specific tasks. Finally, the use of practicing, whether with high or moderate frequency, by the two groups while learning grammar and vocabulary is a good indication that these groups of the study are highly motivated to learn FL.

Methodological implication

The summative ratings scales or as sometimes called self-reported questionnaires provide a general assessment of each student's typical strategies across a variety of tasks. This is identical to the questionnaires of the current study where various strategies such as imagery and auditory representation are related to vocabulary learning whereas induction and deduction are related to grammar learning. In addition, many students discovered a great deal about themselves while answering the questionnaires; this has contributed significantly in raising students' awareness towards the use of strategies while learning FL.

Pedagogical Implication

1. It is teachers' repertory to be totally aware of the use of language learning strategies in language learning and therefore to present them as part of their teaching methods.
2. Most teachers are not aware of students' learning strategies as previous studies showed (O'Malley, 1987; Oxford, 1989). Accordingly, teachers should investigate students' current use of learning strategies so that they have some ideas about what strategies need to be enforced.

3. *Successful language learning depends on the collaboration of teachers and learners. Thus, learners' active involvement should not be neglected; rather than this, greater concern is needed for understanding learners and their thought processes the engender while learning the foreign language.*
4. *While teaching, teachers should help learners develop the use of cognitive and metacognitive strategies while learning grammar.*
5. *Teachers should encourage students to practice the grammatical structures presented in the class, informing them that correct grammatical utterances or statements are important to be understandable.*
6. *Human memory is crucial to the concept of language learning, including language learning (Ku, 1995). The more association attached to an item, the easier retrieval of the item. Elaboration as a sub-category of cognitive strategies would be reinforced for effective learning.*
7. *As it is discussed previously, cognitive strategies are task dependent. So, in teaching, there should be a matching of a strategy to a language task. This provides a rationale for teachers to show students how to employ that strategy for the appropriate type of task.*
8. *As previous studies (Chamot, 1988) indicated the effective correlation between the level of proficiency and the use of arranging and planning, teachers should train students to use this strategy by using techniques such as skimming or scanning the text at hands. They also need to encourage students to arrange a suitable schedule to organize the process of language learning. In addition, other strategies that emerged in the study having stronger relationship with proficiency should be reinforced to more successful students and taught to less successful students. This would provide opportunities to refine or extend their repertoire of learning strategies.*

Recommendations:

Based on the findings of the study, the following recommendations appeared important:

1. *Language learning strategies needed to be incorporated into the curriculum. Students with a low level of English proficiency may not know that appropriate language learning strategies will help them improve their English. They need to know what strategies successful English learners use and they need to be trained to use them. Good students may also benefit from this corporation; some strategies that they have been using may not be appropriate for specific tasks, there may be strategies that they have not used yet, or they have not use certain strategies frequently enough.*

2. *Supporting the role of self-learning, it is recommended that textbooks designers design series of FL textbooks based on the cognitive academic language learning approach (CALL) in which high priority is given to the academic language development and direct instruction in learning strategies, accompanied with a CD-ROMs through which students are trained through activities to use the appropriate strategies related to specific tasks, including the learning of grammar and vocabulary.*
3. *It is a common teaching method in language learning classrooms to pay little attention to the conscious efforts learners make in mastering the language. This teaching orientation to maintain students in a state of intellectual dependency on teachers, course materials and teaching method is particularly a problematic issue. Thus, it is recommended to train students to be a strategic competent and to unload them with big number of course material, encourage them to use additional resources, a strategy that is found to be rarely used by both groups of the study.*
4. *Freshmen use of cognitive and metacognitive strategies in general was moderate. So, it is recommended to have the classroom learning situation representative for real life events and activities. In this sense Oxford & Ehrman (1995, p. 378) suggested "the more that a foreign language classrooms can become a 'language experience' situation, the more likely the students will find the need and the will to use language learning strategies at a high level and the more rapidly they will advance towards proficiency". This does not mean to ignore the structured instruction, but using authentic situations such as role-plays or simulations are also needed.*
5. *Since motivation, strategy use and proficiency were intercorrelated, and environmental factors is a variable that lead to higher strategy and higher motivation, teachers, who might not be able to change the environments outside the classrooms, can start to motivate students from inside classrooms by developing students' self-confidence and self-efficacy. With helping students selecting strategies that are suitable to the task at hand, provided with good strategy training; hopefully, students might get higher grades and become more motivated to use strategies.*
6. *It is essential to hold sessions for EFL teachers to be introduced to the use of cognitive and metacognitive strategies on language learning and how to utilize the techniques and approaches of these strategies in learning English.*
7. *It is strongly recommended to link the cognitive and the metacognitive strategies in order to improve students' language achievement. This linkage should be accomplished by explicit explanation of why particular strategies are important, how these strategies can be used,*

how to evaluate their usefulness and how to transfer them to new situations and tasks.

8. *The study raised several critical issues and questions regarding the appropriateness and value of the Girls' college of Education curriculum and method of teaching EFL, like applying the discrete-point policy tests, starting teaching the educational subjects in the third and fourth levels, giving the practical training during the term. So, it is recommended from the high authority to benefit from researches done in this area to develop the curriculum and the evaluation techniques.*
9. *It is agreeable that freshman English majors like other freshmen in other departments face extreme confusion when entering the college due to the environmental changes. Accordingly, many of them have inferior learning strategies and lack of motivation due to their poor self-concept and emotional state. So, it is recommended to implement small group counseling; its main job is offering students appropriate guidance strategies that may assist them in their personal and academic development. This will promote self-confidence as well as prepare them for advanced studies.*

Suggestions for Further Researches:

Several Suggestions need to be investigated in future researches:

1. *Although self-reported data collection instruments are universally acknowledged as instruments for collecting data from large groups, it is needed to determine whether using different assessment methods of data collection will yield different results. Further studies could use task-oriented techniques such as think-aloud protocols or journal-writing to collect data.*
2. *The study is implemented by using the university level language learners, it might be revealing to repeat it for intermediate and secondary levels to see if the results are similar. If they are, then we would have evidence that learners use the same strategies at all levels.*
3. *The current study compared between the freshmen and the seniors in their use of cognitive and metacognitive strategies. It might be effective if other studies compare between second and foreign language learners in their use of strategies while learning English. This may broaden the identification of additional types of strategies that may be useful for both groups.*
4. *It is worth if longitudinal studies are conducted to investigate the use of strategies by the four course levels in Girl' College of Education. This will help in understanding learning difficulties at different stage and how students maintain their motivation or persistence in dealing with difficult tasks.*

5. *This study identified the use of cognitive and metacognitive strategies in learning grammar and vocabulary. More studies are needed to investigate the same strategies with other language skills, reading writing, speaking or listening.*
6. *The current study deals with the identification of cognitive and metacognitive strategies while learning grammar and vocabulary. Further studies may be needed to investigate other strategies such as compensation strategies, social strategies and affective strategies in learning the other language skills*
7. *The use of learner strategies has been investigated with no focus on learners' errors. It would be beneficial to locate the source of students' errors to see whether most of their errors actually derive from wrong use of learning strategies or not.*
8. *Since this study is descriptive in its nature, the focus is on surveying strategy uses. Further studies are needed to design strategy training program and to assess its validity on improving students' achievement in language learning.*
9. *Other studies are needed to use the content analysis technique in order to analyze EFL textbooks focusing on whether the textbooks contain application of strategies on the language task included.*

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