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LANGUAGE LEARNING STRATEGIES IN BILINGUAL CONTEXT: A CASE STUDY

A MASTER'S THESIS

BY

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Ceren Eteke

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Language Learning Strategies in Bilingual Context:
A Case Study

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May 2017

I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Arts in Curriculum and Instruction.

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ABSTRACT

LANGUAGE LEARNING STRATEGIES IN BILINGUAL CONTEXT:
A CASE STUDY

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May 2017

This study aims to investigate the language learning strategies (LLSs) employed by 118 high school students, ranging between 14 and 18-year-olds and receiving bilingual education, for identifying the commonly used direct and indirect strategies and if the use of LLSs differs with respect to age, gender, grade level, proficiency level and importance given to proficiency. The data were collected through Strategy Inventory for Language Learning (SILL, Version 7.0) from a high school offering bilingual degrees in Ankara. The results of the study revealed that memory and metacognitive strategies are the most, but compensatory and affective strategies are the least preferred strategies, and that the use of some of the sub-categories of LLSs differs depending on age, gender, grade level, proficiency level and importance given to proficiency. Also, bilingual high school students, generally, at younger ages, who are female, at lower grades, with lower proficiency level, and who consider their proficiency as "very important tend to utilize LLSs more.

Key words: Language learning strategies, bilingual education, International Baccalaureate

ÖZET

İKİ DİLLİ ORTAMDA DİL ÖĞRENME STRATEJİLERİ: BİR DURUM ÇALIŞMASI

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Bu araştırmanın amacı, yaşları 14 ila 18 arasında değişen ve iki dilli eğitim alan 118 lise öğrencisinin dil öğrenme stratejilerini incelemek ve bu öğrencilerin yaygın olarak kullandıkları doğrudan ve dolaylı stratejileri ve bu stratejilerin yaş, cinsiyet, sınıf düzeyi, dil yeterliliği ve bu yeterliliğe verilen önem gibi değişkenlere göre farklılık gösterip göstermediğini belirlemektir. Çalışma için gerekli olan veri, Ankara'da iki dilli derece veren bir liseden, Dil Öğrenme Stratejileri Envanteri (SILL, Version 7.1) aracı ile toplanmıştır. Çalışmanın sonuçları, bellek ve bilişüstü stratejilerin en fazla, ancak telafi ve duyuşsal stratejilerin en az kullanıldığını, ve dil öğrenme stratejileri kullanımının yaş, cinsiyet, sınıf düzeyi, dil yeterliliği ve bu yeterliliğe verilen öneme bağlı olarak farklılıklar gösterdiğini ortaya koymuştur. Çalışmanın sonuçları aynı zamanda, iki dilli eğitim alan lise öğrencileri arasında, yaşları daha küçük, cinsiyeti kız, sınıf düzeyi daha düşük, dil yeterlilik düzeyi daha düşük olan ve dil yeterliliğinin "çok önemli" olduğunu düşünen öğrencilerin dil öğrenme stratejilerini genellikle daha çok kullanmakta olduğunu göstermiştir.

Anahtar Kelimeler: Dil öğrenme stratejileri, iki dilli eğitim, Uluslararası Bakalorya

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CHAPTER 1: INTRODUCTION

Introduction

In accordance with the main content of this study, language learning strategies (LLSs) in bilingual context, this chapter features background information about bilingual education and LLSs. The background is followed by the purpose, research questions, significance, limitations and the definitions of the study.

Background

Bilingual education

To Baker (2011), the term bilingual education is not as straightforward as it sounds. Mackey's (1970, as cited in Baker & Jones, 1998) classification of bilingual education includes 90 varieties of bilingual education. Ferguson, Houghton & Wells, (1977, as cited in Baker, 2011) provided several aims of bilingual education with varying and conflicting philosophies. Some emphasize monolingual forms of education and they are assimilative in nature but some others are pluralist and additive in nature allowing participants to use L1 (Baker, 2011).

Broad forms of bilingual education include *submersion, ESL pullout, transitional, maintenance, enrichment/two-way or developmental, immersion, heritage,* and *mainstream bilingual education*. *Submersion* and *ESL pullout models* are assimilationist as the emphasis is on the acquisition of L2. Through *transitional* and *maintenance models,* students are taught in their L1 and are gradually transferred to L2-only classes as it is believed that having good command of L1 first ensures a

much easier acquisition of L2. In *enrichment model*, non-native of L2 and native of L2 students are introduced to the subject-matters in minority and majority languages. Also known as the *Canadian Model*, *immersion bilingual education* requires teaching mostly in L2 of native and non-native speakers of L2. Just as *enrichment model*, it advocates pluralism and biliteracy. Heritage bilingual education is a model for L2 minority students and the emphasis is on L1 in order to conserve especially indigenous languages (Cummins, 1981; Roberts, 1995). Lastly, *Mainstream Bilingual Education*, which is regarded as a strong form of bilingual education, aims to teach subjects other than language by means of a foreign language (Baker, 2011). *Mainstream Bilingual Education* is claimed to enhance effective language acquisition and learning (Marsh, Oksman-Rinkinen & Takala, 1996). It's additive in nature; in other words, "the addition of a second language and culture is unlikely to replace or displace the first langue and culture" (Lambert, 1980, as cited in Baker 2011, p. 74). Thus, it aims to maintain L1 but intends to develop biliteracy; its ultimate aim is bilingualism (Baker, 2011). Despite the term 'mainstream', it does not exclude the programs offered by the International Baccalaureate (IB) Organization or International Certificates such as International General Certificate of Secondary Education (IGCSE) (TEL2L, 2017).

Such programs as IB Primary Years Program (PYP), IB Middle Years Program (MYP), IB Diploma Program (DP) and IGCSE provide a platform for accomplishing simultaneous academic and linguistic skills development. Both meet on the common ground of providing an environment for students to become intellectual and multilingual global citizens (IBO, 2017a). Within the context of IGCSE and IB curricula, the subject matters, other than native-language and

literature, are conveyed in L2, and LI language and literature and history are conveyed in tandem (IBO, 2017b; Cambridge International Examinations, 2017).

Offered in English, French or Spanish, the IB offers 4 programmes: Primary Years Programme (PYP) for 3 to 12 year-olds, Middle Years Programme (MYP) for 11 to 16-year-olds, Diploma Programme (DP) for 16 to 19-year-olds and Career-related programme (CP) for 16 to 19-year-olds. The main subject matters in the curriculum for each IB programme are deployed around a core depending on the objectives of the programme, which are "becoming more culturally aware, through the development of a second language" and "being able to engage with people in an increasingly globalized, rapidly changing world" (IBO, 2017c).

Implemented as the preparation step to IB DP in some contexts and offered in English, IGCSE is a programme developed for 14 to 16-year-olds. Apart from having students excel in academic content, the curriculum is designed in a way to reinforce students' knowledge and skills in interaction in L2 (Cambridge International Examinations, 2017).

Most of the subject matters offered are taught in L2; therefore, knowledge and skills in academic content and language are transferred in a way to support each other's improvement rather than teaching both of them separately. In such a bilingual environment, students tend to excel relatively more in linguistic skills and to be more conscious of the language learning process and the strategies to facilitate this process (Rivera, 2002; Cummins, 2003; Bialystok, 2010; Sarıca, 2014).

Language learning strategies

What makes "a good language learner"

Rubin (1975) defined "a good language learner" as someone who makes accurate guesses, is willing to communicate, uninhibited, willing to form sentences with new topics learned, creates opportunities to practice, monitors his/her own learning process and tends to infer the meaning form the context she/he encounters.

Rubin (1975) listed these features in accordance with the observations aiming at exploring the strategies the good language learners employ. Observing successful language learners and reaching a conclusion by listing the above-mentioned attributes, Rubin (1975) advocated that these attributes were applicable and served as useful guidelines for less successful learners in their language learning process as well. In addition, the effectiveness and efficacy in language learning process depend on some variables such as aptitude, motivation and opportunities that learners have. Likewise, LLSs that could be categorized depending on these variables could be based on the learners' task, age, culture, starting age to language learning, personal learning strategies and the content studied. These are also applicable to the other subject areas, which makes learners successful at both linguistic and academic terms (Rubin, 1975).

Initial classifications for LLSs

Claiming that exposure to the second or foreign language on a regular basis seems to be insufficient, and learners' personality, cognitive level and attitude towards learning are significant in the language learning process, Cohen and Aphek (1981) categorized LLSs into three groups such as good communicative, neutral

communicative and bad communicative strategies depending on sociocultural and personal variables.

O'Malley and Chamot (1990) elaborated on Cohen and Aphek's categories (1981) to reach a robust conclusion about LLSs and introduced cognitive strategies, metacognitive strategies and affective strategies. Cognitive strategies entail comprehending communicative features, metacognitive strategies require learners' self-monitoring of their learning process and affective strategies focus on learners' social and emotional interactions during the learning process.

Rubin and Thompson (1982) further defined the following general features of successful language learners. According to this, successful language learners are aware of their own learning styles, create opportunities to practice the language, can infer the meanings in a given context, have more tendency to use memory strategies, consider errors as opportunities to learn a language better, have a good command of their native language that would have a positive impact on their second language, make accurate guesses for a better comprehension, learn a language in chunks and learn a language with varied styles as well as its extra-linguistic utterances.

LLSs and Strategy Inventory for Language Learning (SILL)

Oxford (1990) categorized LLSs under two major headings namely direct and indirect strategies. Direct strategies are the learning strategies that are directly involved in the language learning process. Indirect strategies are the learning strategies that are indirectly involved in the process. Direct strategies include memory, cognitive and compensatory strategies while indirect strategies include metacognitive, affective and social strategies. So as to track learners' strategies vis-à-

vis the six categories, Oxford (1990) introduced the survey called Strategy Inventory for Language Learning (SILL). SILL consists of different question types under six different categories regarding direct and indirect strategies on a Likert scale.

Problem

Education First (EF), one of the leading education companies creating a country rank list in accordance with the countries' English abilities, advocates that language learning globally contributes to a country's GDP, economy and politics to a great extent (2015). EF gathers data depending on the countries' background information such as Gross National Income (GNI) per capita, internet penetration, education spending, years of schooling and population, participants' gender and age (ranging from 18 to 40+). Given these, according to the statistical findings revealed in accordance with the EF English Proficiency Index (EPI) scores, EF makes comparisons among countries in terms of English proficiency. Recently, it has revealed the 2015 and 2016 ranking results. According to the EPI, Turkey ranked 50th among 70 countries by getting 47.62 points, and ranks recently 51st among 72 countries by getting 47.89 points. According to the results, *Education First* has been defining Turkey's situation of language proficiency under the category of "very low proficiency". When Turkey's trend on this issue is considered, it is clear that Turkey is consistently ranked under the categories of either "very low proficiency" or "low proficiency".

EF (2015) asserts that Turkey is less strong compared to the other European countries. The main problem for this is that a commonly adopted trend of memorization-based and "highly grammar-driven, with a repetitive curriculum and

few communicative teaching methods" (EF, 2015, p.12) in English classes. Therefore, in order to overcome this chronic low ranking trend of Turkey, the problems EF stated should be eliminated as far as possible.

In addition, in the report published by The Economic Policy Research Foundation of Turkey (TEPAV), some conclusions about the possible reasons based on the Education First EPI results were highlighted. It is claimed that the reasons for such a deficit could stem from the starting age for learning English, the training of the English teachers and the attitudes of the students towards learning English and English classes in Turkey (TEPAV, 2011). The deficits and shortcomings regarding English necessitate a solution that is attuned to the developments and changes in academic and professional life that globalization has given rise to. Achieving the goal of attuning these changes would contribute to the emerging economic, political and social developments in the country as well. Also, currently English is no longer an additional quality that people write on their CVs. Instead, the *lingua franca* has become a prerequisite to be regarded as qualified and successful in academic and professional realms (TEPAV, 2011).

The success scale in English teaching and learning generally emphasizes what the teaching programme includes, what motivates students, which pedagogical tools are more effective, what the effective teaching methods are and the suggested time allocation for English courses on curricula and plans (TEPAV, 2013). However, research and studies on efficient language acquisition and learning, and effective introduction and application of LLSs seem to be highlighted less in the forefront. The impact of this case manifests itself in higher education as well as primary and

secondary education and Turkey ranks among countries with low language proficiency levels, and "very few students are able to achieve even basic communicative competency even after about 1, 000 hours of English lessons" (TEPAV, 2013, p. 83).

There are, however, schools offering bilingual degrees in Turkey achieving high levels of language proficiency, externally benchmarked by international exams. These schools tend to offer bilingual education through IGCSE and IB programmes, and teach subject-matter in English, while preserving the use of mother tongue; one of six core subjects has always been Language A (first language) (IBO Language Policy, 2014). Such contexts provide platform for further understanding means to develop language learning strategies.

Purpose

This study intends to use Oxford's (1990) *Strategy Inventory for Language Learning* (SILL) to analyze the language learning strategies used by the students of a high school offering bilingual degrees, and to determine if there are any differences in the use of language learning strategies with respect to age, gender, grade level, proficiency level and importance given to proficiency.

Research questions

The two main research questions are as follows:

1. What direct and indirect language learning strategies are used by the students of a high school offering bilingual degrees?

2. Are there any differences in the use of language learning strategies based on age, gender, grade level, proficiency level and importance given to proficiency level?

Significance

This case study uses Oxford's (1990) Strategy Inventory for Language Learning (SILL) in a bilingual context in Turkey, and intends to provide platform for understanding the range of direct and indirect language learning strategies used by students who are provided with bilingual education.

This study will also provide some insights into whether student language learning strategy use changes in relation to age, gender, grade level, proficiency level and importance given to proficiency level.

The findings of the study may help students, teachers, curriculum developers and administrators in terms of prioritizing language learning strategies that could be either explicitly or implicitly incorporated into the process of language learning as "learning strategies are teachable" (Oxford, 1986, p. 3). As a result, "an ideal situation would be one in which all teachers in all subject areas teach learning strategies, as students would then be more likely to transfer strategies learned in one class to another class" (Oxford, 1986, p. 3).

Definition of key terms

Direct strategies: These are the strategies that are directly used in the language learning process (Oxford, 1990). It is one of the two main clusters in Oxford's

language learning strategy classification. It includes memory, cognitive and compensatory strategies.

Indirect strategies: These strategies, as opposed to direct strategies, are indirectly involved in the language learning process (Oxford, 1990). It is the other main heading under Oxford's taxonomy. It is composed of metacognitive, affective and social strategies.

CHAPTER 2: REVIEW OF RELATED LITERATURE

Introduction

In this chapter first of all the emphasis is on the concept of bilingual education and the definitions of its recent and prominent models. Then, International General Certificate of Secondary Education (IGCSE) and International Baccalaureate (IB) programmes are explained. These parts are followed by the emphasis of what makes a good language learner. Having looked at the concept from one of the prominent names in language learning domain, the chapter continues with the teachers' role in introducing language learning strategies (LLSs) and receiving instruction about them. Thirdly, LLSs are introduced in line with the featured LLS classifications in the literature. This is followed by the critical views to the categorizations of LLSs and definition of a good language learner. As the data collection tool of this study, Strategy Inventory for Language Learning (SILL) is introduced with its both versions. Then, recent research conducted regarding LLSs by employing SILL are covered to explain to what extent LLSs are related to variables such as age, gender, proficiency level, language learning beliefs, nationality, language aptitude, education type, motivation, self-efficacy and self-esteem. Finally, as the framework of this study suggests, example studies conducted within the framework of LLSs and bilingual education are introduced. These studies are mainly on the comparison between bilingual and monolingual learners and their use of LLSs also in terms of their gender, school type and education they receive.

Bilingual education

Although it seems that bilingual education means solely having good command of two languages, it is, according to Cazden and Snow, "a simple label for a complex phenomenon" (as cited in García, 2009). As Mocinic (2011) states it is a term used for the education of non-native English speakers in the U.S. context whereas it is referred as the education in both native and second languages in non-native English countries. United Nations Educational, Scientific and Cultural Organization (UNESCO) (1990), however, embraces the term bilingual education to refer to describing an education environment in which national, native and international languages are spoken (UNESCO, 2003, p. 17). UNESCO states that "bilingual education is the education system of using two different instructional languages, one of which is not the learner's first language" (as cited in Ping, 2016, p. 89). Bilingual education differs from conventional language education programmes prepared for EFL and ESL learners. It encompasses receiving education or instruction in two languages instead of only learning the languages themselves as different subjects. It also requires the non-native language exposure in specific contents, which makes it a means of teaching and learning. While doing so, it gathers learners and teachers from diverse linguistic, cultural and national backgrounds together and ensures a conformity among them under a lingua franca (Baker, 2011; García, 2009). Recently, *Cambridge Education Brief 3* (2015, n.p.) defines bilingual education as "the use of two or more languages as mediums of instruction for content subjects".

Types of bilingual education

Submersion

In this type of bilingual education, non-native English students are integrated in English-spoken classes with English native students and they are, as the name suggests, submerged under the majority language and their native language is far from being one of the focuses (Baker, 2007). As a result, they tend to forget their native language and this method has been regarded to cause assimilation of the native language of the non-native students (Cummins, 1981; Roberts, 1995).

ESL pullout

As the main concept of this kind of bilingual education, minority students are given the majority language courses by being withdrawn from the subject area courses for a specific period of time to attend English as a second language classes. As a drawback of such a programme, students tend to perform less in other subject areas as they are pulled out from these classes and are challenged to learn English in separate ESL classes (Roberts, 1995; Baker, 2007). Also, like submersion model, *ESL Pullout* model is assimilationist (Roberts, 1995).

Transitional bilingual education

In transitional models, students are exposed to the subject areas in their first language while they are learning English as their second language for a specific period of time. The idea behind this method is that it is easier to transfer the skills learned in first language to second language, and to move students to second language-only classes where academic skills and knowledge are acquired in second language only. This kind of models are generally implemented when non-native speakers are the majority

(Cummins, 1981; Roberts, 1995). Similarly, to Baker (2007), students are offered academic knowledge in their native language and then they are expected to transform the knowledge into the target language. Such a model advocates that second language proficiency can be easily attainable through native language fluency. Also, transitional model is defined as "eventual monolingual teaching and learning, usually in the dominant language" (Pacific Policy Research Center, 2010). Learners are exposed to academic subjects mainly in L1 to ensure a solid understanding of the subjects areas and then to ensure a relatively easy acquisition of L2 (May, 2008).

Maintenance bilingual education

Similar to transitional models, maintenance models also aim at education in students' first language along with intensive English courses and transferring the students to second language-only classes. The difference is that such models are achieved in relatively longer term and this kind of a bilingual programme is relatively more pluralist and its aim is to raise bilingual individuals (Cummins, 1981; Roberts, 1995).

Enrichment, two-way or developmental bilingual education

In enrichment models, non-native English students and native English students are integrated in maintenance models through which they are separated for English and L1 classes. They study subject areas in their native and second or foreign language. With its drawback of redundant repetition, this model could be concurrent as well, during which students are first taught in their native language and then in their second language (Roberts, 1995) simultaneously.

Enrichment bilingual education (Baker, 2007) also entails the presence of virtually equal size of students from different linguistic backgrounds. During teaching, both groups are exposed to both languages equally. In either way, like maintenance model, enrichment modes are pluralistic and provide "cross-cultural understanding and appreciation" (Colon, Hidalgo, Nevarez & Garcia-Blanco, 1990, p.1) as the classrooms include natives and non-native students together and the focus seems to be far from majority language yet to raise bilingual individuals.

Being a part of transitional models, enrichment models consist of *two-way* or *dual language models* that provide include natives and non-native students. In this model, instruction is done in two languages, and the intensity of second language gradually increases in instruction. Similarly, in dual language models, students are taught in both their first and second languages. Teachers are generally expected to be bilinguals to understand students' first language during the academic courses taught in second language yet only to respond in second language (Roberts, 1995).

Immersion

Being coined in Canada in 1960, the term immersion bilingual education advocates ensuring efficient bilingual students. In this context, teachers expose students to second language during the instruction of academic subjects. It is basically teaching mainstream subjects in the curriculum in second language (Roberts, 1995; Baker, 2007).

Immersion models based on age and time. Baker (2007) mentions a category of bilingualism based on age as *early immersion* for 5 to 6 years old, *middle*

immersion for 9 to 10 years old and *late immersion* for 11 to 14 years old. For early, middle and late immersion, students begin to be exposed to L2 when they turn 5, 9 and 11 years old respectively. Shaw, Imam and Hughes (2015) also categorized immersion types with respect to age: as *early immersion* for 4 to 7-year-olds, *delayed/middle immersion* for 8 to 11-year-olds, *late immersion* for 12 to 13-year-olds and *very late immersion* for 14 to 16-year-olds. As for time, there are three immersion types namely *total immersion* requiring 100% exposure to L2 and "strict use of only the second language in non-language lessons", *partial immersion* requiring exposure to L2 during subject learning and teaching, and *two-way immersion* requiring the attendance of L2 minority and L2 majority learners together in the same classrooms (Shaw, Imam & Hughes, 2015).

Heritage bilingual education

Heritage language bilingual education is teaching mainstream subjects mainly in native language and having students acquire literacy in native language. This process is accompanied by second language to which the literacy and skills are transferred in that language later (Baker, 2007). Similarly, according to May (2008), learners are taught the academic subjects intensely in L1 and L2. Heritage models aim at maintaining the endangered languages through a balanced use of the indigenous language and L2 in education.

Mainstream bilingual education

Also described as immersion bilingual education, this type of bilingual education is commonly observed where teaching of subject matters is done in L2. L2, in this case, is the means of teaching rather than the end. In this context, students are generally

the natives of the official language of the country they receive education (TEL2L, 2017). The aim is to preserve L1 competence and culture while improving and exceling in L2 competence, thereby attaining biliteracy (Lambert, 1980). Mainstream bilingual education, by its nature, is mostly implemented in international schools offering IB (TEL2L, 2017). As Marsh, Oksman-Rinkinen and Takala (1996) state, it "is one of the most interesting and promising innovations in formal language teaching and learning" as it provides an effective L2 acquisition through an international environment in which L2 exposure is of utmost importance.

The importance of bilingual education

According to, Cummins (2003), "Bilingualism has positive effects on children's linguistic and educational development" (p.61). In addition, it increases "mental flexibility", "inter-cultural skills" and "opportunities for global exchange and trade" (Cambridge Education Brief 3, 2015, p.2).

Bilingual education, also, boosts cognitive flexibility, and "a growing number of studies report that life-long bilinguals outperform monolinguals on a number of nonlinguistic tests of cognitive control" (Christoffels, Haan, Steenbergen, Wildenberg, & Cortazo, 2015, p.375). The importance of bilingual education is not limited to development of cognitive skills.

To Bialystok (2010), students receiving bilingual education perform well at metalinguistic tasks as well. Also, the study conducted by Adesope, Lavin, Thompson, and Ungerleider (2010) show that students in bilingual education environment develop cognitive, memory and metalinguistic skills (as cited in İlhan &

Aydın, 2015). Additionally, as Tuncer (2009), and Yayla, Kozikoglu and Celik (2016) indicated, students receiving bilingual education tend to use LLSs more compared to the ones receiving monolingual education. Chin (2015) and Rivera, Tressler, McCreadie and Ballantyne (2014) also assert that once the balance between native and second language is maintained, the language proficiency in second language and skills in native language tend to improve more, which leads not only to linguistic but also to an academic success as well. As Rivera (2002) suggests, "A review of the research finds that bilingual education is effective in both English and content area knowledge" (p.2).

Bilingual programmes

International General Certificate of Secondary Education (IGCSE)

IGCSE is an international two-year programme provided for both English native and students of different native languages. The curriculum is studied during 9th and 10th grades and it includes over 70 subject areas including 30 languages. Provided that schools implementing IGCSE base the curriculum on the core subject areas such as mathematics, science (physics, biology and chemistry), English language and literature, humanities and social sciences (geography and history) and language and literature of the first language of the country IGCSE is being implemented, they may design the rest of the curriculum depending on the rest of the subjects among these 70 subject areas offered by the programme. The duration and the weighing of the subjects taught may depend on the school decision making mechanisms. Apart from the first language classes, the other subject areas are taught in English. IGCSE has been designed in a way to support bilingual and multilingual education and considers students as language learners, teachers of each subject area as language teachers, and

schools implementing the curriculum as bilingual or multilingual schools (Cambridge International Examinations, n.d). According to O'Sullivan (2015), IGCSE is a platform for the conservation of national languages as well as for reinforcing bilingual education simultaneously.

International Baccalaureate (IB)

A non-lucrative education programme, IB consists of three programmes as Primary Years Programme (PYP), Middle Years Programme (MYP) and Diploma Programme (DP). All of them share the same mission of raising internationally-minded individuals on a bilingual platform as "bilingualism is the hallmark of a truly internationally minded person and this requirement should be central to all three IB programmes" (IBO, 2009).

Primary Years Programme (PYP)

PYP curriculum encompasses the courses of language, social studies, mathematics, arts, science, and physical, social and personal education. The programme starts for the students at the age of 3 and students are introduced with a second or foreign language at the age of 7 at last. The subject areas are taught in second language (English, French or Spanish) apart from first language classes which are of utmost importance as the second language as IB emphasizes the importance that having a good command of national language facilitates the acquisition of second or foreign language (IBO, 2009).

Middle Years Programme (MYP)

This curriculum consists of the courses of language acquisition, language literature, individual and societies, mathematics, design, arts, sciences, and physical and health education. The programme starts for the students at the age of 11. The programme entails at least 50 hours of teaching in a year for each of the subject area mentioned. During the last two years of the programme, for each year, all of the above-mentioned courses should be taught at least for 70 hours (IBO, 2015).

Diploma Programme

Similar to MYP programme, this programme includes the courses of language acquisition, studies in language and literature, individuals and societies, mathematics, and the arts and sciences. Students start this programme at the age of 16 during their last two years at high school. Each main subject area consists of related subjects and students are expected to select one subject under each main subject area most of which are also divided into two levels as high level (HL) and standard level (SL). For example, language acquisition is divided into two levels as standard level (SL) and high level (HL). Studies in language and literature is divided into three courses as language and literature, literature and literature and performance. Language and literature, and literature classes include two levels each as SL and HL whereas literature and performance is given only in standard level. Also, divided into two levels as SL and HL, individuals and societies comprise business management, economics, geography, global politics, history, ITGS, philosophy, psychology, anthropology, world religions and environmental systems and societies. Mathematics comprises calculators, further mathematics, mathematical studies SL, mathematics SL and mathematics HL. Arts includes dance, film, music, theatre and visual arts. Lastly, sciences include biology, chemistry, physics,

computer science, design technology, sports, exercise and health science, and environmental systems and societies (Rivera, Tressler, McCreadie & Ballantyne, 2014). HL classes are recommended to be taught for 240 and SL classes for 15 teaching hours during the two-year period (IBO, 2013).

Language learning strategy background

Definition of a "good language learner"

LLSs are accepted to have commenced with *what makes a good language learner* studies (Rubin, 1975; Stern, 1974). The aim of these studies was to ascertain the traits of being a successful learner. To this end, Rubin focused on the strategies employed by the successful learners and thought, in this way, the strategies could be introduced to the less successful learners as useful guidelines. The anticipation of having a profound understanding of the strategies paved a way for Rubin to form a definition for a good language learner. She initially began with the definition of a practical and efficient language learning, then she continued listing the variables for learning strategies and reached to a conclusion by listing the attributes of a good language learner and finally stated the teachers' role in LLSs process.

Hence, according to Rubin, good language learning depends on variables such as aptitude, motivation and opportunity. Aptitude is accepted to be innate yet believed to be gained through strict practice and determination (Politzer & Weiss, 1969; Yeni-Komshian, 1967; Hatfield, 1965 as cited in Rubin, 1975). Motivation that leads to an eagerness towards communication and interaction is a key factor to improve language learning success. The opportunity to practice the previously and newly learned topics inside and outside the learning environment plays an important role in

the internalization of the language. As for the LLSs, they vary depending on the given task and context, cognitive stage, age of the learner, individual learning styles and cultural differences. Consequently, given the features for language learning and strategies, a good language learner is a good guesser, willing to communicate, not inhibited, formulates new sentences with his knowledge, creates opportunities to practice, monitors his own learning process, and infers the meaning of any kind of text (Rubin, 1975).

In addition to the above-mentioned attributes, Rubin and Thompson (1982) further define the characteristics of a good language learner, and Nunan (2000) compiles and lists these attributes, given this, good language learners:

- find their own way,
- organize information about language,
- are creative and experiment with language,
- make their own opportunities, and find strategies for getting practice in using the language inside and outside the classroom,
- learn to live with uncertainty and develop strategies for making sense of the target language without wanting to understand every word,
- use mnemonics (rhymes, word associations, etc. to recall what has been learned),
- make errors work,
- use linguistic knowledge, including knowledge of their first language in mastering a second language,
- let the context (extra-linguistic knowledge and knowledge of the world) help them in comprehension,
- learn to make intelligent guesses,
- learn chunks of language as wholes and formalized routines to help them perform 'beyond their competence",
- learn production techniques (e.g. techniques for keeping a conversation going),
- learn different styles of speech and writing and learn to vary their language according to the formality of the situation. (p.171)

Teachers' role in language learning

Listing the characteristics, Rubin (1975) also highlighted the importance of the teachers' role in raising autonomous learners and teaching LLS. She stated that they should raise their students in a way that students become aware of how to help

themselves in the process of language learning. Cohen (1977) draws attention to the fact that teachers are considered to be the main responsibles of the students' success in language learning process. Therefore, teachers' awareness about LLSs is of utmost importance, and thus, they should focus more on considering individual learner characteristics and conveying LLSs accordingly instead of only teaching by constantly exposing learners to foreign language (L2) as the curriculum obliges. Given this, Cohen argues that "strategy instruction should be embedded into language instruction so that learners are provided an opportunity to enhance their language learning experience" (Cohen, 2007, p.695). Oxford (2003) states that "skilled teachers can help their students develop an awareness of learning strategies and enable them to use a wider range of appropriate strategies" (p. 9). Likewise, Chamot (2005) advocates that LLSs are teachable through explicit and LLS-integrated instructions, and that language teachers need to be aware of what learning strategies students already use for different tasks to make convenient decisions for planning, material preparation and instruction.

Language learning categorizations

Cohen's categorization

Harking back to Naiman, Fröhlich, Stern and Todesco (1978)'s personality, cognitive and attitudinal variables and Gardner and Lambert (1972)'s attitudinal, motivational, intelligence and achievement variables, Cohen points out that exposure to L2 is not enough and learner personality, cognitive stage and attitude for learning play a significant role as well. Therefore, Cohen and Aphek (1981) divide the learning strategies as good communicative, bad communicative and neutral communicative strategies being based upon socio-cultural and individual variables.

Chamot and O'Malley's categorization

Chamot and O'Malley (1990) broaden Cohen and Aphek's (1981) communicative approach in language learning. They subsume the communication-focused traits under another category as cognitive strategies aiming at improving comprehension skills, metacognitive strategies aiming at monitoring one's learning process and socio-affective strategies involving social interaction and communication.

Oxford's categorization

Having considered the above-mentioned strategy categorizations, Oxford (1986) emphasized that learning strategies are important because they enable learners to be successful in language learning, to be accountable for his/her own learning, are teachable and ease the teachers' task if they consider learners' strategy preferences. Having proposed the "primary strategies for second language learning" in 1989, Oxford (1990) developed a taxonomy in which the prominent names' such as Rubin (1975) and O'Malley and Chamot (1990) categorization of strategies were compiled. In the taxonomy, Oxford divides the LLSs into two main headings as direct strategies and indirect strategies, each of which composed of three sub-categories. Direct strategies include memory, cognitive and compensatory strategies, and indirect strategies are concerned with metacognitive, affective and social strategies, and as Oxford (1990) and O'Malley and Chamot (1990) suggest, "students who are able to effectively combine and manage different language learning strategies are more successful in learning a second language" (as cited in Yayla, Kozikoglu, & Çelik, 2016, p. 16).

Critical views to the categories of LLS and good language learner attributes

Silent speakers

According to Rubin (1975), being uninhibited is one of the components in the definition of *a good language learner*. Nonetheless, Reiss (as cited in Oxford, 1986, p. 17) considered being uninhibited as a personal characteristic rather than a strategy to be learnt. By basing upon her research in which she measured the frequency of Rubin's strategy use, Reiss noted that a good language learner can also be a "silent speaker"; therefore, she/he does not necessarily be uninhibited.

Overlapping categories of the strategy classifications

Being critical on the concept of strategy and proposing self-regulation instead, Dörnyei (2005) stated that strategies developed by the scholars are theoretical and merely put into practice. Moreover, Dörnyei (2005) criticized the taxonomies developed by O'Malley and Chamot, and Oxford by claiming that some categories overlap, which causes too many items covered under Strategy Inventory for Language Learning (SILL) and makes the calculation of the scores challenging.

Purpura's alternative

Purpura (1999) appreciates the advances in the realm of LLSs and the procedures of data collection and analysis for the pre-determined hypotheses. He emphasized that the rare existence of mental processing in second and foreign language ability as far as second language test performance is concerned (SLTP). To this end, he employs structural equation modeling (SEM) as an alternative to the relatively more traditional tools in order to investigate the relationship between SLTP and cognitive and metacognitive characteristics of test takers of different ability groups. Metacognitive and cognitive processes are evaluated in terms of reading and lexico-

grammatical abilities. According to the results of the research, Purpura (1999) concludes that although both low and high ability test takers employ specific procedures in a similar way, the majority of the strategies are more appropriately selected by high ability test takers.

Strategy inventory for language learning (SILL)

The information on SILL

"One difficulty with strategy observations is that many learning strategies are purely internal and cannot be easily observed" (Oxford, 1986, p.13). So as to keep track on both mental and practical process of learners, Oxford (1986) developed Strategy Inventory for Language Learning (SILL) and defines it as "the most widely used survey" (Oxford, 2003, p.15). SILL is a standard tool to measure the LLSs of second or foreign language learners and "it has also been used in studies to correlate strategy use with variables such as learning, styles, gender, proficiency level, culture and task" (Chamot, 2005, p.114). SILL has two versions: version 5.1 (Oxford, 1990) is for English native speakers learning a second language and version 7.0 (Oxford, 1990) is for non-native English speakers learning English as a foreign language (ESL) or learning English as a second language (EFL). The details regarding both versions are mentioned below.

Version 5.1 of SILL

Version 5.1 comprises 80 Likert-type scale items with six subcategories as: Part (A) with 12 items measuring retrieval strategies (memory), Part (B) with 28 items measuring the strategies to make associations between previously learnt and recent information (cognitive), Part(C) with nine items measuring the strategies to

compensate lacking information (compensatory), Part (D) with 16 items measuring the strategies used to monitor one's own learning process (metacognitive), Part (E) with seven items measuring the strategies to control emotions and motivation (affective) and Part (F) with nine items measuring the strategies used for interaction (social).

Version 7.0 of SILL

Version 7.0 comprises 50 Likert-type scale items with six subcategories as (Oxford, 1990) (see Appendix B):

- Part (A) with nine items measuring retrieval strategies (memory), which focuses on *creating mental linkages, applying images and sounds, reviewing well* and *employing action*.
- Part (B) with 14 items measuring the mental and decision making process (cognitive), which focuses on *practicing, receiving and sending messages, analyzing and reasoning,* and *creating structure for input and output*.
- Part (C) with 15 items measuring the strategies for interaction and to compensate the lacking information (compensatory), which focuses on *guessing intelligently*, and *overcoming limitations in speaking and writing*
- Part (D) with nine items measuring the strategies used to monitor own learning process (metacognitive), which focuses on *centering learning, arranging and planning learning* and *evaluating learning*
- Part (E) with 12 items measuring the strategies used to control emotions, motivation (affective), which focuses *on lowering anxiety, encouraging oneself* and *taking emotional temperature*

- Part (F) with six items measuring the strategies used to improve the process of language learning through the communication with others, which focuses on *asking questions, cooperating with others* and *empathizing with others*.

The function of SILL

In both versions, the subjects respond the items by evaluating them from 1 to 5 on a separate worksheet and should be aware that there is no right or wrong answers. The subjects are not given the function and meanings of the items according to the subcategories they belong to in order to eliminate the possibility of recalling LLSs and responding accordingly. As the items in SILL comply with Oxford's taxonomy, it is considered to be highly reliable and valid by the researchers studying on collecting data to measure language learning strategies (Russell, 2010). It is also a useful tool for teachers to administer SILL to discover their students' learning strategies as well as their cognitive, metacognitive, social, affective, memory and compensatory skills and shortcomings. After its latest developed version in 1990 by Oxford, SILL has been utilized as a questionnaire by Chamot (2005) as one of the methods identifying LLSs of the learners in addition to retrospective interviews, stimulated recall interviews, written diaries and journals and think aloud protocols.

Range of studies focusing on SILL

Green and Oxford (1995) employed SILL for the LLS preferences of non-native English university level students. They concluded that proficiency level differs in terms of LLS choice. They concluded that more successful language learners tend to use cognitive, compensatory, metacognitive and social strategies. Bremner (1999) also concludes the higher proficiency level leads to more use of strategies. Similarly,

Norton and Toohey (2001) find that successful learners are more likely to internalize cognitive, metacognitive, social and affective strategies (as cited in Chang, 2009).

Griffiths (2003) used SILL in order to identify the frequently used strategies in terms of proficiency level by the students attending a private language school and whose ages ranged between 14 to 64. According to the research results, she concluded that the learners having higher proficiency level tend to use memory, cognitive, metacognitive, affective and social strategies more.

To Gan, Humphreys and Hamp-Lyons (2004), less successful learners tend to use more memory strategies. However, Gerami and Baighlou (2011) found that less successful learners use cognitive strategies whereas successful learners employ metacognitive strategies more frequently.

As for the *teachability* of strategies, of Griffiths (2003) claims that learners who are being directly taught memory, cognitive and compensatory strategies are likely to become high achievers in language learning. Very similarly, conducting research on Iranian female L2 learners whose ages range between 15 to 17, Marefat (2003) emphasizes the importance of teaching LLSs to the learners. Her study's results suggest that such learners have good command of short and long term memory as they tend to use memory, cognitive and compensatory strategies most frequently.

Basing their studies on similar context, Acunsal (2005) and Şen (2009) conducted their research on the *teachability* of LLSs to L2 learners. Acunsal worked on 8th grade students and Şen focused on English preparatory programme students. Despite

the different samples, both reached similar conclusions: the least preferred strategy is affective strategies and teachers should embed some instructions about use of LLS during teaching.

According to Green and Oxford (1995), and Ku (1995), gender difference influences LLS preference, and females tend to employ more strategies. Hong-Nam and Leavell (2006) conducted research to measure the relationship between LLS use and proficiency level, gender and nationality, and applied SILL for EFL university students to collect data accordingly. They conclude that intermediate level students tend to use the strategies more than the ones in beginner and advanced level, and female students are more likely to employ social and affective strategies when compared to males. Also, Japanese students tend to employ affective strategies, and Chinese students internalize social strategies more whereas Korean students prefer metacognitive strategies.

Stating that if language learning and its strategies are in question, the main focus is mainly on adolescents and adults, Vrettou (n.d.) did research on sixth grade students in Greek state elementary schools. The outcomes highlight that motivation and gender make a difference on LLS preferences.

Alhaisoni (2012) investigated the relationship between LLS preferences and gender and proficiency levels. She conducts research on EFL university students and concluded that female students tend to use the overall strategies, especially the social strategies. Also, as for proficiency level, the students with high proficiency tend to use overall LLSs more compared to the ones with low proficiency levels.

Likewise, Li (2015) conducted research regarding the relationship between the strategy preferences of the learners, and proficiency level and gender as well as the learners' strategy preferences vis-à-vis the skill areas such as listening, speaking and vocabulary. The sample of the research consisted of Chinese students attending pre-degree ESOL programme and Business Diploma programme. The outcomes of the research indicated that the higher the proficiency level is, the higher the frequency of using the strategies, especially the ones under cognitive, affective and memory categories, and female participants are more likely to use the strategies under the compensatory category.

Claiming that teaching English in Chinese schools are more teacher-centered and consequently LLSs are not taken into consideration, Liu (2013) conducted research aiming at measuring the relationship between LLS use and gender on senior high school students. The results indicated that females tend to use more LLSs compared to males and different genders tend to opt for different strategies, so the teachers should consider this fact while teaching. Also, criticizing the formal type of education, Liu advocated a more communication-based environment in which the learners are provided with the opportunity to practice the theoretical knowledge and to administer LLSs more efficiently.

Aiming at doing research on the relationship between LLSs and global self-esteem (GBS) among college EFL learners, and determining the most frequently used strategy, Asadifard and Biria (2013) employed SILL to collect data accordingly. As a result, their study concluded that there is a considerably significant relationship between LLSs and GBS. According to the results from the data collected, the

relationship between cognitive strategies and GBS are relatively more related whereas GBS and affective strategies have the least correlated relationship.

Nosratinia, Saveiy and Zaker (2014) utilized SILL to see the relationship between EFL learners' self-efficacy and metacognitive awareness between LLSs. The results of their study show that the students having metacognitive awareness and self-efficacy are more likely to use LLSs accurately.

Altunay (2014) conducted research on distance learners of ESL and employed SILL to measure the most and the least preferred LLSs. As a result, the least used strategy seems to be the affective strategies, which may be the reason why the distant education learners are not involved in face-to-face interactions.

Sadeghi and Khonbi (2015) aimed at exploring the relationship between LLSs and language learning aptitude (LLA) by determining Iranian male and female university students as their sample. Their findings conclude that there is a positive correlation between LLSs and LLA especially in cognitive and metacognitive categories, and learners should receive LLS instruction. Also, the results yield a significant mean difference between genders in terms of cognitive and metacognitive strategies. According to the results, males tend to employ more of these strategies.

Aspiring to find out the LLS preferences in TEFL-oriented programmes, Zareva and Fomina (2012) conducted research on Russian university students in English Linguistics programmes. The results of the study indicate medium to high frequency use of all strategies, and conclude that curriculum designers and instructors should

take the strategies used by learners into consideration for TEFL-oriented programmes.

Kayaoğlu (2013) aimed at exploring if a relationship existed between the LLS use and successful and less successful learners' beliefs of language. To this end, he conducted research on adult Turkish EFL students at undergraduate level, and his study conclude that learners' beliefs influence strategy use and successful language learners prefer metacognitive strategies more than less successful learners.

Also, as a similar context, Kaplan (2016) conducted a study on frequency of LLS use with respect to importance given to proficiency level among Anatolian high school students. The results of the study suggest that as students give more importance to proficiency, they are more likely to use memory and compensatory strategies and less likely to use cognitive strategies.

LLSs and bilingual education

Based on their research on academic success rates of students studying in bilingual diploma programme and the encouraging and discouraging factors to attend the programme, Rivera, Tressler, McCreadie and Ballantyne (2014) reach the conclusion that bilingual diploma students have relatively higher achievements in language acquisition tests and are more likely to take more language courses compared to the students of standard diploma programme.

Claiming that LLSs are only taken into consideration in traditional language education settings, Brauer (1997) conducts research to explore and explain the LLS

preferences by the native English, fourth grade students receiving two-way bilingual education. According to the results, more successful language learners tend to use cognitive, metacognitive and social strategies. Also, conducting research to see if there is a difference between monolingual and bilingual Korean university students in terms of LLS use frequency, Hong (2006) concludes that monolinguals tend to use compensatory strategies and bilinguals tend to use cognitive strategies more as monolinguals have low competence in learning an L2. Chang (2009) states that despite the common research on LLSs, few regarding the LLS preference difference between EFL and ESL learners are conducted. As a result, he investigated such a difference between Taiwanese college level ESL and EFL students. According to the results of this study, the ESL students are more likely to use social strategies compared to the EFL students.

Yayla, Kozikoglu and Celik (2016) conducted a comparative study to reveal if there is any difference in the use of LLSs between monolingual and bilingual learners at university level, and if the use varies in terms of gender, department and school type. The findings of the study suggested that bilingual learners use more LLSs than monolingual learners. In addition, it is shown that the most frequently used strategy is metacognitive strategy whereas the least is affective strategies; female students use LLSs more compared to males, and the students attending four-year departments use LLSs more than the ones attending two-year departments. Similarly, Tuncer's (2009) study suggested that bilingual EFL learners tend to use more LLSs compared to monolingual EFL learners in Turkey.

CHAPTER 3: METHOD

Introduction

This chapter commences with the focus on the research design employed, and continues with providing information with regard to context, participants, data collection and analysis procedures.

Research design

This case study was conducted at a high school implementing both local and international curricula, and offering three internationally recognized bilingual degrees at high school level, namely IGCSE and IB Diploma and one locally and internationally recognized high school diploma. The school requires successful completion of the international curricula first to award a local high school diploma. There are only two schools of this nature in Turkey. The researcher used case study to explain and explore "how a phenomenon [language learning strategies] is influenced by the context [a school offering bilingual degrees] within which it is situated" (Baxter & Jack, 2008).

This study first focuses on describing direct and indirect language learning strategies that are used by students of a high school offering bilingual degrees. The study also intends to explain if there is any difference in language learning strategies caused by age, gender, grade level, proficiency level and importance given to proficiency. In this research, hence, the use of LLSs represents the phenomenon and the use among students of a high school offering bilingual degrees represents the specific context.

The study used both descriptive and inferential statistics to answer the research questions.

Context

This research study was conducted at a laboratory and international high school offering bilingual degrees in Turkey, namely IGCSE and IB. Embodying pre-kindergarten, elementary, middle and high school, it is a school for both Turkish national and international students and it is an environment where students from different nationalities are taught by almost 200 teachers who are also from various nationalities. Education at the school starts with early immersion at pre-kindergarten and kindergarten, continues through two-way bilingual education in elementary school, and through a program shifting from bilingual to monolingual (i.e. English) in most subject areas in middle school, and is completed through the mandatory international English programmes in high school.

This is a school administering both national (Turkish Ministry National Curriculum) and mandatory international curricula (IGCSE and IB) in English. Accordingly, Primary Years Programme (PYP) from pre-kindergarten to the end of 4^{th} grade, Cambridge IGCSE for 9^{th} and 10^{th} grades, and IB Diploma Programme during 11^{th} and 12^{th} grades are implemented alongside with Turkish Ministry National Curriculum. Middle Years Programme (MYP) is not implemented in the school. All students must pass the IB Diploma Programme to graduate.

As a part of PYP, each homeroom class for pre-kindergarten and elementary school is provided with an international and a Turkish teacher for co-teaching for all subject

areas except *English* and *Turkish*. PYP students are exposed to Turkish for at most 10 teaching hours out of 40 in a week. In middle school, *Turkish Language Arts*, *Turkish Social Studies* and *Turkish as an Additional Language* are presented in Turkish; all other subjects are taught in English. Middle school students receive these lessons for at most 11 teaching hours out of 45 in a week. As for high school, 9th and 10th graders are obliged to undertake both IGCSE courses and non-IGCSE courses. *Turkish History, Turkish Literature, Turkish Geography* and *Ethics* are taken by Turkish students only and Turkish language courses are taken only by international students as non-IGCSE courses. *History and Global Perspectives* as IGCSE courses are only taken by international students. 9th and 10th graders are exposed to *Turkish* for 11 teaching hours out of a total of 50 hours in a week. IB DP courses, except for the courses of *Turkish Literature*, *Turkey in the 20th Century* are taken commonly, both by the Turkish and international students. Non-IB DP courses as *Philosophy*, *Ethics* and *Traffic*, are taken only by the Turkish students. 11th and 12th graders are exposed to *Turkish* for 9 hours, if they are HL, and for 11 hours, if they are SL, in a week.

Participants

The study was conducted with the participation of 9th, 10th, 11th and 12th grade students of the school. The Turkish native students whose ages range between 14 to 18 were selected for the study. 171 Turkish-native students out of a total of 197 students formed the target population of the study, and a total of 121 of them responded the instrument administered online and in class, but 118 of them completed all the parts. Of these 118 students, 36 students out of 50 comprise 9th, 41 out of 41 comprise 10th, 20 out of 37 comprise 11th and 21 out of 43 comprise 12th

graders. Also, the number of 14-year-olds is 10, of 15-year-olds is 34, of 16-year-olds is 37, of 17-year-olds is 20 and of 18-year-olds is 17. As for gender representation, the total number of males is 59 and also of females is 59. The number of students considering their proficiency level as "excellent" is 52 and of the ones considering their proficiency level as "good" is 65. Lastly, the number of students considering proficiency as "very important" is 87, of the ones considering proficiency as "important" is 25 and as "not important" is 6.

Instrumentation

This study used Oxford's (1990) Strategy Inventory for Language Learning (SILL) version 7.0 to address the research questions. According to Oxford (1990), SILL is a questionnaire utilized to measure LLS use by language learners. It is proved to be highly reliable by many studies (Kang, 2012). SILL has two versions, version 5.1 is for "English speakers learning a new language" and version 7.0 is for "speakers of other languages learning English" (Oxford, 1990).

There are 50 Likert scale items in the instrument, and they are listed under direct and indirect strategies, and each of which is composed of three main categories on (Oxford, 1990):

Direct strategies

First nine statements under Part A are designed to identify memory strategy use; next 14 statements under Part B to ascertain cognitive strategy use, and six statements under Part C to determine compensatory strategy use.

Indirect strategies

The nine statements under Part D are used for identifying metacognitive strategy use; Part E comprises six statements for exploring affective strategy use and Part F, which consists of the remaining six questions, for discerning social strategies. The evaluation on Likert scale ranges between 1 to 5. On the scale, 1 means *never or almost never true of me*, 2 means *usually not true of me*, 3 is *somewhat true of me*, 4 is *usually true of me* and 5 means *always or almost true of me*.

The tool also included a background questionnaire (see Appendix A) composed of the following sections: age, gender, grade level, proficiency level, and importance given to proficiency level.

Method of data collection

Before the data collection process, a proposal was prepared to request permission from the Provincial Directorate of the Ministry of National Education to administer the instrument.

An online version of the SILL was prepared, and the Head of English department facilitated its administration. 43 students responded the survey online, so to increase the response rate, the hard copy version of 128 questionnaires were also sent to the high school principal and counsellor. The number of responses to the hard copy version of the survey was 78, which made in total 121 responses to the online and hard copy version of the survey. To ensure objective student responses, the SILL survey was administered by the teachers, and the participants were given privacy during the answering process.

Method of data analysis

The study used SPSS Statistics (version 24.0) for both descriptive and inferential analyses. Firstly, to see the reliability of the six dimensions in SILL and the non-objectivity of the participants, the Cronbach alpha for each dimension was checked, which was observed to be greater than 0.70 (Carmines & Zeller, 1979).

Before conducting statistical analyses to answer the research questions, first, the normality was checked and it was observed that the skewness and kurtosis values were between +2 and -2. Therefore, the variables in the study were assumed to have univariate normality (Gravetter & Wallnau, 2014). Then, the average of each category and for direct and indirect strategies were calculated for inferential statistics. All analyses were based on parametric techniques. For the variables under the background questionnaire, the mean and the standard deviation of age, the frequency of gender and grade level were calculated. Since, for proficiency level, the majority of the participants chose “excellent”, “good”, and only one participant chose “fair” and nobody chose “poor”, the inferential statistics was done for the first two categories by excluding the participant saying “fair” and “poor”. Also, one of the students’ response was excluded from the variable of proficiency level and the measurements were conducted based on 117 students out of the total of 118 as the student left the related part blank. Lastly, the study excluded the participants’ answers to the question of *how long have you been learning English* and *why do you want to learn the language in English* on the background questionnaire (see Appendix A) as they were out of the scope of the study although the data were collected for both of the statements.

To answer the first research question regarding the commonly used direct and indirect strategies, descriptive statistics was used, and to answer the second research question, the researcher used inferential statistics, ANOVA and independent samples t-test. When variances assumed, Tukey's post hoc Honestly Significant Difference (HSD) test was used, and when variances not assumed, Dunnett's post hoc C test was used. As for the analyses through independent samples t-test, the homogeneity of variance according to Levene's test was checked to see if the assumption was met. Alpha level was taken as 0.05 for all inferential analyses.

CHAPTER 4: RESULTS

Introduction

This chapter presents the results of the study, and the findings in relation direct and indirect strategy use are provided through both descriptive and inferential analyses within the framework of age, gender, grade level, proficiency level and importance given to proficiency.

Direct and indirect strategies: Age

This study explores how direct and indirect strategies are used among high school students at a laboratory school offering bilingual degrees. Table 1 suggests that both direct and indirect strategies have a medium level of usages among the age groups.

Table 1
Overall direct and indirect strategies: Age

		14 year-olds (n=10)	15 year-olds (n=34)	16 year-olds (n=37)	17 year-olds (n=20)	18 year-olds (n=17)
Direct Strategies						
	M	3.38	3.30	3.38	3.36	3.02
	SD	0.79	0.73	0.62	0.72	0.66
Indirect Strategies						
	M	3.00	3.24	3.06	3.28	2.64
	SD	1.15	0.88	0.83	0.82	0.76

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Having the same means at medium level, 14 and 16-year-olds use direct strategies more among all age groups whereas direct strategies are used more by 17 and 15-year-olds respectively (Table 1).

When the overall means of direct and indirect strategies are analyzed (Figure 1), one can observe that direct strategy use is more common among all age groups when it is compared to indirect strategy use.

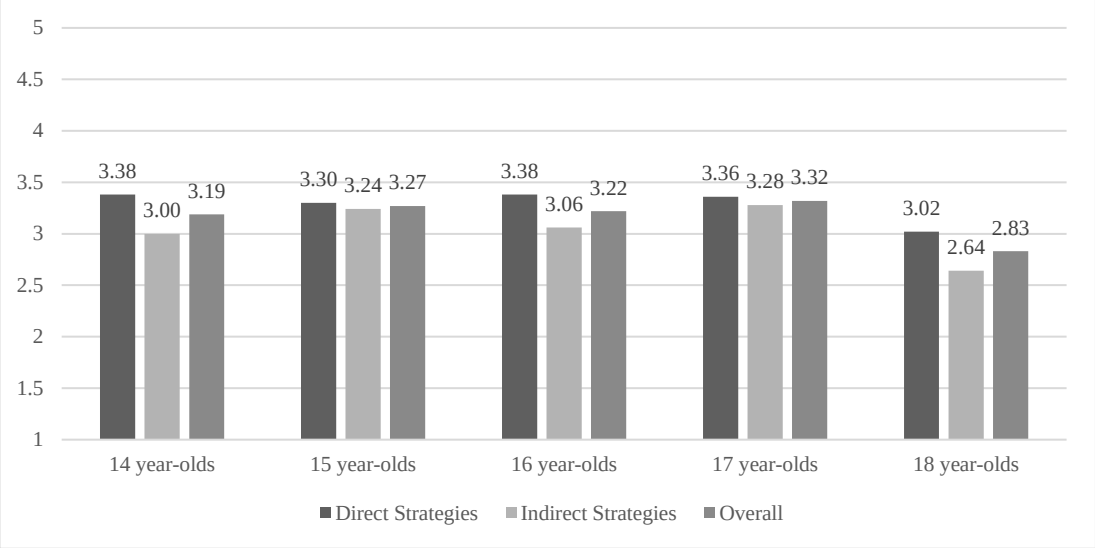


Figure 1. Means of overall direct and indirect strategies across age

As Figure 1 also suggests, the overall use of both direct and indirect strategies is the highest among 17-year-olds whereas the lowest is among 18-year-olds.

Table 2 below indicates the results from the analysis of variance (ANOVA) test conducted to see if there is a significant mean difference between age groups in terms of the overall direct and indirect strategies.

Table 2
ANOVA for overall direct and indirect strategies: Age

	df_1	df_2	F
Direct Strategies	4	117	0.93
Indirect Strategies	4	117	1.69

The results show that there is no statistically significant mean difference between age groups in terms of the overall direct and indirect strategies as seen in Table 2. When direct and indirect strategies are divided into their subgroups as memory, cognitive, compensatory, metacognitive, affective and social strategies, it is observed in Table 3 that the most commonly used strategy is metacognitive strategies, at high level among 14 and 15-year-olds, and at medium level among 16, 17 and 18-year-olds.

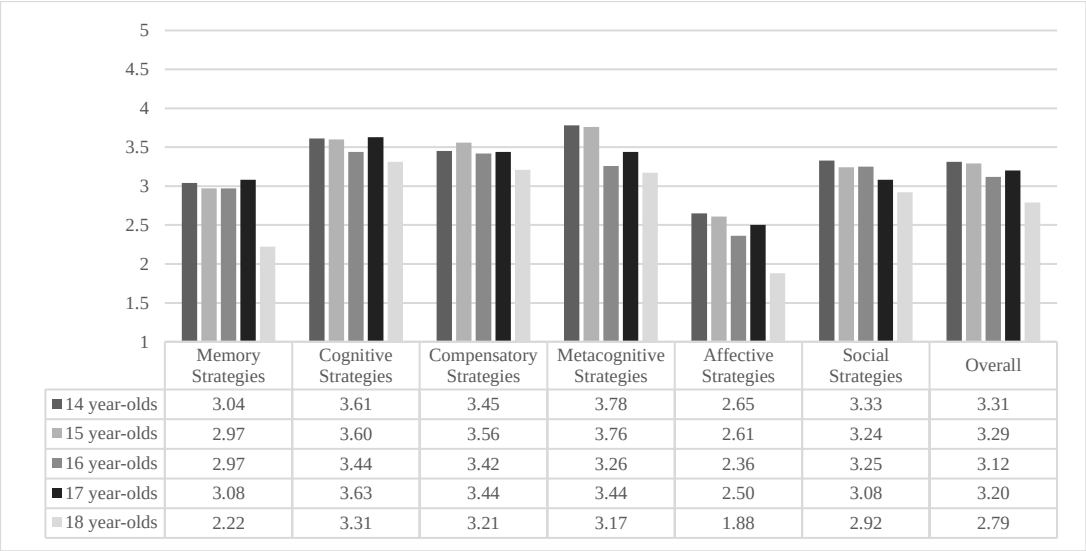
Table 3
Direct and indirect strategies: Age

		14 year-olds (n=10)	15 year-olds (n=34)	16 year-olds (n=37)	17 year-olds (n=20)	18 year-olds (n=17)
Memory Strategies						
	M	3.04	2.97	2.97	3.08	2.22
	SD	0.75	1.01	0.95	0.98	0.72
Cognitive Strategies						
	M	3.61	3.60	3.44	3.63	3.31
	SD	0.55	0.97	0.62	0.64	0.55
Compensatory Strategies						
	M	3.45	3.56	3.42	3.44	3.21
	SD	0.54	0.82	0.74	0.83	0.85
Metacognitive Strategies						
	M	3.78	3.76	3.26	3.44	3.17
	SD	0.74	0.94	0.98	0.75	0.96
Affective Strategies						
	M	2.65	2.61	1.36	2.50	1.88
	SD	0.91	1.09	1.15	1.28	0.98
Social Strategies						
	M	3.33	3.24	3.25	3.08	2.92
	SD	0.86	1.17	0.93	1.06	1.02

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Affective strategies, on the other hand, seem to be employed the least among all age groups, especially among 16 and 18- year-olds (Table 3).

Figure 2 also demonstrates that 14 and 15-year-olds use metacognitive strategies more and affective strategies less compared to the other strategies.



	Memory Strategies	Cognitive Strategies	Compensatory Strategies	Metacognitive Strategies	Affective Strategies	Social Strategies	Overall
14 year-olds	3.04	3.61	3.45	3.78	2.65	3.33	3.31
15 year-olds	2.97	3.60	3.56	3.76	2.61	3.24	3.29
16 year-olds	2.97	3.44	3.42	3.26	2.36	3.25	3.12
17 year-olds	3.08	3.63	3.44	3.44	2.50	3.08	3.20
18 year-olds	2.22	3.31	3.21	3.17	1.88	2.92	2.79

Figure 2. Means of direct and indirect strategies across age

When the overall means are compared among all age groups, the use of all of the strategies are the highest for 14-year-olds and the lowest for 16-year-olds (Figure 2). However, among six main strategy categories, there is a statistically significant mean difference between some age levels in terms of their use of only memory strategies as a result of the ANOVA test, as seen in Table 4.

Table 4
ANOVA for direct and indirect strategies: Age

	df_1	df_2	F
Memory Strategies	4	117	2.63*
Cognitive Strategies	4	117	0.70
Compensatory Strategies	4	117	0.58
Metacognitive Strategies	4	117	2.15
Affective Strategies	4	117	1.40
Social Strategies	4	117	0.43

* $p < 0.05$

The post hoc Tukey's Honestly Significant Difference (HSD) shows that this meaningful difference is only between 17 and 18-year-olds.

Direct strategies: Age

Table 5 demonstrates the subcategories of direct strategies as memory, cognitive and compensatory strategies. It can be seen that memory strategy use is at medium level among all age groups except 18-year-olds, which seems to be at low level.

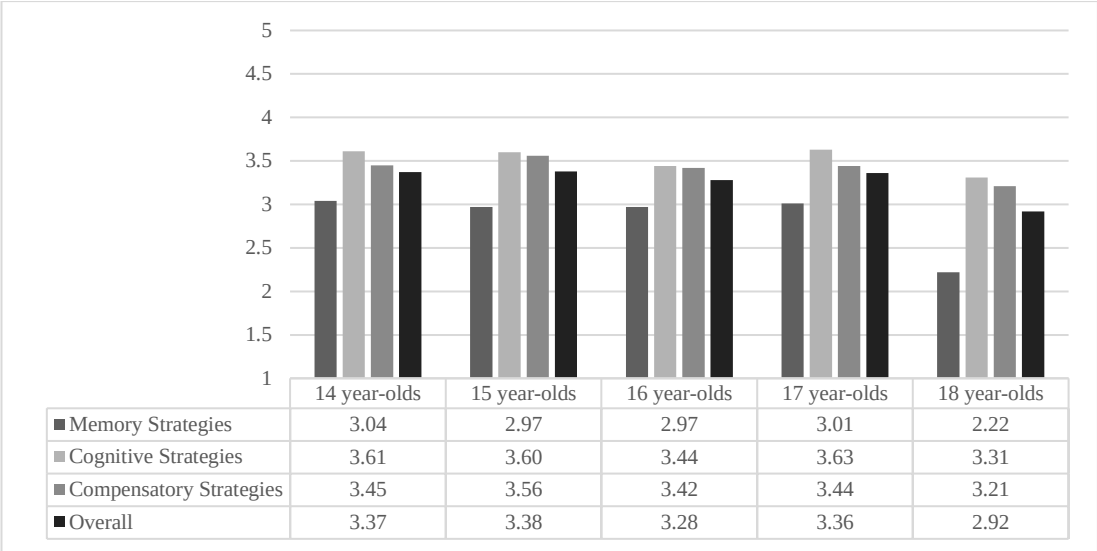
Table 5
Direct strategies: Age

		14 year-olds (n=10)	15 year-olds (n=34)	16 year-olds (n=37)	17 year-olds (n=20)	18 year-olds (n=17)
Memory Strategies						
	M	3.04	2.97	2.97	3.08	2.22
	SD	0.75	1.01	0.95	0.98	0.72
Cognitive Strategies						
	M	3.61	3.60	3.44	3.63	3.31
	SD	0.55	0.97	0.62	0.64	0.55
Compensatory Strategies						
	M	3.45	3.56	3.42	3.44	3.21
	SD	0.54	0.82	0.74	0.83	0.85

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Cognitive strategy use is at high level among 14, 15 and 17-year-olds and at medium level among 16 and 18-year-olds. As for compensatory strategies, only 16-year-olds use them at high level whereas the rest of the groups use them at medium level (Table 5).

As Figure 3 suggests, cognitive strategy use is the most, whereas memory strategies are the least preferred strategies when compared to all the direct strategies among all age groups.



	14 year-olds	15 year-olds	16 year-olds	17 year-olds	18 year-olds
Memory Strategies	3.04	2.97	2.97	3.01	2.22
Cognitive Strategies	3.61	3.60	3.44	3.63	3.31
Compensatory Strategies	3.45	3.56	3.42	3.44	3.21
Overall	3.37	3.38	3.28	3.36	2.92

Figure 3. Means of memory, cognitive and compensatory strategies across age

Given the overall means of the use of all strategies under each age group, it seems that 15-year-olds employ all of the direct strategies more and 18-year-olds less than the other age groups (Figure 3).

As Table 6 suggests, there is a statistically significant mean difference in terms of memory strategies as a result of the ANOVA test.

Table 6
ANOVA for direct strategies: Age

	df_1	df_2	F
Memory Strategies	4	117	2.63*
Cognitive Strategies	4	117	0.70
Compensatory Strategies	4	117	0.58

* $p < 0.05$

The post hoc Tukey HSD analysis indicates that the difference is between 15 and 18, and 17 and 18-year-olds.

Memory strategies: Age

As Table 7 suggests, the memory strategies are in categories as *creating mental linkages, applying images and sounds, reviewing well and employing action*. The strategies of reviewing English lessons often and recalling new English words through remembering their location on page, board or a street tend to be at high and medium level as age levels decrease.

Table 7
Memory strategies: Age

	14 year-olds (n=10)	15 year-olds (n=34)	16 year-olds (n=37)	17 year-olds (n=20)	18 year-olds (n=17)
Creating mental linkages: Relationship between old and new (M1)					
M	3.70	3.56	3.84	3.75	3.29
SD	1.06	1.13	1.39	1.25	1.65
Creating mental linkages: New words in a sentence (M2)					
M	2.90	3.06	3.81	3.35	3.29
SD	0.88	1.21	1.18	1.35	1.76
Applying images and sounds: Sound and image connection (M3)					
M	3.00	3.03	2.95	3.50	2.29
SD	1.25	1.31	1.49	1.00	1.40
Applying images and sounds: Mental picture (M4)					
M	3.70	3.41	3.08	3.60	2.41
SD	1.34	1.23	1.52	1.19	1.58
Applying images and sounds: Rhymes (M5)					
M	2.20	2.18	2.16	2.50	1.59
SD	1.40	1.36	1.46	1.43	1.12
Applying images and sounds: Flashcards (M6)					
M	2.50	2.56	2.51	2.55	2.29
SD	1.65	1.52	1.81	1.36	1.53
Applying images and sounds: Page, board and street signs (M9)					
M	3.90	3.50	3.54	2.55	2.29
SD	0.99	1.42	1.59	1.23	1.53
Reviewing well: Review often (M8)					
M	3.70	2.91	2.84	2.80	1.71
SD	1.06	1.29	1.34	1.40	1.05

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

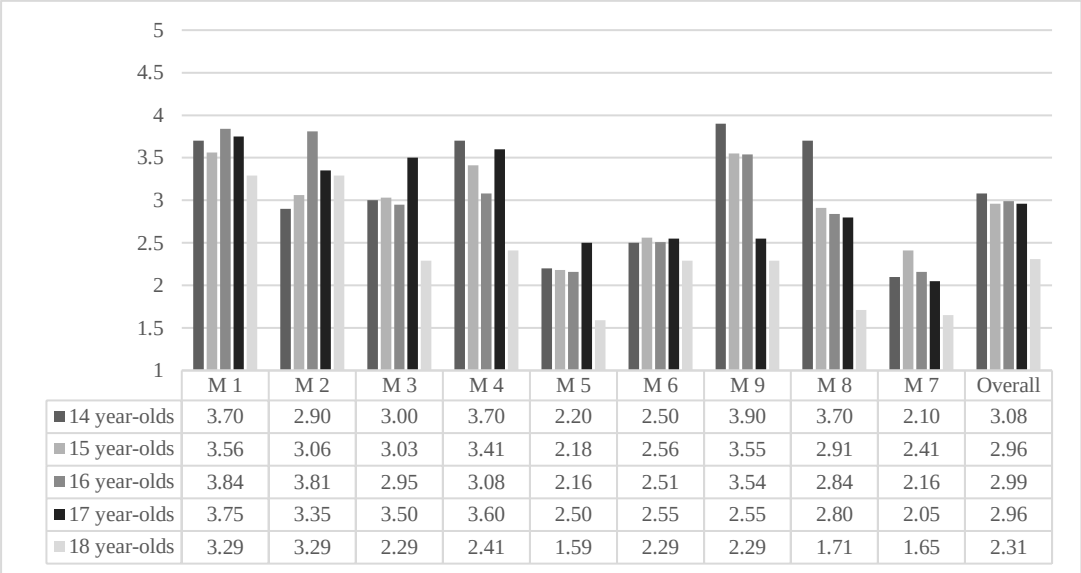
Table 7 (cont'd)
Memory strategies: Age

		14 year-olds (n=10)	15 year-olds (n=34)	16 year-olds (n=37)	17 year-olds (n=20)	18 year-olds (n=17)
Employing action: Physically acting out (M7)						
	M	2.10	2.41	2.16	2.05	1.65
	SD	1.37	1.35	1.57	1.23	1.27

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

The strategies of using rhymes to remember new English words and physically acting out new English words is at low level among all age groups, generally being the lowest among 18-year-olds (Table 7).

Figure 4 includes the overall use of memory strategies for each age group.



	M 1	M 2	M 3	M 4	M 5	M 6	M 9	M 8	M 7	Overall
14 year-olds	3.70	2.90	3.00	3.70	2.20	2.50	3.90	3.70	2.10	3.08
15 year-olds	3.56	3.06	3.03	3.41	2.18	2.56	3.55	2.91	2.41	2.96
16 year-olds	3.84	3.81	2.95	3.08	2.16	2.51	3.54	2.84	2.16	2.99
17 year-olds	3.75	3.35	3.50	3.60	2.50	2.55	2.55	2.80	2.05	2.96
18 year-olds	3.29	3.29	2.29	2.41	1.59	2.29	2.29	1.71	1.65	2.31

Figure 4. Means of memory strategies across age

According to the overall means in Figure 4, the use of memory strategies is the highest among 14 year-olds and the lowest among 18 year-olds.

The ANOVA test conducted yields statistically significant difference across age groups in terms of reviewing English often and physically acting out as memory strategies as seen in Table 8.

Table 8
ANOVA for memory strategies: Age

	df_1	df_2	F
Creating mental linkages: Relationship between old and new (M1)	4	117	0.58
Creating mental linkages: New words in a sentence (M2)	4	117	1.92
Applying images and sounds: Sound and image connection (M3)	4	117	1.90
Applying images and sounds: Mental picture (M4)	4	117	2.39
Applying images and sounds: Rhymes (M5)	4	117	1.04
Applying images and sounds: Flashcards (M6)	4	117	0.87
Applying images and sounds: Page, board and street signs (M9)	4	117	4.20
Reviewing well: Review often (M8)	4	117	4.40*
Employing action: Physically acting out (M7)	4	117	0.87*

* $p < 0.05$

The post hoc Tukey HSD analysis indicates that the significant difference regarding reviewing is between 14 and 18, 15 and 18, and 16 and 18-year-olds. As for physically acting out, there is significant difference between 14 and 17, and 14 and 18-year-olds.

Cognitive strategies: Age

Table 9 below demonstrates the cognitive strategies under the categories of *practicing*, *receiving and sending messages*, *analyzing and reasoning*, and *creating structure for input and output*. The strategies of speaking like a native, reading books in English, writing in English and watching TV shows in English seem to be preferred most by all of the age groups and the preferences are at high level.

Table 9
Cognitive strategies: Age

	14 year-olds (n=10)	15 year-olds (n=34)	16 year-olds (n=37)	17 year-olds (n=20)	18 year-olds (n=17)
Practicing: Saying or writing new words (C1)					
M	3.60	2.88	3.30	2.95	2.53
SD	0.70	1.39	1.52	1.23	1.33
Practicing: Speaking like a native (C2)					
M	4.20	4.00	4.14	4.45	4.24
SD	0.92	1.23	1.08	0.76	1.25
Practicing: Practicing the sounds (C3)					
M	3.50	3.29	3.32	3.30	2.59
SD	1.35	1.45	1.47	1.46	1.66
Practicing: Using words in different ways (C4)					
M	3.90	3.35	3.84	3.60	3.82
SD	1.20	1.30	1.19	1.47	1.38
Practicing: Finding patterns (C11)					
M	2.80	2.47	2.68	2.95	2.00
SD	1.32	1.46	1.47	1.32	1.17
Receiving and sending messages: Starting					
M	4.10	3.79	4.08	4.05	3.76
SD	1.10	1.34	1.16	1.05	1.25
Receiving and sending messages: English TV shows or movies (C6)					
M	4.40	4.41	4.78	4.35	4.76
SD	1.08	1.18	0.48	1.04	0.66
Receiving and sending messages: Reading books					
M	4.10	3.71	4.11	4.25	4.18
SD	1.20	1.29	1.22	0.85	1.19
Analyzing and reasoning: Skimming then reading					
M	3.40	3.56	3.51	3.30	3.65
SD	1.51	1.38	1.38	1.49	1.12
Analyzing and reasoning: Looking for similar words					
M	3.30	3.09	2.86	2.80	2.47
SD	1.34	1.53	1.55	1.24	1.66
Analyzing and reasoning: Dividing words into parts					
M	2.80	2.79	3.14	2.90	2.88
SD	1.40	1.37	1.46	1.12	1.76
Analyzing and reasoning: No word-for-word translation					
M	3.90	3.71	3.59	3.35	2.76
SD	0.88	1.36	1.28	1.31	1.60

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

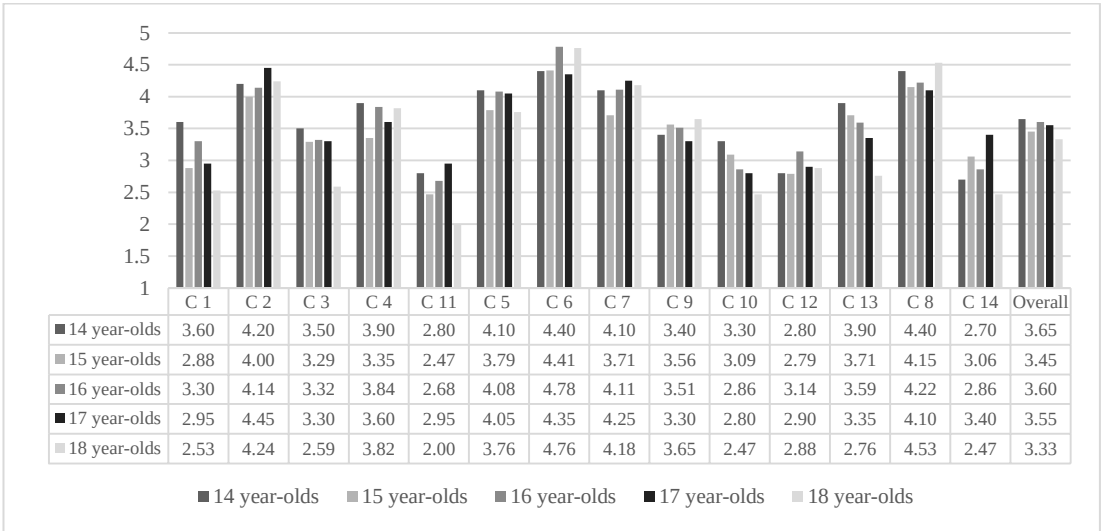
Table 9 (cont'd)
Cognitive strategies: Age

		14 year-olds (n=10)	15 year-olds (n=34)	16 year-olds (n=37)	17 year-olds (n=20)	18 year-olds (n=17)
Creating structure for input and output: Writing in English (C8)						
	M	4.40	4.15	4.22	4.10	4.53
	SD	0.84	1.11	0.98	1.12	0.72
Creating structure for input and output: Making summaries? (C14)						
	M	2.70	3.06	2.86	3.40	2.47
	SD	1.49	1.41	1.42	1.10	1.63

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

The rest of the strategies are preferred at medium level and there is no cognitive strategy that is preferred at low level across age groups (Table 9).

The figure below (Figure 5) also shows that the strategy of watching TV shows in English has the highest and the means for the strategy of finding patterns in English among all age groups have the lowest values among all age groups compared to the other cognitive strategies.



	C 1	C 2	C 3	C 4	C 11	C 5	C 6	C 7	C 9	C 10	C 12	C 13	C 8	C 14	Overall
14 year-olds	3.60	4.20	3.50	3.90	2.80	4.10	4.40	4.10	3.40	3.30	2.80	3.90	4.40	2.70	3.65
15 year-olds	2.88	4.00	3.29	3.35	2.47	3.79	4.41	3.71	3.56	3.09	2.79	3.71	4.15	3.06	3.45
16 year-olds	3.30	4.14	3.32	3.84	2.68	4.08	4.78	4.11	3.51	2.86	3.14	3.59	4.22	2.86	3.60
17 year-olds	2.95	4.45	3.30	3.60	2.95	4.05	4.35	4.25	3.30	2.80	2.90	3.35	4.10	3.40	3.55
18 year-olds	2.53	4.24	2.59	3.82	2.00	3.76	4.76	4.18	3.65	2.47	2.88	2.76	4.53	2.47	3.33

Figure 5. Means of cognitive strategies across age

Also as the overall means of cognitive strategies under each age group suggest in Figure 5, 14-year-olds seem to have the highest and 18-year-olds have the lowest use of cognitive strategies.

The ANOVA test was conducted to see if there is a statistically significant mean difference across age in terms of cognitive strategies (Table 10).

Table 10
ANOVA for cognitive strategies: Age

	df_1	df_2	F
Practicing: Saying or writing new words (C1)	4	117	1.49
Practicing: Speaking like a native (C2)	4	117	0.56
Practicing: Practicing the sounds (C3)	4	117	0.94
Practicing: Using words in different ways (C4)	4	117	0.81
Practicing: Finding patterns (C11)	4	117	1.25
Receiving and sending messages: Starting conversation (C5)	4	117	0.42
Receiving and sending messages: English TV shows or movies (C6)	4	117	1.36
Receiving and sending messages: Reading books (C7)	4	117	0.93
Analyzing and reasoning: Skimming then reading carefully (C9)	4	117	0.19
Analyzing and reasoning: Looking for similar words (C10)	4	117	0.69
Analyzing and reasoning: Dividing words into parts (C12)	4	117	0.30
Analyzing and reasoning: No word-for-word translation (C13)	4	117	1.83
Creating structure for input and output: Writing in English (C8)	4	117	0.60
Creating structure for input and output: Making summaries (C14)	4	117	1.17

According to the results of the test, there is no statistically significant mean difference across age groups regarding use of cognitive strategies (Table 10).

Compensatory strategies: Age

Table 11 indicates the means of compensatory strategy use under the categories of *guessing intelligently* and *overcoming limitations in speaking and writing* among the age groups.

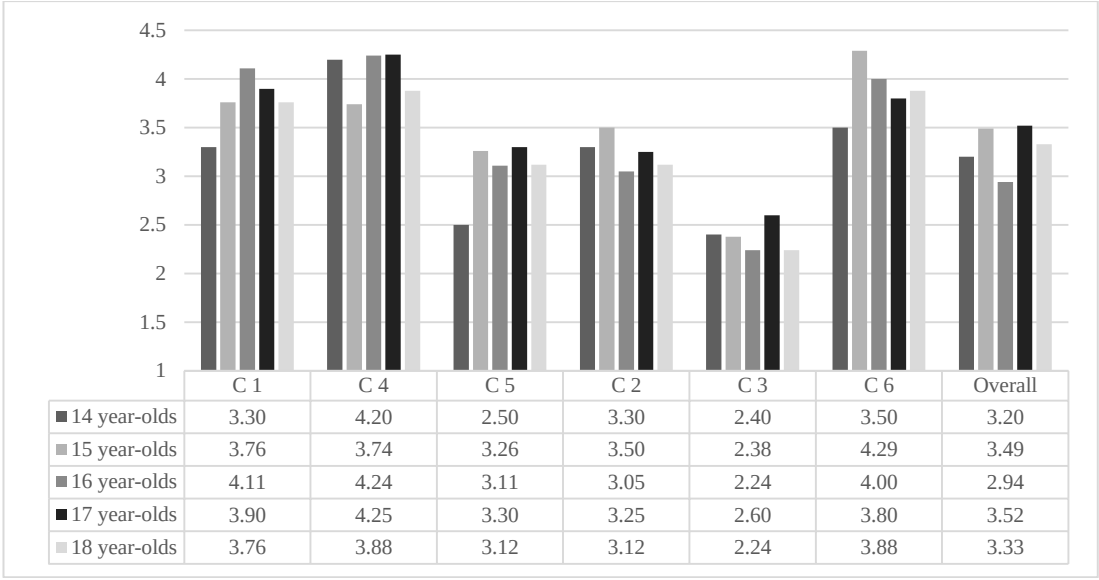
Table 11
Compensatory strategies: Age

	14 year-olds (n=10)	15 year-olds (n=34)	16 year-olds (n=37)	17 year-olds (n=20)	18 year-olds (n=17)
Guessing intelligently: Guessing unfamiliar words					
M	3.30	3.76	4.11	3.90	3.76
SD	1.42	1.16	1.10	1.17	1.20
Guessing intelligently: Not looking up every word (C4)					
M	4.20	3.74	4.24	4.15	3.88
SD	0.92	1.26	.895	0.93	1.32
Guessing intelligently: Guessing what is to be said					
M	2.50	3.26	3.11	3.30	3.12
SD	1.43	1.46	1.24	1.49	1.65
Overcoming limitations in speaking and writing: Using gestures (C2)					
M	3.30	3.50	3.05	3.25	3.12
SD	1.49	1.29	1.20	1.07	1.62
Overcoming limitations in speaking and writing: Making up new words (C3)					
M	2.40	2.38	2.24	2.60	2.24
SD	1.43	1.44	1.48	1.35	1.52
Overcoming limitations in speaking and writing: Using similar words or phrases					
M	3.50	4.29	4.00	3.80	3.88
SD	1.43	0.94	1.08	0.83	1.11

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Except for 15, 16 and 18-year-olds' usage of the strategy of making up new words, all the strategies are at high and medium level among all age groups (Table 11).

As Figure 6 suggests, the highest means belong to the strategies of not looking up dictionary for every unfamiliar word and the least preferred strategy seems to be making up new words among all age groups.



	C 1	C 4	C 5	C 2	C 3	C 6	Overall
14 year-olds	3.30	4.20	2.50	3.30	2.40	3.50	3.20
15 year-olds	3.76	3.74	3.26	3.50	2.38	4.29	3.49
16 year-olds	4.11	4.24	3.11	3.05	2.24	4.00	2.94
17 year-olds	3.90	4.25	3.30	3.25	2.60	3.80	3.52
18 year-olds	3.76	3.88	3.12	3.12	2.24	3.88	3.33

Figure 6. Means of compensatory strategies across age

As the overall means of compensatory strategies under each age group suggest in Figure 6, 17 year-olds have the highest and 16 year-olds have the lowest means of the overall compensatory strategy use.

The ANOVA test was conducted to see if there is a statistically significant mean difference across age in terms of compensatory strategies as seen in Table 12.

Table 12
ANOVA for compensatory strategies: Age

	df1	df2	F
Guessing intelligently: Guessing unfamiliar words (C1)	4	117	1.08
Guessing intelligently: Not looking up every word (C4)	4	117	1.82
Guessing intelligently: Guessing what is to be said next (C5)	4	117	0.64
Overcoming limitations in speaking and writing: Using gestures (C2)	4	117	0.58
Overcoming limitations in speaking and writing: Making up new words (C3)	4	117	0.23
Overcoming limitations in speaking and writing: Using similar words (C6)	4	117	1.49

The results yield no statistically significant mean difference across age groups regarding use of compensatory strategies (Table 12).

Indirect strategies for age

Table 13 below presents indirect strategy use by age groups, which is mainly at medium level. Metacognitive strategy use by 14 and 15-year-olds is at high level.

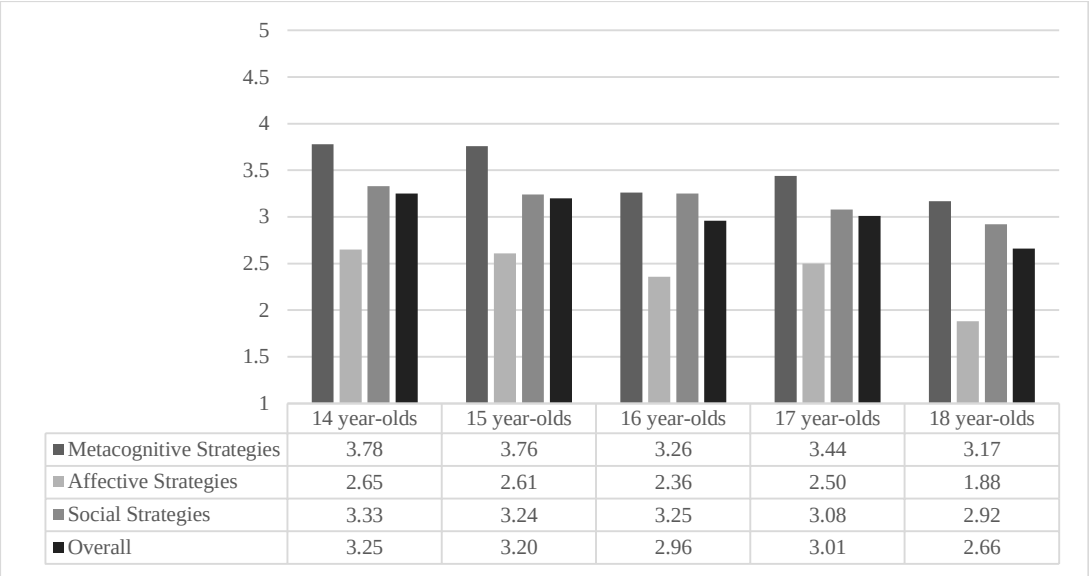
Table 13
Indirect strategies: Age

		14 year-olds (n=10)	15 year-olds (n=34)	16 year-olds (n=37)	17 year-olds (n=20)	18 year-olds (n=17)
Metacognitive Strategies						
	M	3.78	3.76	3.26	3.44	3.17
	SD	0.74	0.94	0.98	0.75	0.96
Affective Strategies						
	M	2.65	2.61	1.36	2.50	1.88
	SD	0.91	1.09	1.15	1.28	0.98
Social Strategies						
	M	3.33	3.24	3.25	3.08	2.92
	SD	0.86	1.17	0.93	1.06	1.02

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Affective strategy use by 16 and 18-year-olds is at low level and by the rest of the age groups, it is at medium level.

As Figure 7 suggests, metacognitive strategies are the most preferred, and affective strategies are the least preferred strategies among all age groups in terms of indirect strategies.



	14 year-olds	15 year-olds	16 year-olds	17 year-olds	18 year-olds
Metacognitive Strategies	3.78	3.76	3.26	3.44	3.17
Affective Strategies	2.65	2.61	2.36	2.50	1.88
Social Strategies	3.33	3.24	3.25	3.08	2.92
Overall	3.25	3.20	2.96	3.01	2.66

Figure 7. Means of indirect strategies across age

Also, as the overall means of all indirect strategies under each age group suggest, 14 year-olds use the overall indirect strategies more and 18 year-olds less when compared to the other age groups (Figure 7).

The ANOVA test was done in order to see if there is a statistically significant mean different across age groups in terms of indirect strategies as seen in Table 14.

Table 14
ANOVA for indirect strategies: Age

	df_1	df_2	F
Metacognitive Strategies	4	117	2.15
Affective Strategies	4	117	1.40
Social Strategies	4	117	0.43

The results suggest that there is no statistically significant mean difference across age groups regarding use of indirect strategies (Table 14).

Metacognitive strategies: Age

Table 15 below demonstrates the metacognitive strategies under the strategy clusters of *centering learning*, *arranging and planning* and *evaluating learning*. 14-year-olds tend to use the strategy of finding ways to use English more; 15-year-olds use the strategy of paying attention more; 16-year-olds think about the progress more; 17-year-olds look for people to speak English and 18-year-olds find out to be better learners more when compared to the other strategies.

Table 15
Metacognitive strategies: Age

	14 year-olds (n=10)	15 year-olds (n=34)	16 year-olds (n=37)	17 year-olds (n=20)	18 year-olds (n=17)
Centering learning: Paying attention(M3)					
M	3.60	4.12	3.86	3.75	3.82
SD	1.35	1.07	1.16	1.16	1.33
Arranging and planning learning: Finding ways to use English (M1)					
M	4.00	3.94	3.68	3.60	4.00
SD	1.16	1.10	1.27	1.27	1.28
Arranging and planning learning: Finding out to be a better learner (M4)					
M	3.30	3.79	3.46	3.60	2.59
SD	1.16	1.25	1.35	1.14	1.37
Arranging and planning learning: Planning schedule to study (M5)					
M	2.90	2.82	2.73	3.20	2.24
SD	1.52	1.40	1.45	1.36	1.44
Arranging and planning learning: Looking for people to speak English (M6)					
M	3.00	3.35	3.27	3.90	3.12
SD	1.70	1.50	1.48	1.12	1.54
Arranging and planning learning: Looking for opportunities to read					
M	3.60	3.76	3.30	3.85	3.29
SD	1.17	1.16	1.45	1.04	1.49
Arranging and planning learning: Clear goals to improve (M8)					
M	3.30	3.47	3.41	3.55	2.53
SD	1.16	1.00	1.32	1.23	1.46

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

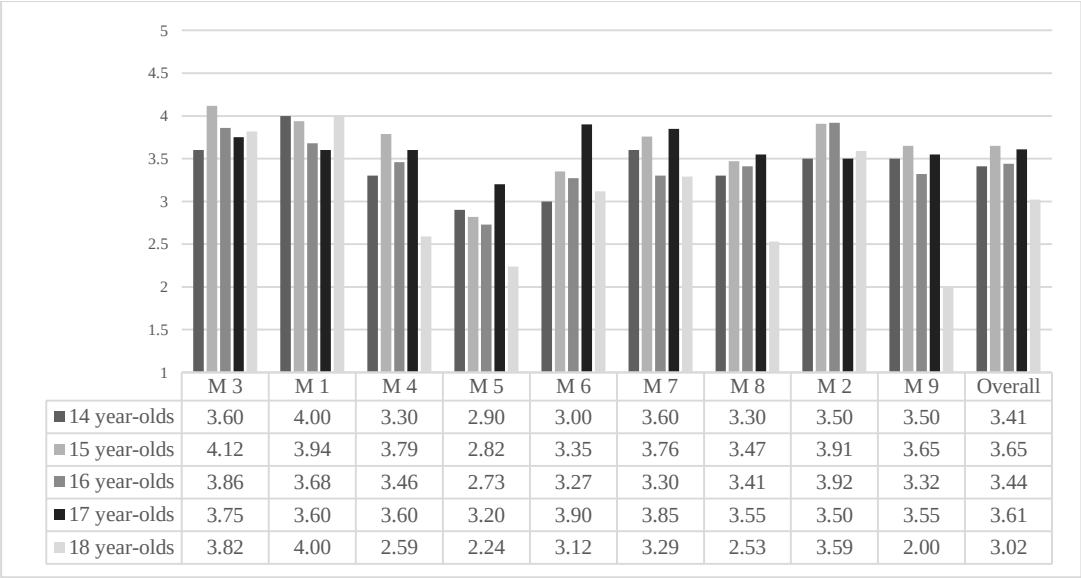
Table 15 (cont'd)
Metacognitive strategies: Age

		14 year-olds (n=10)	15 year-olds (n=34)	16 year-olds (n=37)	17 year-olds (n=20)	18 year-olds (n=17)
Evaluating learning: Noticing mistakes (M2)						
	M	3.50	3.91	3.92	3.50	3.59
	SD	0.97	1.03	1.19	1.15	1.12
Evaluating learning: Noticing mistakes (M9)						
	M	3.50	3.65	3.32	3.55	2.00
	SD	1.35	1.28	1.44	1.10	1.23

High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Also, all the strategies except for looking for people to speak for 17 and 18-year-olds and thinking about the progress for 18-year-olds are at high and medium level.

As Figure 8 suggests, the means of the strategy of trying to find ways to use English is the highest and planning a schedule to study English is the lowest for the 14, 15 and thinking about the progress is the lowest for the 18-year-olds. Also, for the 16-year-olds, the most preferred strategy is noticing mistakes and the least preferred is thinking about progress. As for the 17-year-olds, the most preferred is finding ways to use English and the least preferred one is planning a schedule to study English.



	M 3	M 1	M 4	M 5	M 6	M 7	M 8	M 2	M 9	Overall
14 year-olds	3.60	4.00	3.30	2.90	3.00	3.60	3.30	3.50	3.50	3.41
15 year-olds	4.12	3.94	3.79	2.82	3.35	3.76	3.47	3.91	3.65	3.65
16 year-olds	3.86	3.68	3.46	2.73	3.27	3.30	3.41	3.92	3.32	3.44
17 year-olds	3.75	3.60	3.60	3.20	3.90	3.85	3.55	3.50	3.55	3.61
18 year-olds	3.82	4.00	2.59	2.24	3.12	3.29	2.53	3.59	2.00	3.02

Figure 8. Means of metacognitive strategies across age

Given the overall means for all of the metacognitive strategies for each age group as seen in Figure 8, it seems that 15-year-olds employ the overall metacognitive strategies more and 18-year-olds less when compared to the other age groups.

There is also a statistically significant mean difference between age groups regarding metacognitive strategies such as finding out to be a better learner and thinking about self-progress as the results of the ANOVA test suggest (Table 16).

Table 16
ANOVA for metacognitive strategies

	df_1	df_2	F
Centering learning: Paying attention(M3)	4	117	0.56
Arranging and planning learning: Finding ways to use English (M1)	4	117	0.53
Arranging and planning learning: Finding out to be a better learner (M4)	4	117	2.66*
Arranging and planning learning: Planning schedule to study (M5)	4	117	1.09
Arranging and planning learning: Looking for people to speak English (M6)	4	117	0.99
Arranging and planning learning: Looking for opportunities to read (M7)	4	117	1.03
Arranging and planning learning: Clear goals to improve (M8)	4	117	1.85
Evaluating learning: Noticing mistakes (M2)	4	117	0.86
Evaluating learning: Thinking about progress (M9)	4	117	5.09*

* $p < 0.05$

A post hoc Tukey HSD analysis indicates that the difference is between 15 and 18-year-olds regarding the strategy of finding out to be a better learner. As for, the strategy of thinking about self-progress, the difference is between 14 and 18, 15 and 18, 16 and 18, and 17 and 18-year-olds.

Affective strategies: Age

Table 17 demonstrates the affective strategies under the categories of *lowering anxiety*, *encouraging* oneself and *taking emotional temperature*. 18-year-olds -except for the strategy of encouraging oneself to speak- prefer affective strategies at low level.

Table 17
Affective strategies: Age

	14 year-olds (n=10)	15 year-olds (n=34)	16 year-olds (n=37)	17 year-olds (n=20)	18 year-olds (n=17)
Lowering anxiety: Trying to relax (A1)					
M	2.40	2.74	2.78	2.55	1.76
SD	1.84	1.62	1.55	1.54	1.44
Encouraging: Encouraging oneself to speak (A2)					
M	3.10	3.76	3.73	3.35	3.06
SD	1.73	1.42	1.35	1.27	1.82
Encouraging: Giving a reward or treat(A3)					
M	2.60	2.35	2.11	2.50	1.47
SD	1.65	1.50	1.25	1.47	1.13
Taking emotional temperature: Noticing being tense or nervous (A4)					
M	2.40	2.59	2.19	2.30	1.71
SD	1.43	1.58	1.41	1.46	1.36
Taking emotional temperature: Keeping diary to write down feelings (A5)					
M	1.90	1.82	1.68	2.30	1.65
SD	1.66	1.40	1.31	1.69	1.46

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

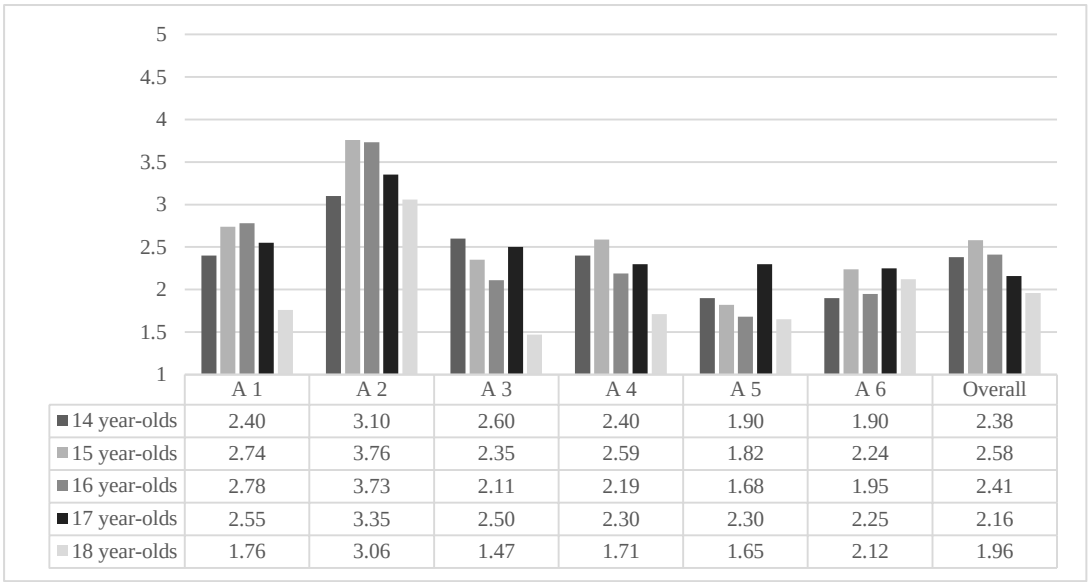
Table 17 (cont'd)
Affective strategies: Age

		14 year-olds (n=10)	15 year-olds (n=34)	16 year-olds (n=37)	17 year-olds (n=20)	18 year-olds (n=17)
Taking emotional temperature: Talking to someone about feelings (A6)						
	M	1.90	2.24	1.95	2.25	2.12
	SD	1.45	1.48	1.39	1.33	1.80

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

The other age groups -except for encouraging oneself to speak- prefer these strategies either low or medium level (Table 17).

As Figure 9 suggests, encouraging for speaking has the highest means among all age groups compared to the other strategies. On the other hand, except for 17-year-olds, keeping diary to write down feelings seems to be have the lowest means among all age groups.



	A 1	A 2	A 3	A 4	A 5	A 6	Overall
14 year-olds	2.40	3.10	2.60	2.40	1.90	1.90	2.38
15 year-olds	2.74	3.76	2.35	2.59	1.82	2.24	2.58
16 year-olds	2.78	3.73	2.11	2.19	1.68	1.95	2.41
17 year-olds	2.55	3.35	2.50	2.30	2.30	2.25	2.16
18 year-olds	1.76	3.06	1.47	1.71	1.65	2.12	1.96

Figure 9. Means of affective strategies across age

Given the overall means of affective strategies for each age group as seen in Figure 9, it can be clearly said that 15-year-olds employ the overall affective strategies more and 18-year-olds less when compared to the other age groups.

The ANOVA test was done to see if there is a statistically significant mean difference across age in terms of affective strategies as seen in Table 18.

Table 18
ANOVA for affective strategies

	df1	df2	F
Lowering anxiety: Trying to relax (A1)	4	117	1.40
Encouraging: Encouraging oneself to speak (A2)	4	117	1.12
Encouraging: Giving a reward or treat(A3)	4	117	1.70
Taking emotional temperature: Noticing being tense or nervous (A4)	4	117	1.08
Taking emotional temperature: Keeping diary to write down feelings (A5)	4	117	0.70
Taking emotional temperature: Talking to someone about feelings (A6)	4	117	0.27

According to the results there is no statistically significant mean difference across age groups regarding use of affective strategies (Table 18).

Social strategies: Age

Table 19 shows the social strategies under the strategy clusters of *asking questions*, *cooperating with others* and *empathizing with others*. It suggests that all the strategy uses are at medium and high level.

Table 19
Social strategies: Age

	14 year-olds (n=10)	15 year-olds (n=34)	16 year-olds (n=37)	17 year-olds (n=20)	18 year-olds (n=17)
Asking questions: Asking to slow down or repeat (S1)					
M	3.20	2.91	2.70	3.10	2.35
SD	1.48	1.38	1.37	1.41	1.46

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

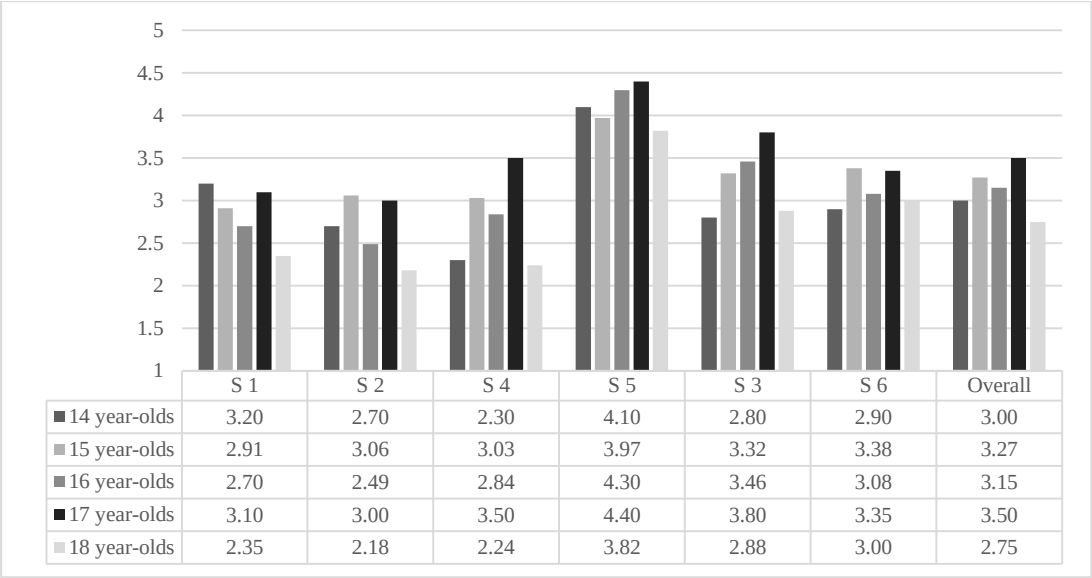
Table 19 (cont'd)
Social strategies: Age

	14 year-olds (n=10)	15 year-olds (n=34)	16 year-olds (n=37)	17 year-olds (n=20)	18 year-olds (n=17)
Asking questions: Asking for correction (S2)					
M	2.70	3.06	2.49	3.00	2.18
SD	1.57	1.43	1.54	1.41	1.43
Asking questions: Asking for help from natives (S4)					
M	2.30	3.03	2.84	3.50	2.24
SD	1.42	1.45	1.48	1.40	1.56
Asking questions: Asking questions in English (S5)					
M	4.10	3.97	4.30	4.40	3.82
SD	1.10	1.19	0.94	0.75	1.51
Cooperating with others: Practicing with others (S3)					
M	2.80	3.32	3.46	3.80	2.88
SD	1.14	1.59	1.46	1.15	1.65
Empathizing with others: Learning about culture (S6)					
M	2.90	3.38	3.08	3.35	3.00
SD	1.52	1.52	1.52	1.42	1.50

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

The strategies of asking to slow down or repeat, asking for correction and asking for help from natives for the 18-year-olds and the strategy of asking for help from natives for the 14-year-olds are at low level (Table 19).

As Figure 10 suggests, the most preferred strategy among all age groups is asking questions in English and the least preferred strategy seems to be the strategy of asking for correction.



	S 1	S 2	S 4	S 5	S 3	S 6	Overall
14 year-olds	3.20	2.70	2.30	4.10	2.80	2.90	3.00
15 year-olds	2.91	3.06	3.03	3.97	3.32	3.38	3.27
16 year-olds	2.70	2.49	2.84	4.30	3.46	3.08	3.15
17 year-olds	3.10	3.00	3.50	4.40	3.80	3.35	3.50
18 year-olds	2.35	2.18	2.24	3.82	2.88	3.00	2.75

Figure 10. Means of social strategies across age

Given the overall means of social strategies for each age group as seen in Figure 10, it can be clearly said that 17-year-olds seem to have the highest and 18-year-olds seem to have the lowest means of social strategy use among all age groups.

To further analyze the use of social strategies across age groups in terms of social strategies, the researcher conducted the ANOVA test as seen in Table 20.

Table 20
ANOVA for social strategies

	df1	df2	F
Asking questions: Asking to slow down or repeat (S1)	4	117	0.96
Asking questions: Asking for correction (S2)	4	117	1.44
Asking questions: Asking for help from natives (S4)	4	117	2.21
Asking questions: Asking questions in English (S5)	4	117	1.02
Cooperating with others: Practicing with others (S3)	4	117	1.32
Empathizing with others: Learning about the culture (S6)	4	117	0.41

The results (Table 20) show that there is no statistically significant mean difference across age groups regarding use of social strategies.

Direct and indirect strategies: Gender

The above Table 21 indicates the means of direct and indirect strategy use between genders.

Table 21
Overall direct and indirect strategies: Gender

		Male (n=59)	Female (n=59)
Direct Strategies			
	M	3.26	3.34
	SD	0.66	0.72
Indirect Strategies			
	M	2.97	3.20
	SD	0.81	0.92

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

As the table suggests, both strategy uses among students of both genders are at medium level (Table 21).

In Figure 11, the separate and the overall means of both strategies for each gender are given.

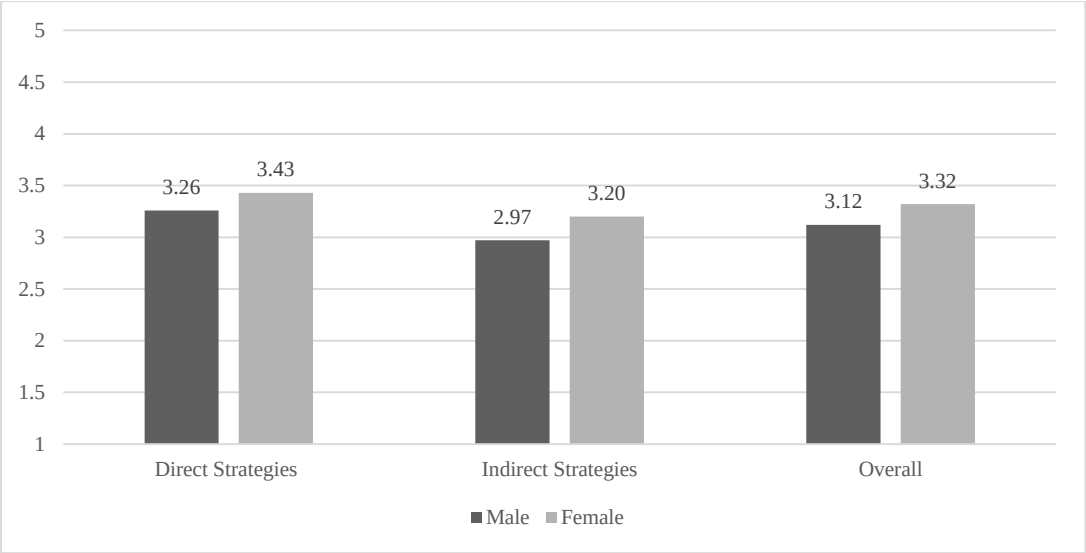


Figure 11. Means of overall direct and indirect strategies across gender

According to Figure 11, females tend to use more direct and indirect strategies compared to males.

Table 22 demonstrates the independent samples t-test conducted to yield if there is a statistically significant mean difference between genders.

Table 22
Independent samples t-test for direct and indirect strategies: Gender

			t.	df	p
	F	Sig.			
Direct Strategies	0.08	0.78	-0.64	116	0.53
Indirect Strategies	2.25	0.14	-1.44	116	0.15

As table 22 suggests, in terms of inferential statistics there seems to be no difference between genders in terms of use of the overall direct and indirect strategies.

Table 23 lists all direct and indirect strategies and the differences of strategy preference frequency in terms of gender. According to the table below, females' strategy uses are at medium and high level whereas males' use of the strategies is at medium and low level.

Table 23
Direct and indirect strategies: Gender

		Male (n=59)	Female (n=59)
Memory Strategies			
	M	2.92	2.85
	SD	0.94	0.98
Cognitive Strategies			
	M	3.48	3.55
	SD	0.63	0.81
Compensatory Strategies			
	M	3.37	3.50
	SD	0.71	0.84
Metacognitive Strategies			
	M	3.35	3.58
	SD	0.92	0.93
Affective Strategies			
	M	2.19	2.64
	SD	0.95	1.23
Social Strategies			
	M	3.04	3.32
	SD	0.90	1.13

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Among all the strategies, males prefer cognitive and females prefers metacognitive strategies more. Also, affective strategies are the least preferred strategy by both genders (Table 23).

Figure 12 below demonstrates that the means of strategy uses are higher among females except for memory strategies which is used more by males.

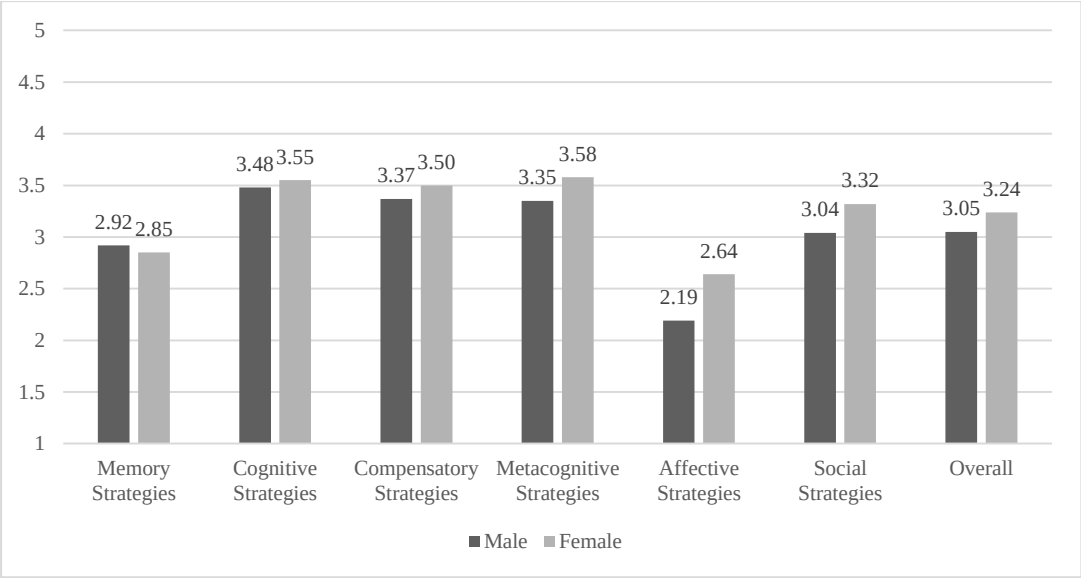


Figure 12. Means of direct and indirect strategies across gender

Also, given the overall means of all strategies for each gender as seen in Figure 12, it can be clearly seen that females tend to use all of the strategies more compared to males.

Table 24 demonstrates if there is a statistically significant mean difference between genders in terms of all strategies as memory, cognitive, compensatory, metacognitive, affective and social strategies.

Table 24
Independent samples t-test for direct and indirect strategies: Gender

			t.	df	p
	F	Sig.			
Memory Strategies	0.13	0.73	0.43	116	0.67
Cognitive Strategies	5.68	0.02	-0.59	109.115	0.56
Compensatory Strategies	0.98	0.32	-0.87	116	0.39
Metacognitive Strategies	0.09	0.77	-1.39	116	0.39
Affective Strategies	10.21	0.002	-2.212	109.06	0.03*
Social Strategies	5.88	0.02	-1.51	110.27	0.14

* $p < 0.05$

The significant mean difference between genders seems to be for the use of affective strategies, females tend to use affective strategies significantly more than males (Table 24).

Direct strategies: Gender

Table 25 indicates the direct strategies as memory, cognitive and compensatory strategies. According to the table, it can be suggested that direct strategy uses by males are at medium level whereas the ones by females are at high level except for the memory strategies which are also at medium level for females.

Table 25
Direct strategies: Gender

		Male (n=59)	Female (n=59)
Memory Strategies			
	M	2.92	2.85
	SD	0.94	0.98
Cognitive Strategies			
	M	3.48	3.55
	SD	0.63	0.81
Compensatory Strategies			
	M	3.37	3.50
	SD	0.71	0.84

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

When the means are compared, memory strategies is the only direct strategy used more by males (Figure 13).

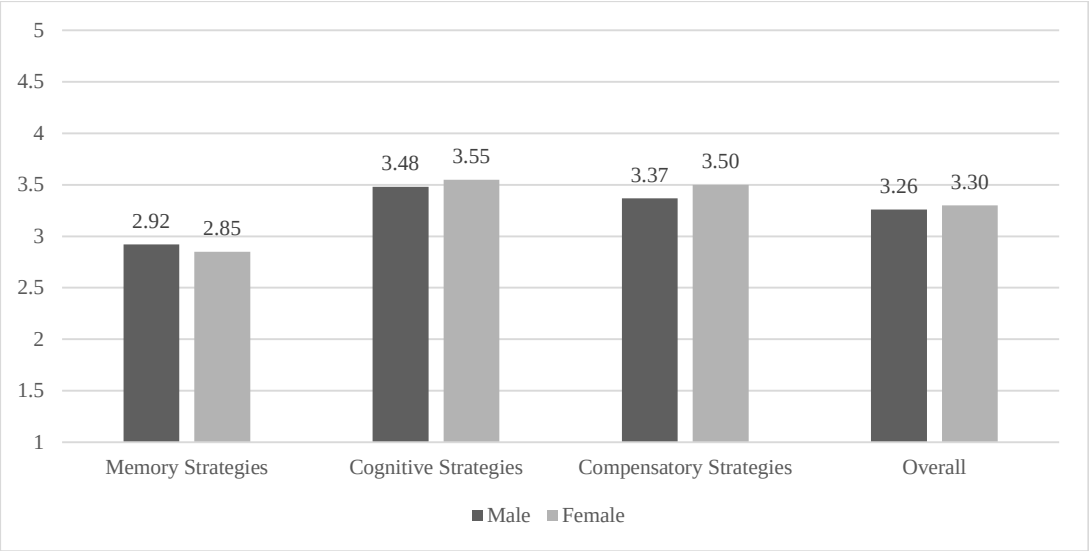


Figure 13. Means of direct strategies across gender

Nevertheless, given the overall means of all direct strategies for each gender, it can be clearly said that females employ the overall direct strategies more than do males.

Table 26 indicates independent samples t-test done to see if there is a statistically significant mean difference between genders.

Table 26
Independent samples t-test for direct strategies: Gender

			t.	df	p
	F	Sig.			
Memory Strategies	0.13	0.73	0.43	116	0.67
Cognitive Strategies	5.68	0.02	-0.59	109.115	0.56
Compensatory Strategies	0.98	0.32	-0.87	116	0.39

According to the test, there is no statistically significant mean difference between genders in terms of all direct strategies as memory, cognitive and compensatory strategies (Table 26).

Memory strategies: Gender

Table 27 includes the main categories of memory strategies as *creating mental linkages, applying images and sounds, reviewing well* and *employing action*. According to the table, the strategy of creating relationship between new and old knowledge is at high level for both genders. The strategy of learning with rhymes and physically acting out are at low level for both genders.

Table 27
Memory strategies: Gender

	Male (n=59)	Female (n=59)
Creating mental linkages: Relationship between old and new (M1)		
M	3.56	3.75
SD	1.41	1.20
Creating mental linkages: New words in a sentence (M2)		
M	3.44	3.29
SD	1.29	1.34
Applying images and sounds: Sound and image connection (M3)		
M	3.07	2.88
SD	1.39	1.33
Applying images and sounds: Mental picture (M4)		
M	3.24	3.20
SD	1.41	1.44
Applying images and sounds: Rhymes (M5)		
M	2.24	2.05
SD	1.38	1.38
Applying images and sounds: Flashcards (M6)		
M	2.10	2.90
SD	1.39	1.67
Applying images and sounds: Page, board and street signs (M9)		
M	2.93	3.49
SD	1.47	1.51
Reviewing well: Review often (M8)		
M	2.64	2.88
SD	1.40	1.30

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Table 27 (cont'd)
Memory strategies: Gender

		Male (n=59)	Female (n=59)
Employing action: physically acting out (M7)			
	M	2.15	2.12
	SD	1.40	1.40

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Also, the other strategies are at medium level except for the strategy of using flashcards for only males, which is also at low level (Table 27).

The means indicating the strategy preferences seem to be higher among males in terms of using new words in a sentence, connecting sounds and images, creating mental pictures and rhymes, and physically acting out (Figure 14).

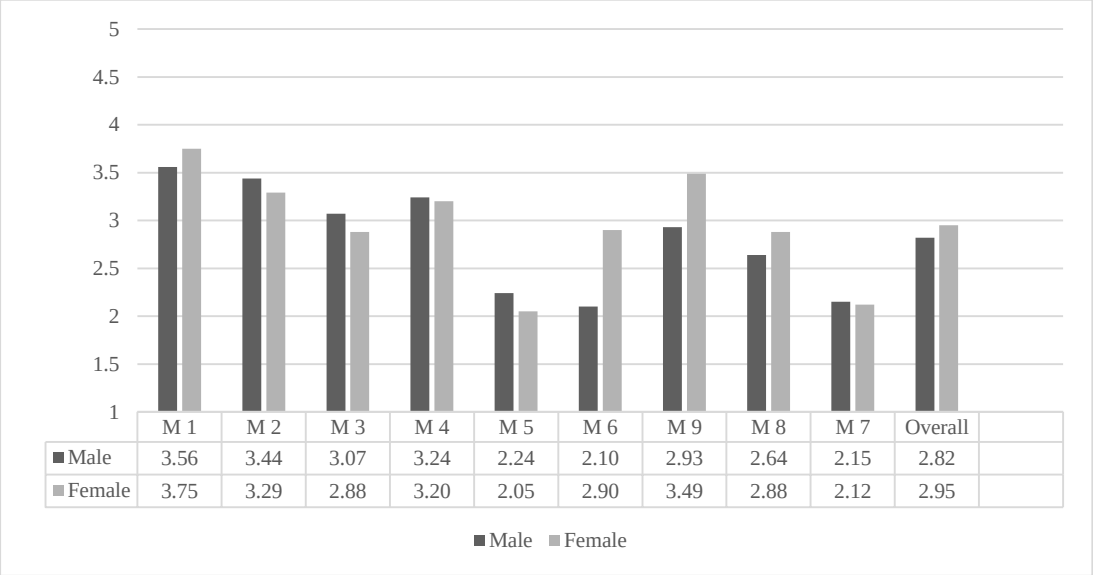


Figure 14. Means of memory strategies across gender

Given the overall means for all of the memory strategies for each gender as seen in Figure 14, it can be clearly said that females employ the overall memory strategies more compared to males.

Table 28 below yields if there is a statistically significant mean difference between genders in terms of memory strategy use.

Table 28
Independent samples t-test for memory strategies: Gender

			t.	df	p
	F	Sig.			
Creating mental linkages: Relationship between old and new (M1)	4.74	0.3	-0.78	113.154	0.44
Creating mental linkages: New words in a sentence (M2)	0.03	0.88	0.63	116	0.53
Applying images and sounds: Sound and image connection (M3)	0.11	0.74	0.75	116	0.46
Applying images and sounds: Mental picture (M4)	0.35	0.56	0.13	116	0.90
Applying images and sounds: Rhymes (M5)	1.02	0.31	0.73	116	0.47
Applying images and sounds: Flashcards (M6)	6.65	0.01	-2.82	112.229	0.01*
Applying images and sounds: Page, board and street signs (M9)	0.50	0.48	-2.04	116	0.04*
Reviewing well: Review often (M8)	1.47	0.23	-0.95	116	0.34
Employing action: Physically acting out (M7)	0.05	0.23	-2.04	116	0.90

* $p < 0.05$

As Table 28 suggests, there is a statistically significant mean difference between genders in terms of only two memory strategies as the strategy of using flashcards and the strategy of associating the information with the ones seen on a page, board or a street sign. Females seem to apply both strategies more than males.

Cognitive strategies: Gender

According to the table below (Table 29) yielding the categories of cognitive strategies, both males and females use the strategies at medium and high level.

Table 29
Cognitive strategies: Gender

	Male (n=59)	Female (n=59)
Practicing: Saying or writing new words (C1)		
M	3.08	2.98
SD	1.42	1.33
Practicing: Speaking like a native (C2)		
M	3.92	4.42
SD	1.16	0.95
Practicing: Practicing the sounds (C3)		
M	3.08	3.36
SD	1.45	1.51
Practicing: Using words in different ways (C4)		
M	3.69	3.63
SD	1.22	1.38
Practicing: Finding patterns (C11)		
M	2.75	2.41
SD	1.41	1.37
Receiving and sending messages: Starting conversation (C5)		
M	3.92	3.98
SD	1.12	1.28
Receiving and sending messages: English TV shows or movies (C6)		
M	4.37	4.76
SD	1.07	0.68
Receiving and sending messages: Reading books (C7)		
M	3.75	4.31
SD	1.27	1.02
Analyzing and reasoning: Skimming then reading carefully (C9)		
M	3.32	3.68
SD	1.32	1.37
Analyzing and reasoning: Looking for similar words (C10)		
M	2.92	2.88
SD	1.43	1.56
Analyzing and reasoning: Dividing words into parts (C12)		
M	3.10	2.76
SD	1.41	1.39

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

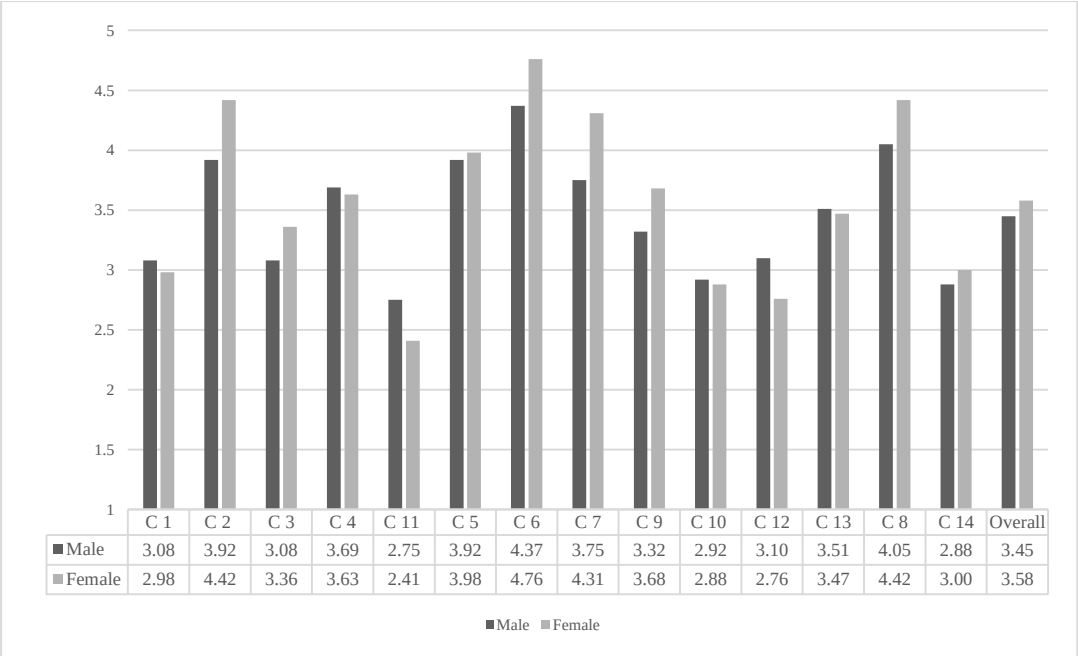
Table 29 (cont'd)
Cognitive strategies: Gender

	Male (n=59)	Female (n=59)
Analyzing and reasoning: No word-for-word translation (C13)		
M	3.51	3.47
SD	1.29	1.42
Creating structure for input and output: Writing in English (C8)		
M	4.05	4.42
SD	1.09	0.86
Creating structure for input and output: Making summaries (C14)		
M	2.88	3.00
SD	1.37	1.46

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

However, the strategy of starting a conversation is used at low level among females (Table 29).

According to the means compared in Figure 15, the highest mean of strategy use belongs to the strategy of watching TV and movies in English to learn the language for both genders, with a higher mean among females. Also, the least preferred strategy is finding patterns for both genders, with a higher mean among men.



	C 1	C 2	C 3	C 4	C 11	C 5	C 6	C 7	C 9	C 10	C 12	C 13	C 8	C 14	Overall
Male	3.08	3.92	3.08	3.69	2.75	3.92	4.37	3.75	3.32	2.92	3.10	3.51	4.05	2.88	3.45
Female	2.98	4.42	3.36	3.63	2.41	3.98	4.76	4.31	3.68	2.88	2.76	3.47	4.42	3.00	3.58

Figure 15. Means of cognitive strategies across gender

Given the overall means for cognitive strategies for each gender as seen in Figure 15, females seem to employ cognitive strategies more compared to males.

Table 30 below demonstrates if there is a statistically significant mean difference between males and females in terms of cognitive strategies.

Table 30
Independent samples t-test for cognitive strategies: Gender

			t.	df	p
	F	Sig.			
Practicing: Saying or writing new words (C1)	0.92	0.34	0.40	116	0.69
Practicing: Speaking like a native (C2)	1.28	0.26	-2.60	116	0.11
Practicing: Practicing the sounds (C3)	0.31	0.58	-0.99	116	0.32
Practicing: Using words in different ways (C4)	1.46	0.23	0.28	116	0.78
Practicing: Finding patterns (C11)	0.16	0.69	1.32	116	0.19
Receiving and sending messages: Starting conversation (C5)	1.54	0.22	-0.31	116	0.76
Receiving and sending messages: English TV shows or movies (C6)	14.72	0.00	-2.37	98.393	0.02*
Receiving and sending messages: Reading books (C7)	4.65	0.03	-2.64	110.983	0.01*

* $p < 0.05$

Table 30 (cont'd)
Independent samples t-test for cognitive strategies: Gender

			t.	df	p
	F	Sig.			
Analyzing and reasoning: Skimming then reading carefully (C9)	0.37	0.55	-1.44	116	0.15
Analyzing and reasoning: Looking for similar words (C10)	0.71	0.40	0.12	116	0.90
Analyzing and reasoning: Dividing words into parts (C12)	0.07	0.80	1.31	116	0.19
Analyzing and reasoning: No word-for-word translation (C13)	0.93	0.34	0.14	116	0.89
Creating structure for input and output: Writing in English (C8)	1.49	0.23	-2.068	116	0.04*
Creating structure for input and output: Making summaries (C14)	0.06	0.81	-0.46	116	0.65

* $p < 0.05$

As it is clearly seen in Table 30, there is a statistically significant mean difference between genders in terms of three cognitive strategies as watching English TV shows, reading English books and writing in English. Females seem to apply all of these strategies significantly more than males.

Compensatory strategies: Gender

Table 31 includes the categories of compensatory strategies employed by males and females.

Table 31
Compensatory strategies: Gender

	Male (n=59)	Female (n=59)
Guessing intelligently: Guessing unfamiliar words (C1)		
M	3.69	4.02
SD	1.21	1.12
Guessing intelligently: Not looking up every word (C4)		
M	4.02	4.03
SD	0.96	1.22

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Table 31 (cont'd)
Compensatory strategies: Gender

	Male (n=59)	Female (n=59)
Guessing intelligently: Guessing what is to be said next (C5)		
M	3.47	2.80
SD	1.15	1.58
Overcoming limitations in speaking and writing: Using gestures (C2)		
M	3.03	3.46
SD	1.26	1.29
Overcoming limitations in speaking and writing: Making up new words (C3)		
M	2.68	2.03
SD	1.41	1.39
Overcoming limitations in speaking and writing: Using similar words or phrases (C6)		
M	4.00	3.98
SD	0.97	1.14

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

According to Table 31, except for the strategy of making up new words for females, most of the compensatory strategies are used at medium and high level both for males and females.

Based on the means demonstrated in Figure 16, the most preferred strategy is the strategy of not looking up every unknown word for both genders, with virtually the same means. Also, lowest means belong to the strategy of making up new words for both genders, with a higher mean for males.

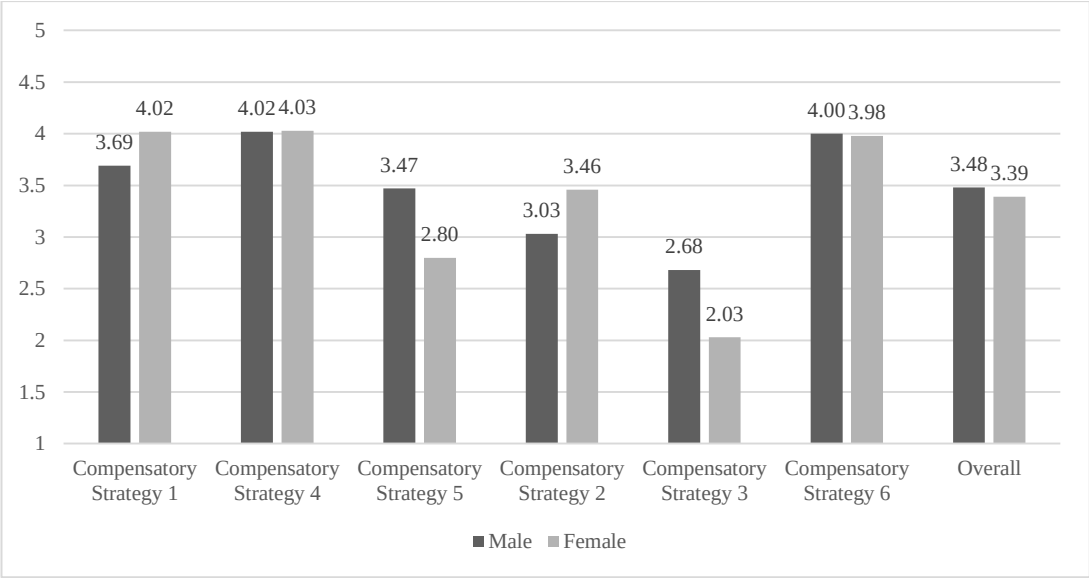


Figure 16. Means of compensatory strategies across gender

Given the overall means for all of the compensatory strategies for each gender as seen in Figure 16, it can be said that males seem to employ compensatory strategies more when compared to females.

The below Table 32 demonstrates if the mean differences of compensatory strategies between genders are significantly different.

Table 32
Independent samples t-test for compensatory strategies: Gender

			t.	df	p
	F	Sig.			
Guessing intelligently: Guessing unfamiliar words (C1)	3.24	0.07	-1.50	116	0.14
Guessing intelligently: Not looking up every word (C4)	2.67	0.11	-0.08	116	0.93
Guessing intelligently: Guessing what is to be said next (C5)	13.67	0.00	2.66	105.845	0.01*
Overcoming limitations in speaking and writing: Using gestures (C2)	0.46	0.50	-1.81	116	0.07

* p< 0.05

Table 32 (cont'd)
Independent samples t-test for compensatory strategies: Gender

			t.	df	p
	F	Sig.			
Overcoming limitations in speaking and writing: Making up new words (C3)	0.41	0.53	2.50	116	0.01*
Overcoming limitations in speaking and writing: Using similar words (C6)	1.47	0.23	0.90	116	0.93

* $p < 0.05$

As Table 32 suggests, there is a statistically significant mean difference between genders in terms of only two of the compensatory strategies as the strategy of guessing what to be said next in a conversation and the strategy of making up new words while speaking and writing. Males seem to employ both strategies significantly more than females.

Indirect strategies: Gender

Table 33 suggests indirect strategies as metacognitive, affective and social strategies and their level of usage by males and females.

Table 33
Indirect strategies: Gender

		Male (n=59)	Female (n=59)
Metacognitive Strategies			
	M	3.35	3.58
	SD	0.92	0.93
Affective Strategies			
	M	2.19	2.64
	SD	0.95	1.23
Social Strategies			
	M	3.04	3.32
	SD	0.90	1.13

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

The preferences of indirect strategies are at medium level, except for affective strategies which is at low level for males and at the lowest medium level for females (Table 33).

Based on the below figure (Figure 17), the most preferred strategy is metacognitive strategies by both genders, with a higher mean for females. Also, Affective strategies are the least preferred strategies by both genders, with a higher mean among females. Overall, females seem to use all indirect strategies when compared to males.

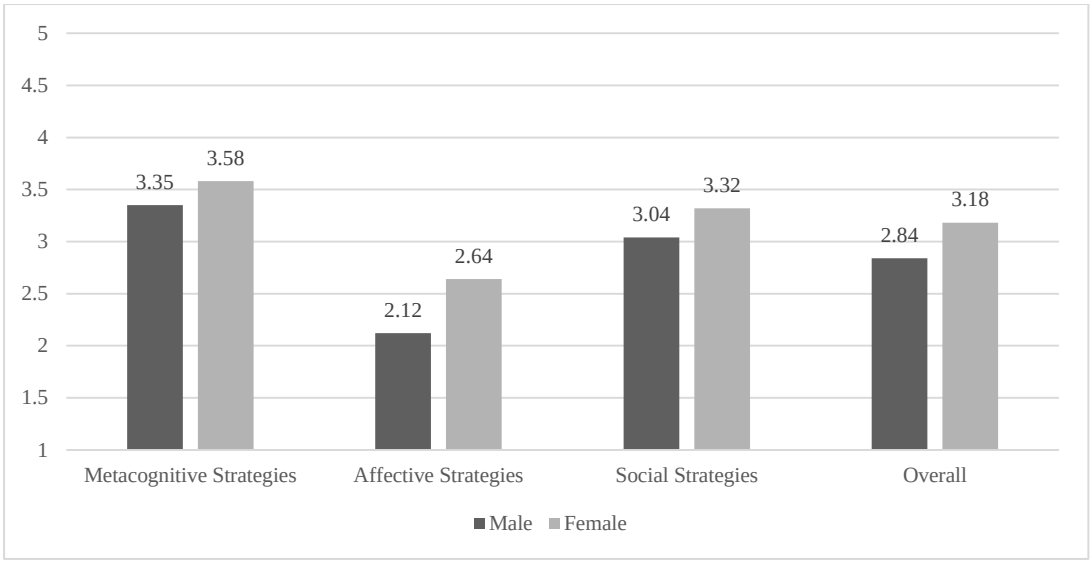


Figure 17. Means of indirect strategies across gender

Given the overall means of the indirect strategies for each gender as seen in Figure 17, it can be seen that females employ the overall indirect strategies more compared to males.

Table 34 below shows if there is a statistically significant mean difference between genders in terms of all of the direct strategies.

Table 34
Independent samples t-test for indirect strategies: Gender

			t.	df	p
	F	Sig.			
Metacognitive Strategies	0.09	0.77	-1.39	116	0.39
Affective Strategies	10.21	0.002	-2.212	109.06	0.03*
Social Strategies	5.88	0.02	-1.51	110.27	0.14

* $p < 0.05$

The only difference seems to be in terms of affective strategies between females and males. Females tend to employ affective strategies more than males even though for both genders affective strategies seem to be the least preferred one among indirect strategies.

Metacognitive strategies: Gender

Table 35 demonstrates the frequency of use of metacognitive strategies in terms of gender.

Table 35
Metacognitive strategies: Gender

		Male (n=59)	Female (n=59)
Centering learning: Paying attention (M3)			
	M	3.81	3.97
	SD	1.17	1.17
Arranging and planning learning: Finding ways to use English (M1)			
	M	3.71	3.92
	SD	1.19	1.22
Arranging and planning learning: Finding out to be better learner (M4)			
	M	3.29	3.59
	SD	1.26	1.35
Arranging and planning learning: Planning schedule to study (M5)			
	M	2.76	2.80
	SD	1.28	1.57

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Table 35 (cont'd)
Metacognitive strategies: Gender

	Male (n=59)	Female (n=59)
Arranging and planning learning: Looking for people to speak English (M6)		
M	3.25	3.46
SD	1.36	1.56
Arranging and planning learning: Looking for opportunities to read (M7)		
M	3.31	3.80
SD	1.34	1.20
Arranging and planning learning: Having clear goals for improvement (M8)		
M	3.24	3.39
SD	1.24	1.43
Evaluating learning: Noticing mistakes (M2)		
M	3.49	4.03
SD	1.15	0.99
Evaluating learning: Thinking about progress (M9)		
M	3.17	3.39
SD	1.28	1.50

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

According to Table 35, the categories of metacognitive strategy use is at medium and high level for both genders with the lowest medium level means for the strategy of planning a schedule to study.

According to Figure 18, all of the means of the strategies are higher among females when compared to males. The most preferred strategy among females seems to be noticing mistakes. Among males, on the other hand, the most preferred strategy seems to be paying attention.

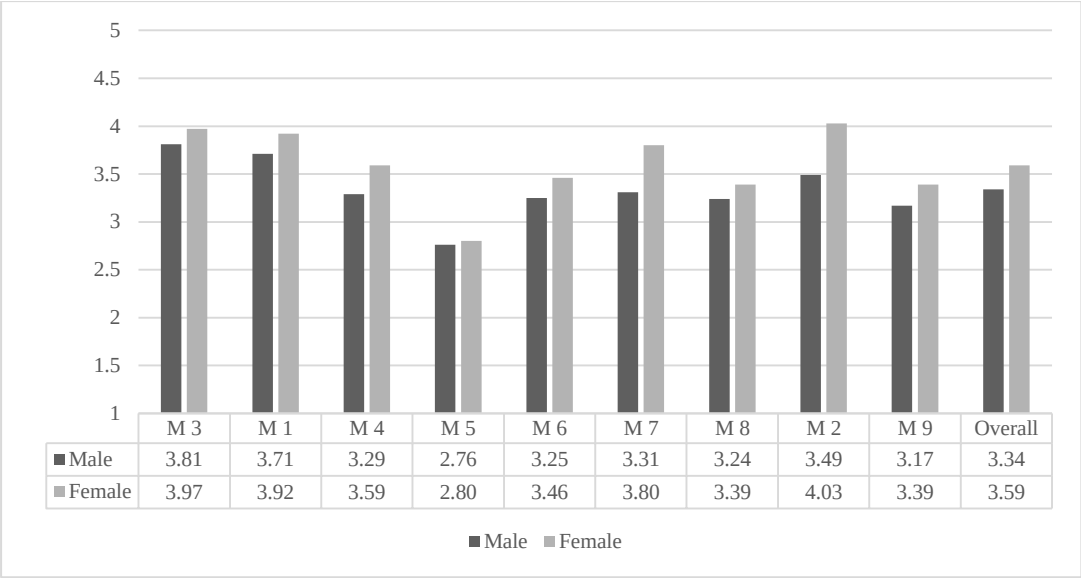


Figure 18. Means of metacognitive strategies across gender

Given the overall means of metacognitive strategies for each gender as seen in Figure 18, females seem to employ metacognitive strategies more than males. Table 36 yields the independent samples t-test results in order to see if there is a statistically significant mean difference between genders in terms of metacognitive strategies.

Table 36
Independent samples t-test for metacognitive strategies: Gender

			t.	df	p
	F	Sig.			
Centering learning: Paying attention(M3)	0.18	0.67	-0.71	116	0.48
Arranging and planning learning: Finding ways to use English (M1)	0.05	0.83	-0.92	116	0.36
Arranging and planning learning: Finding out to be a better learner (M4)	0.78	0.38	-1.27	116	0.21
Arranging and planning learning: Planning schedule to study (M5)	8.34	0.01	-0.13	11.314	0.90
Arranging and planning learning: Looking for people to speak English (M6)	2.30	0.13	-0.76	116	0.45

* $p < 0.05$

Table 36 (cont'd)
Independent samples t-test for metacognitive strategies: Gender

			t.	df	p
	F	Sig.			
Arranging and planning learning: Looking for opportunities to read (M7)	1.90	0.17	-2.10	116	0.04*
Arranging and planning learning: Clear goals to improve (M8)	2.20	0.14	-0.62	116	0.54
Evaluating learning: Noticing mistakes (M2)	2.88	0.09	-2.73	116	0.01*
Evaluating learning: Thinking about progress (M9)	3.35	0.07	-0.86	116	0.39

* $p < 0.05$

According to Table 37, the only significant mean difference seems to be in terms of the strategy of looking for opportunities to read and noticing own mistakes. Females seem to employ both strategies significantly more than males.

Affective strategies: Gender

The affective strategies, as suggested under Table 36, are mostly at low level for both genders.

Table 37
Affective strategies: Gender

	Male (n=59)	Female (n=59)
Lowering anxiety: Trying to relax (A1)		
M	2.44	2.66
SD	1.47	1.71
Encouraging: Encouraging oneself to speak (A2)		
M	3.37	3.68
SD	1.39	1.54
Encouraging: Giving a reward or treat(A3)		
M	2.27	2.12
SD	2.39	1.48

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Table 37 (cont'd)
Affective strategies: Gender

	Male (n=59)	Female (n=59)
Taking emotional temperature: Noticing being tense or nervous (A4)		
M	2.31	2.24
SD	1.42	1.52
Taking emotional temperature: Keeping diary to write down feelings (A5)		
M	1.81	1.86
SD	1.38	1.53
Taking emotional temperature: Talking to someone about feelings (A6)		
M	2.14	2.07
SD	1.44	1.48

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

The strategy of trying to relax is at medium level for both genders and the strategy of encouraging oneself to speak which is at high level only among females (Table 37).

As Figure 19 suggests, the highest means belong to encouraging oneself to speak and the lowest belongs to keeping diary to write down feelings.

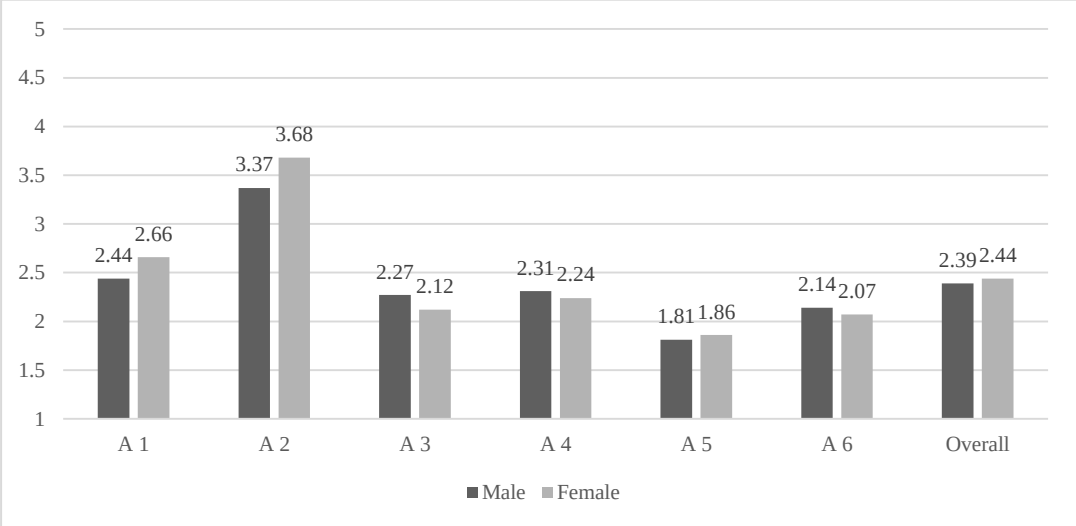


Figure 19. Means of affective strategies across gender

Given the overall means of affective strategies for both genders as seen in Figure 19, it can be clearly seen that females employ the overall affective strategies more compared to males.

Table 38 demonstrates if there is a statistically significant mean difference between genders in terms of affective strategies.

Table 38
Independent samples t-test for affective strategies: Gender

			t.	df	p
	F	Sig.			
Lowering anxiety: Trying to relax (A1)	5.45	0.21	-0.75	113.377	0.45
Encouraging: Encouraging oneself to speak (A2)	1.04	0.31	-1.13	116	0.26
Encouraging: Giving a reward or treat(A3)	0.18	0.68	0.58	116	0.56
Taking emotional temperature: Noticing being tense or nervous (A4)	0.88	0.35	0.25	116	0.80
Taking emotional temperature: Keeping diary to write down feelings (A5)	0.49	0.49	-0.19	116	0.85
Taking emotional temperature: Talking to someone about feelings (A6)	0.02	0.89	0.25	116	0.80

* $p < 0.05$

As it is seen in Table 38, there is no statistically significant mean difference between genders in terms of affective strategies.

Social strategies: Gender

The social strategies in terms of gender indicated below (Table 39) suggests that most of the social strategies are used at medium level mainly by females.

Table 39
Social strategies: Gender

	Male (n=59)	Female (n=59)
Asking questions: Asking to slow down or repeat (S1)		
M	2.80	2.85
SD	1.27	1.53
Asking questions: Asking for correction (S2)		
M	2.53	2.90
SD	1.43	1.53
Asking questions: Asking for help from natives (S4)		
M	2.71	3.03
SD	1.40	1.58
Asking questions: Asking questions in English (S5)		
M	3.98	4.29
SD	1.11	1.08
Cooperating with others: Practicing with others (S3)		
M	3.03	3.64
SD	1.40	1.48
Empathizing with others: Learning about the culture (S6)		
M	2.90	3.47
SD	1.40	1.52

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Only the strategy of asking questions in English and practicing with others as a cooperation strategy are at high level, the former is among both genders and the latter is for females (Table 39).

Based on the means yielded in Figure 20, the most preferred social strategy by both genders is asking questions in English.

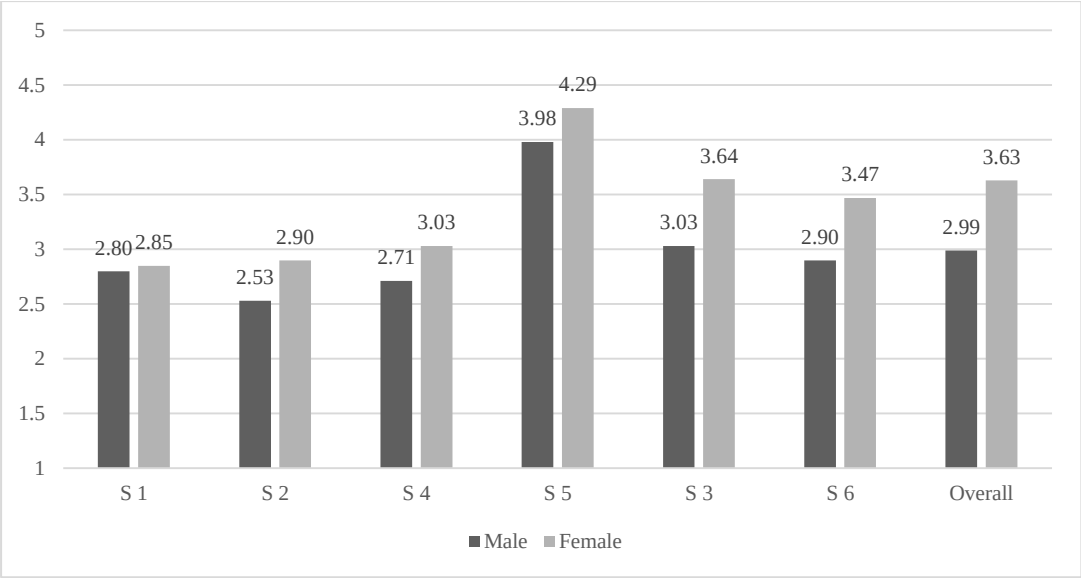


Figure 20. Means of social strategies across gender

Given the overall means of social strategies for each gender as seen in Figure 20, females tend to employ the overall social strategies more compared to males. Table 40 below yields if there is a statistically significant mean difference between genders in terms of social strategies.

Table 40
Independent samples t-test for social strategies: Gender

			t.	df	p
	F	Sig.			
Asking questions: Asking to slow down or repeat (S1)	4.68	0.03	-0.20	116	0.85
Asking questions: Asking for correction (S2)	0.95	0.33	-1.37	116	0.17
Asking questions: Asking for help from natives (S4)	1.55	0.22	-1.17	116	0.24
Asking questions: Asking questions in English (S5)	0.09	0.76	-1.51	116	0.13
Cooperating with others: Practicing with others (S3)	1.19	0.28	-2.30	116	0.02*
Empathizing with others: Learning about the culture (S6)	1.16	0.28	-2.14	116	0.03

* p< 0.05

As Table 40 suggests, there is a statistically significant mean difference between genders in terms of the strategy of practicing English with others. Females seem to employ this strategy significantly more than males.

Direct and indirect strategies: Grade level

Below Table 41 includes the means of direct strategies in terms of four different grade levels as 9th, 10th, 11th and 12th grade. Except for 11th graders, 9th, 10th and 12th graders use direct strategies more than indirect strategies.

Table 41
Overall direct and indirect strategies: Grade level

		9th Grade (n=36)	10th Grade (n=41)	11th Grade (n=20)	12th Grade (n=21)
Direct Strategies					
	M	3.42	3.25	3.36	3.16
	SD	0.65	0.72	0.57	0.77
Indirect Strategies					
	M	3.26	2.98	3.39	2.69
	SD	0.90	0.86	0.78	0.81

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

For all grade levels, the use of both direct and indirect strategies is at medium level (Table 41).

According to Figure 21, the use of direct strategies is the highest among 9th graders and is the lowest among 12th graders. As for indirect strategies, their use is the highest among 11th graders and the lowest among 12th graders.

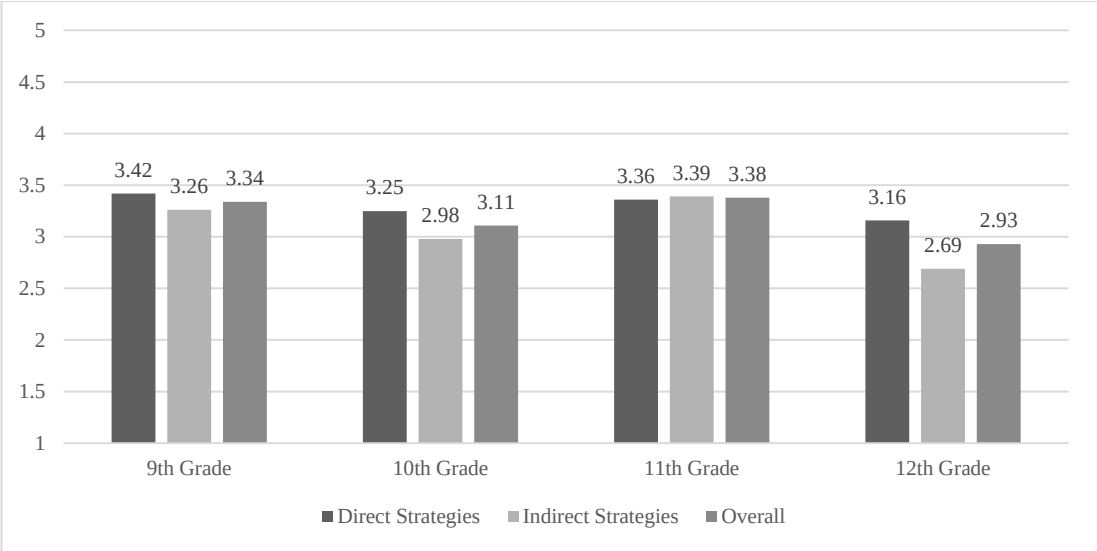


Figure 21. Means of overall direct and indirect strategies across grade level

Also as the overall means of the overall direct and indirect strategies in Figure 21 suggests, 11th graders tend to employ both strategies more and 12th graders less compared to the other grade levels.

The ANOVA test done for the overall direct and indirect strategy use in terms of grade levels as in Table 42 demonstrates that there is a statistically significant difference among grade levels in terms of indirect strategies.

Table 42
ANOVA for overall direct and indirect strategies: Grade level

	df_1	df_2	F
Direct Strategies	3	117	0.78
Indirect Strategies	3	117	3.09*

* $p < 0.05$

The significant difference in terms of indirect strategies is only between 11th and 12th graders according to post hoc Tukey HSD test.

Table 43 demonstrates the use of all language learning strategies in terms of grade levels. Memory strategies are used at medium level by all grade levels. Cognitive strategies are used at high level except for 12th graders using the strategy at medium level. Compensatory strategies are used at medium level except 9th graders using it at high level.

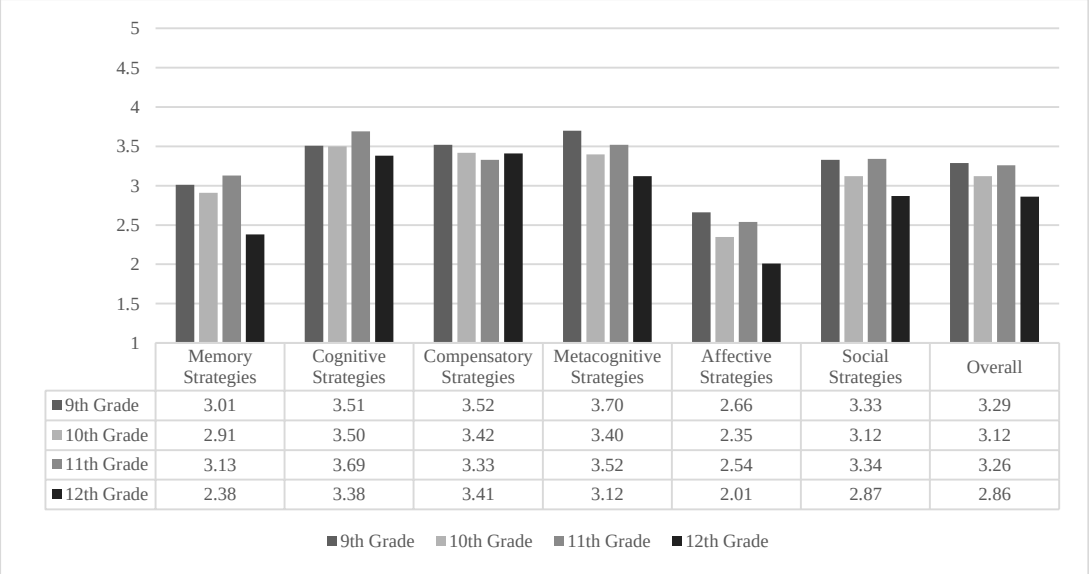
Table 43
Direct and indirect strategies: Grade level

	9th Grade (n=36)	10th Grade (n=41)	11th Grade (n=20)	12th Grade (n=21)
Memory Strategies				
M	3.01	2.91	3.13	2.38
SD	0.92	0.99	0.81	0.95
Cognitive Strategies				
M	3.51	3.50	3.69	3.38
SD	0.88	0.73	0.59	0.53
Compensatory Strategies				
M	3.52	3.42	3.33	3.41
SD	0.88	0.61	0.92	0.78
Metacognitive Strategies				
M	3.71	3.40	3.52	3.12
SD	0.90	0.99	0.82	0.88
Affective Strategies				
M	2.66	2.35	2.54	2.01
SD	1.12	1.02	1.27	1.12
Social Strategies				
M	3.33	3.12	3.34	2.87
SD	1.14	0.89	0.99	1.07

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Metacognitive strategies are used at high level by 9th and 11th graders and at medium level by 10th and 12th graders. Affective strategies are used at medium level by all grade levels except 12th graders using it at low level. Social strategies are used at medium level by all grade levels (Table 43).

As Figure 22 suggests, affective strategies are the least preferred strategies and metacognitive strategies are the most preferred strategies among all grade levels.



	Memory Strategies	Cognitive Strategies	Compensatory Strategies	Metacognitive Strategies	Affective Strategies	Social Strategies	Overall
9th Grade	3.01	3.51	3.52	3.70	2.66	3.33	3.29
10th Grade	2.91	3.50	3.42	3.40	2.35	3.12	3.12
11th Grade	3.13	3.69	3.33	3.52	2.54	3.34	3.26
12th Grade	2.38	3.38	3.41	3.12	2.01	2.87	2.86

Figure 22. Means of direct and indirect strategies across grade level

Also, the means of overall strategy use for both direct and indirect strategies are the highest for 9th graders and the lowest for 12th graders (Figure 22).

Table 44 indicates that the statistically significant mean difference is only valid for memory strategies among grade levels.

Table 44
ANOVA for direct and indirect strategies: Grade level

	df_1	df_2	F
Memory Strategies	3	117	2.74*
Cognitive Strategies	3	117	0.61
Compensatory Strategies	3	117	0.84
Metacognitive Strategies	3	117	0.13
Affective Strategies	3	117	0.18
Social Strategies	3	117	0.33

* $p < 0.05$

However, a post hoc Tukey HSD test does not yield a difference albeit the ANOVA results.

Direct strategies: Grade level

Table 45 demonstrates the direct strategy use across grade level and includes memory, cognitive and compensatory strategies. Memory strategies are at medium level among all grade levels, cognitive strategies are at high level except 12th graders with a level of use at medium level. Compensatory strategies are at medium level except 9th graders with the level of use at high level.

Table 45
Direct strategies: Grade level

	9th Grade (n=36)	10th Grade (n=41)	11th Grade (n=20)	12th Grade (n=21)
Memory Strategies				
M	3.01	2.91	3.13	2.38
SD	0.92	0.99	0.81	0.95
Cognitive Strategies				
M	3.51	3.50	3.69	3.38
SD	0.88	0.73	0.59	0.53
Compensatory Strategies				
M	3.52	3.42	3.33	3.41
SD	0.87935	0.61	0.92	0.78

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Both 9th and 12th graders' means for all direct strategies increase starting from memory strategies to compensatory strategies (Table 45).

As Figure 23 suggests, compared to cognitive and compensatory strategies, the means of memory strategies are lower among all grade levels.

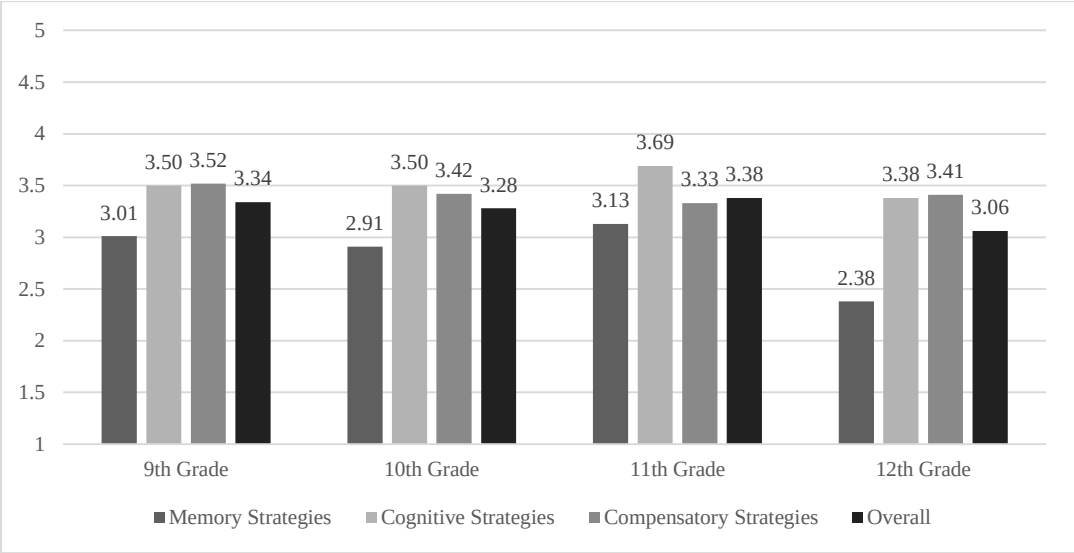


Figure 23. Means of direct strategies across grade level

In addition, the overall means of the strategies are the highest for 11th graders and the lowest for the 12th graders (Figure 23).

Table 46 indicates that the statistically significant mean difference is only valid for memory strategies among grade levels in terms of only direct strategies.

Table 46
ANOVA for direct strategies: Grade level

	df_1	df_2	F
Memory Strategies	3	117	2.74*
Cognitive Strategies	3	117	0.61
Compensatory Strategies	3	117	0.84

* $p < 0.05$

However, a post hoc Tukey HSD test fails to show the significant difference.

Memory strategies: Grade level

Table 47 below yields the memory strategies according to grade levels. The strategies are mainly used at high and medium level. The strategy of using rhymes to

remember English words are at low level among all grade levels. Using flashcards are used at low level by 12th graders and physically acting out new English words is at low level at all levels except 9th graders.

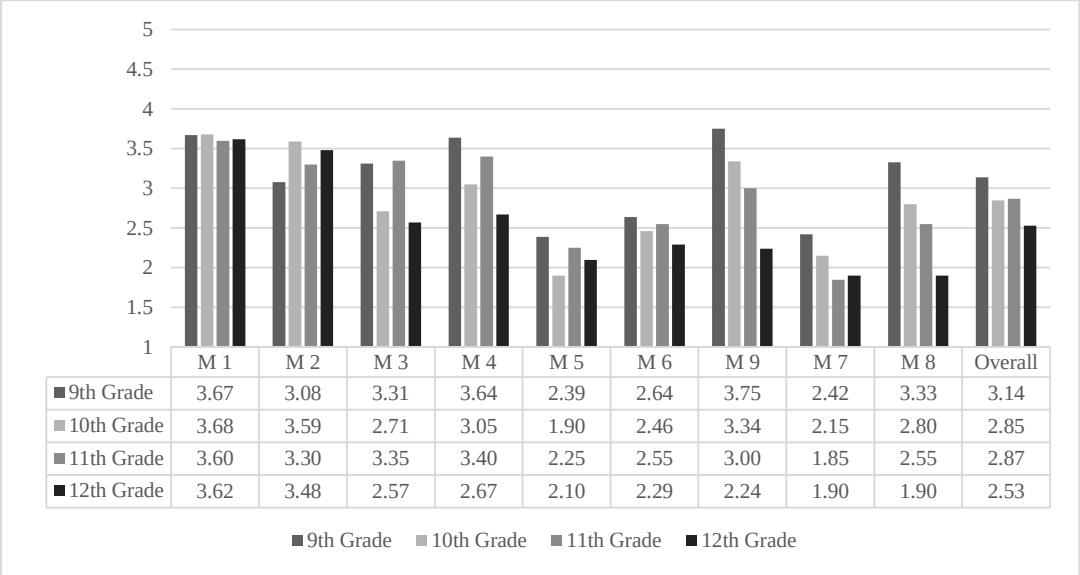
Table 47
Memory strategies: Grade level

	9th Grade (n=36)	10th Grade (n=41)	11th Grade (n=20)	12th Grade (n=21)
Creating mental linkages: Relationship between old and new (M1)				
M	3.67	3.68	3.60	3.62
SD	1.01	1.47	1.23	1.53
Creating mental linkages: New words in a sentence (M2)				
M	3.08	3.59	3.30	3.48
SD	1.13	1.22	1.42	1.63
Applying images and sounds: Sound and image connection (M3)				
M	3.31	2.71	3.50	2.57
SD	1.19	1.45	1.09	1.50
Applying images and sounds: Mental picture (M4)				
M	3.64	3.05	3.40	2.67
SD	1.07	1.55	1.19	1.68
Applying images and sounds: Rhymes (M5)				
M	2.39	1.90	2.25	2.10
SD	1.36	1.34	1.37	1.52
Applying images and sounds: Flashcards (M6)				
M	2.64	2.46	2.55	2.29
SD	1.53	1.79	1.43	1.42
Applying images and sounds: Page, board and street signs (M9)				
M	3.75	3.34	3.00	2.24
SD	1.25	1.62	1.38	1.41
Employing action: Physically acting out (M7)				
M	2.42	2.15	1.85	1.90
SD	1.34	1.56	1.14	1.38
Reviewing well: Review often (M8)				
M	3.33	2.80	2.55	1.90
SD	1.22	1.29	1.50	1.09

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

The strategy of remembering the location of English words on a page, board and street signs and reviewing English lessons often seem to have a decreasing trend from 9th grade to 12th grade (Table 47).

As Figure 24 suggests, the strategy of establishing a relationship between old and new information has the highest means, and using rhymes and physically acting out have the lowest means among all grade levels. Besides, 9th graders seem to prefer remembering the location on paper, board or street sign, 10th, 11th and 12th graders establishing relationship between old and new most.



	M 1	M 2	M 3	M 4	M 5	M 6	M 9	M 7	M 8	Overall
9th Grade	3.67	3.08	3.31	3.64	2.39	2.64	3.75	2.42	3.33	3.14
10th Grade	3.68	3.59	2.71	3.05	1.90	2.46	3.34	2.15	2.80	2.85
11th Grade	3.60	3.30	3.35	3.40	2.25	2.55	3.00	1.85	2.55	2.87
12th Grade	3.62	3.48	2.57	2.67	2.10	2.29	2.24	1.90	1.90	2.53

Figure 24. Means of memory strategies across grade level

As the overall means of memory strategies for each grade level as seen in Figure 24 suggest, 9th graders seem to employ the overall memory strategies more and 12th graders less compared to the other grade levels.

Table 48 indicates the ANOVA test conducted to see if there is statistically significant mean difference among grade levels in terms of memory strategies. The

statistically significant mean difference seems to be for two memory strategies as reviewing often and physically acting out among grade levels.

Table 48
ANOVA for memory strategies: Grade level

	df_1	df_2	F
Creating mental linkages: Relationship between old and new (M1)	3	117	0.02
Creating mental linkages: New words in a sentence (M2)	3	117	1.01
Applying images and sounds: Sound and image connection (M3)	3	117	2.47
Applying images and sounds: Mental picture (M4)	3	117	2.53
Applying images and sounds: Rhymes (M5)	3	117	0.84
Applying images and sounds: Flashcards (M6)	3	117	0.23
Applying images and sounds: Page, board and street signs (M9)	3	117	5.15*
Reviewing well: Review often (M8)	3	117	5.78*
Employing action: Physically acting out (M7)	3	117	0.96

* $p < 0.05$

According to a post hoc Tukey HSD test, the significant difference is between 9th and 12th, and 10th and 12th graders in terms of reviewing often. The same post hoc test indicates that the significant difference of remembering new English words through location is between 9th and 12th, and 10th and 12th graders.

Cognitive strategies: Grade level

Table 49 below yields the cognitive strategies across grade level. All cognitive strategies are at either high or medium level among all grade levels.

Table 49
Cognitive strategies: Grade level

	9th Grade (n=36)	10th Grade (n=41)	11th Grade (n=20)	12th Grade (n=21)
Practicing: Saying or writing new words (C1)				
M	3.00	3.15	3.25	2.67
SD	1.29	1.54	1.1	1.35

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Table 49 (cont'd)
Cognitive strategies: Grade level

	9th Grade (n=36)	10th Grade (n=41)	11th Grade (n=20)	12th Grade (n=21)
Practicing: Speaking like a native (C2)				
M	4.11	4.07	4.40	4.24
SD	1.04	1.21	0.82	1.18
Practicing: Practicing the sounds (C3)				
M	3.50	3.17	3.30	2.76
SD	1.32	1.55	1.38	1.67
Practicing: Using words in different ways (C4)				
M	3.58	3.71	3.65	3.71
SD	1.20	1.27	1.39	1.49
Practicing: Finding patterns (C11)				
M	2.72	2.34	2.95	2.43
SD	1.50	1.33	1.28	1.43
Receiving and sending messages: Starting conversation (C5)				
M	4.08	3.90	3.70	4.05
SD	1.08	1.32	1.26	1.12
Receiving and sending messages: English TV shows or movies (C6)				
M	4.50	4.59	4.50	4.71
SD	0.94	1.07	0.76	0.64
Receiving and sending messages: Reading books (C7)				
M	3.86	4.00	4.30	4.10
SD	1.18	1.34	0.87	1.14
Analyzing and reasoning: Skimming then reading carefully (C9)				
M	3.67	3.37	3.20	3.76
SD	1.27	1.55	1.24	1.18
Analyzing and reasoning: Looking for similar words (C10)				
M	3.36	2.61	2.60	2.95
SD	1.36	1.61	1.23	1.56
Analyzing and reasoning: Dividing words into parts (C12)				
M	2.92	2.85	3.15	2.90
SD	1.40	1.41	1.27	1.61
Analyzing and reasoning: No word-for-word translation (C13)				
M	3.89	3.49	3.15	3.14
SD	1.17	1.29	1.35	1.65

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

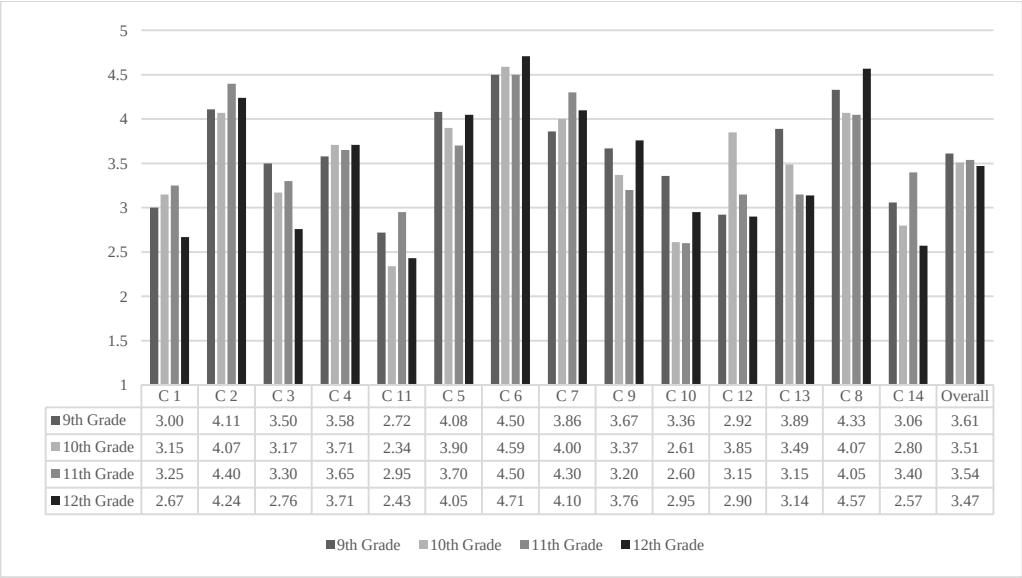
Table 49 (cont'd)
Cognitive strategies: Grade level

	9th Grade (n=36)	10th Grade (n=41)	11th Grade (n=20)	12th Grade (n=21)
Creating structure for input and output: Writing in English (C8)				
M	4.33	4.07	4.05	4.57
SD	0.86	1.15	1.10	0.68
Creating structure for input and output: Making summaries (C14)				
M	3.06	2.80	3.40	2.57
SD	1.41	1.42	1.19	1.54

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

The strategies of looking for similar words in Turkish that are similar to English words and trying not to translate word-for-word decreases starting from 9th graders to 12th graders (Table 49).

As Figure 25 suggests, the strategies of trying to talk like a native, watching TV shows and movies in English, reading in English for pleasure and writing notes, messages letters or reports in English seem to have the highest means by all grade levels. The strategy of watching TV shows and movies in English is the most preferred strategy by all grade levels. Trying to find patterns in English seem to be the least preferred strategy by all grade levels except 11th graders having the lowest mean for the strategy of looking for words in Turkish that are similar to new words in English.



	C 1	C 2	C 3	C 4	C 11	C 5	C 6	C 7	C 9	C 10	C 12	C 13	C 8	C 14	Overall
9th Grade	3.00	4.11	3.50	3.58	2.72	4.08	4.50	3.86	3.67	3.36	2.92	3.89	4.33	3.06	3.61
10th Grade	3.15	4.07	3.17	3.71	2.34	3.90	4.59	4.00	3.37	2.61	3.85	3.49	4.07	2.80	3.51
11th Grade	3.25	4.40	3.30	3.65	2.95	3.70	4.50	4.30	3.20	2.60	3.15	3.15	4.05	3.40	3.54
12th Grade	2.67	4.24	2.76	3.71	2.43	4.05	4.71	4.10	3.76	2.95	2.90	3.14	4.57	2.57	3.47

Figure 25. Means of cognitive strategies across grade level

As the overall means of cognitive strategies for each grade level as seen in Figure 25 suggest, 12th graders seem to employ the overall cognitive strategies more and 10th graders less compared to the other grade levels.

As Table 50 suggests, the ANOVA test was conducted to see if there is statistically significant mean difference among grade levels in terms of cognitive strategies. The difference exists for the cognitive strategy of not translating word-for-word.

Table 50
ANOVA for cognitive strategies: Grade level

	df_1	df_2	F
Practicing: Saying or writing new words (C1)	3	117	0.76
Practicing: Speaking like a native (C2)	3	117	0.46
Practicing: Practicing the sounds (C3)	3	117	1.14
Practicing: Using words in different ways (C4)	3	117	0.07
Practicing: Finding patterns (C11)	3	117	1.07
Receiving and sending messages: Starting conversation (C5)	3	117	0.50
Receiving and sending messages: English TV shows or movies (C6)	3	117	0.29
Receiving and sending messages: Reading books (C7)	3	117	0.62
Analyzing and reasoning: Skimming then reading carefully (C9)	3	117	0.91

* $p<0.05$

Table 50 (cont'd)
ANOVA for cognitive strategies: Grade level

	df_1	df_2	F
Analyzing and reasoning: Looking for similar words (C10)	3	117	2.00
Analyzing and reasoning: Dividing words into parts (C12)	3	117	0.20
Analyzing and reasoning: No word-for-word translation (C13)	3	117	1.98*
Creating structure for input and output: Writing in English (C8)	3	117	1.54
Creating structure for input and output: Making summaries (C14)	3	117	1.41

* $p<0.05$

However, a post hoc Tukey HSD test does not yield among which grade levels the difference is.

Compensatory strategies: Grade level

Table 51 indicates the compensatory strategies across grade level. The strategy use is mainly at high and medium level. The strategy of making up new words when the right English word are not known is at low level among 9th and 10th graders.

Table 51
Compensatory strategies: Grade level

	9th Grade (n=36)	10th Grade (n=41)	11th Grade (n=20)	12th Grade (n=21)
Guessing intelligently: Guessing unfamiliar words (C1)				
M	3.61	4.00	4.00	3.86
SD	1.20	1.20	1.12	1.11
Guessing intelligently: Not looking up every word (C4)				
M	3.81	4.20	4.00	4.10
SD	1.17	1.01	0.97	1.22
Guessing intelligently: Guessing what is to be said next (C5)				
M	3.03	2.98	3.80	3.00
SD	1.46	1.33	1.15	1.64
Overcoming limitations in speaking and writing: Using gestures (C2)				
M	3.47	2.98	3.50	3.14
SD	1.34	1.19	1.10	1.49

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

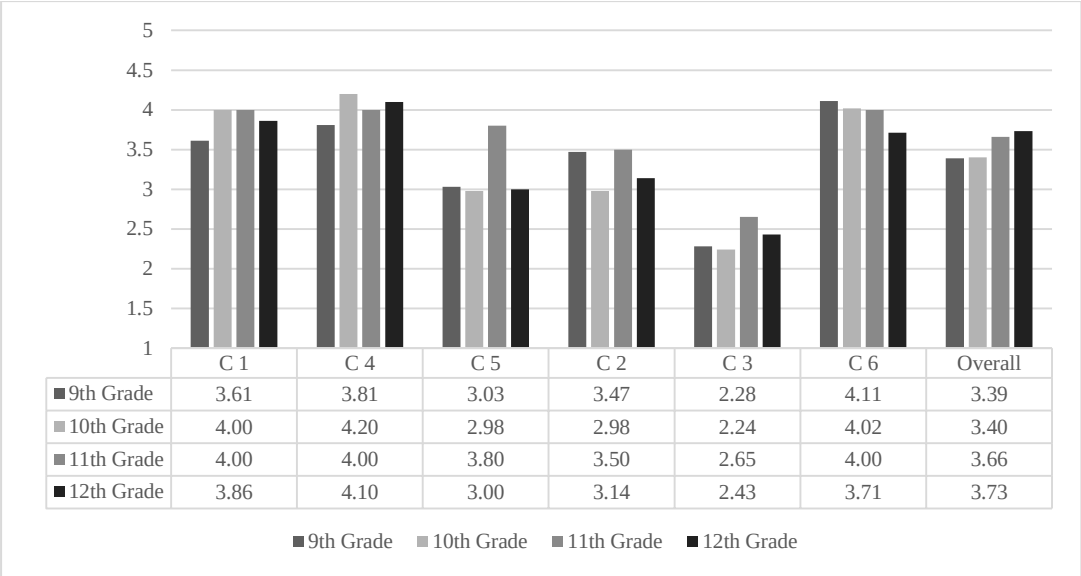
Table 51 (cont'd)
Compensatory strategies: Grade level

	9th Grade (n=36)	10th Grade (n=41)	11th Grade (n=20)	12th Grade (n=21)
Overcoming limitations in speaking and writing: Making up new words (C3)				
M	2.28	2.24	2.65	2.43
SD	1.30	1.53	1.39	1.54
Overcoming limitations in speaking and writing: Using similar word or phrases (C6)				
M	4.11	4.02	4.00	3.71
SD	1.04	1.06	1.12	1.01

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

The strategy of using similar word or phrases when cannot find an English word is at high level among all levels yet seems to decrease starting from 9th grade to 12th grade (Table 51).

As it can be seen in Figure 25, the means of the strategies of making guesses when cannot understand the English words, reading English without looking up every new word and using similar word or phrases when cannot find an English word are higher, and the least preferred strategy among all grade levels is making up new words when cannot know the right ones in English. Also, as Figure 25 suggests, 9th graders' most preferred strategy is using similar word or phrases when can't find an English word, 10th graders' and 12th graders' is reading English without looking up every new word, 11th graders' is making guesses, using similar word or phrases when cannot find an English word and reading English without looking up every new word.



	C 1	C 4	C 5	C 2	C 3	C 6	Overall
9th Grade	3.61	3.81	3.03	3.47	2.28	4.11	3.39
10th Grade	4.00	4.20	2.98	2.98	2.24	4.02	3.40
11th Grade	4.00	4.00	3.80	3.50	2.65	4.00	3.66
12th Grade	3.86	4.10	3.00	3.14	2.43	3.71	3.73

Figure 26. Means of compensatory strategies across grade level

As the overall means of compensatory strategies for each grade level as seen in Figure 26 suggest, 12th graders seem to employ compensatory strategies more and 9th graders less compared to the other grade levels.

As it is indicated in Table 52, the ANOVA test was conducted to see if there is statistically significant mean difference among grade levels in terms of use of compensatory strategies.

Table 52
ANOVA for compensatory strategies: Grade level

	df1	df2	F
Guessing intelligently: Guessing unfamiliar words (C1)	3	117	0.71
Guessing intelligently: Not looking up every word (C4)	3	117	0.45
Guessing intelligently: Guessing what is to be said next (C5)	3	117	0.08
Overcoming limitations in speaking and writing: Using gestures (C2)	3	117	0.19
Overcoming limitations in speaking and writing: Making up new words (C3)	3	117	0.69
Overcoming limitations in speaking and writing: Using similar words (C6)	3	117	0.97

As the results of the test suggests, there is no statistically significant mean difference (Table 52).

Indirect strategies: Grade level

Below Table 53 includes the indirect strategies as metacognitive, affective and social strategies across grade level. The indirect strategy use seems to be at mainly medium level.

Table 53
Indirect strategies: Grade level

		9th Grade (n=36)	10th Grade (n=41)	11th Grade (n=20)	12th Grade (n=21)
Metacognitive Strategies					
	M	3.71	3.40	3.52	3.12
	SD	0.90	1.00	0.82	0.88
Affective Strategies					
	M	2.66	2.35	2.54	2.01
	SD	1.12	1.02	1.27	1.12
Social Strategies					
	M	3.33	3.12	3.34	2.87
	SD	1.14	0.89	0.99	1.068

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Metacognitive strategies for 9th and 11th graders are at high level and affective strategies for 10th and 12th graders are at low level (Table 53).

As Figure suggests, 9th, 10th and 11th have the highest means for metacognitive strategies whereas 12th graders have the highest mean for social strategies. The strategy having the lowest mean for all grade levels is affective strategies.

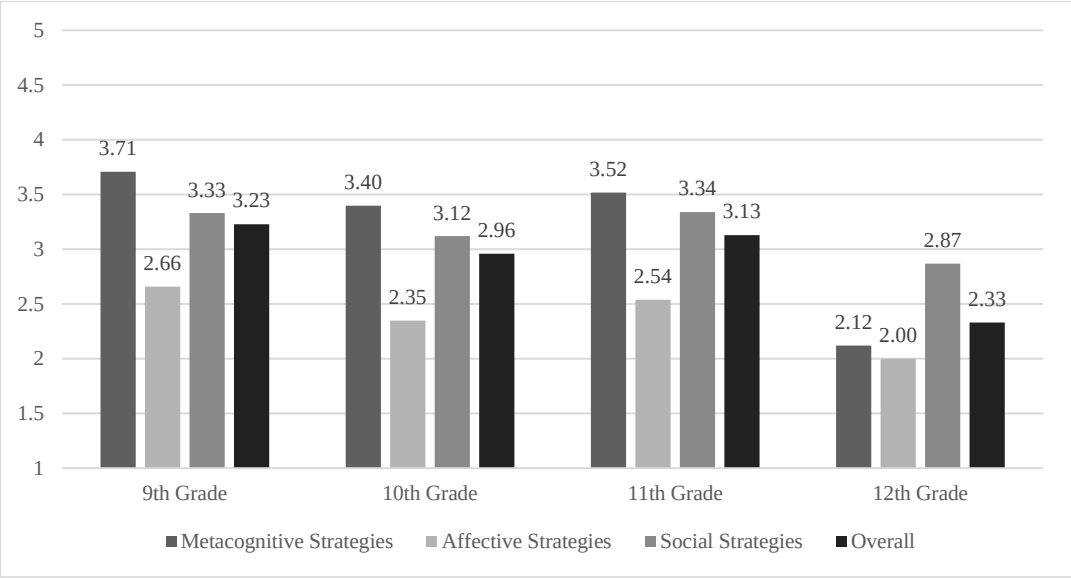


Figure 27. Means of indirect strategies across grade level

Considering the overall means of all indirect strategies, it can be said that 9th graders seem to prefer the strategies more and 12th graders less when compared to the other grade levels (Figure 27).

As seen in Table 54, the ANOVA test was conducted to see if there is a statistically significant mean difference among grade levels in terms of indirect strategies.

Table 54
ANOVA for indirect strategies: Grade level

	df_1	df_2	F
Metacognitive Strategies	3	117	0.13
Affective Strategies	3	117	0.18
Social Strategies	3	117	0.33

However, the results of the test yields no statistically significant mean difference (Table 54).

Metacognitive strategies: Grade level

Table 55 below includes metacognitive strategies across grade level. As the table suggests, the strategies are at medium and high level for all grade levels.

Table 55
Metacognitive strategies: Grade level

	9th Grade (n=36)	10th Grade (n=41)	11th Grade (n=20)	12th Grade (n=21)
Centering learning: Paying attention (M3)				
M	4.03	3.83	3.70	3.95
SD	1.06	1.22	1.22	1.24
Arranging and planning learning: Finding ways to use English (M1)				
M	3.94	3.76	3.50	4.00
SD	1.04	1.26	1.40	1.18
Arranging and planning learning: Finding out to be a better learner (M4)				
M	3.83	3.29	3.70	2.81
SD	1.11	1.42	0.92	1.50
Arranging and planning learning: Planning schedule to study (M5)				
M	3.03	2.59	3.20	2.33
SD	1.32	1.50	1.44	1.35
Arranging and planning learning: Looking for people to speak English (M6)				
M	3.28	3.29	3.80	3.19
SD	1.49	1.50	1.36	1.44
Arranging and planning learning: Looking for opportunities to read (M7)				
M	3.72	3.37	3.75	3.43
SD	1.11	1.41	1.33	1.33
Arranging and planning learning: Clear goals for improvement (M8)				
M	3.56	3.27	3.60	2.71
SD	1.05	1.45	1.31	1.42
Evaluating learning: Noticing mistakes (M2)				
M	3.81	3.85	3.75	3.52
SD	0.95	1.28	1.07	1.08

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

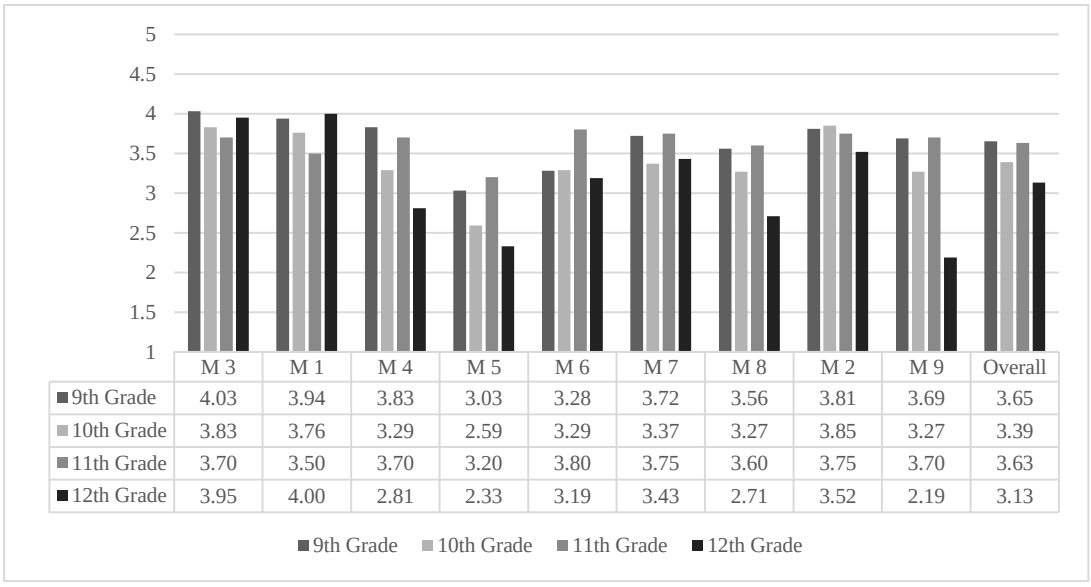
Table 55 (cont'd)
Metacognitive strategies: Grade level

		9th Grade (n=36)	10th Grade (n=41)	11th Grade (n=20)	12th Grade (n=21)
Evaluating learning: Thinking about progress (M9)					
	M	3.69	3.27	3.70	2.19
	SD	1.12	1.52	1.13	1.25

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Only the strategies of planning schedule to have enough time to study and thinking about the progress in English is at low level for 12th graders (Table 55).

As Figure 28 suggests, 9th and 10th graders seem to prefer paying attention when someone is speaking in English more and planning schedule to have enough time to study. Also, 11th graders seem to prefer looking for people to talk English to and 12th graders of trying to find ways to use English more and both grade levels, just like 9th and 10th graders, prefer planning schedule to have enough time to study less.



	M 3	M 1	M 4	M 5	M 6	M 7	M 8	M 2	M 9	Overall
9th Grade	4.03	3.94	3.83	3.03	3.28	3.72	3.56	3.81	3.69	3.65
10th Grade	3.83	3.76	3.29	2.59	3.29	3.37	3.27	3.85	3.27	3.39
11th Grade	3.70	3.50	3.70	3.20	3.80	3.75	3.60	3.75	3.70	3.63
12th Grade	3.95	4.00	2.81	2.33	3.19	3.43	2.71	3.52	2.19	3.13

Figure 28. Means of metacognitive strategies across grade level

As the overall means of metacognitive strategies for each grade level as seen in Figure 28 suggest that 9th graders employ the overall strategies more and 12th graders less compared to the other grade levels.

According to the ANOVA test done for metacognitive strategies (Table 56), there is a statistically significant mean difference among grade levels in terms of the metacognitive strategy of finding out to be a better learner.

Table 56
ANOVA for metacognitive strategies: Grade level

	df_1	df_2	F
Centering learning: Paying attention(M3)	3	117	0.65
Arranging and planning learning: Finding ways to use English (M1)	3	117	0.47
Arranging and planning learning: Finding out to be a better learner (M4)	3	117	0.03*
Arranging and planning learning: Planning schedule to study (M5)	3	117	0.55
Arranging and planning learning: Looking for people to speak English (M6)	3	117	0.85
Arranging and planning learning: Looking for opportunities to read (M7)	3	117	0.42
Arranging and planning learning: Clear goals to improve (M8)	3	117	0.12
Evaluating learning: Noticing mistakes (M2)	3	117	0.56
Evaluating learning: Thinking about progress (M9)	3	117	0.07

* $p < 0.05$

Despite the ANOVA result, a post hoc Tukey HSD test failed to specify among which grade levels this significant difference exists.

Affective strategies: Grade level

Table 57 demonstrates affective strategies across grade level. The strategy of giving oneself a reward when doing well in English is the only strategy at high level for 9th, 10th and 11th graders. The rest of the strategies are mainly at medium and low level.

Table 57
Affective strategies: Grade level

	9th Grade (n=36)	10th Grade (n=41)	11th Grade (n=20)	12th Grade (n=21)
Lowering anxiety: Trying to relax (A1)				
M	2.72	2.68	2.70	1.86
SD	1.56	1.68	1.56	1.39
Encouraging: Encouraging oneself to speak (A2)				
M	3.81	3.61	3.45	2.95
SD	1.35	1.48	1.28	1.72
Encouraging: Giving a reward or treat(A3)				
M	2.53	2.00	2.75	1.48
SD	1.56	1.32	1.37	1.12
Taking emotional temperature: Noticing being tense or nervous (A4)				
M	2.56	2.10	2.85	1.57
SD	1.46	1.45	1.46	1.12
Taking emotional temperature: Keeping diary to write down feelings (A5)				
M	1.92	1.49	2.90	1.38
SD	1.46	1.14	1.74	1.20
Taking emotional temperature: Talking to someone about feelings (A6)				
M	2.17	1.90	2.80	1.71
SD	1.40	1.46	1.40	1.45

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

All affective strategies, except for giving a reward that is at medium level, are at low level for 12th graders (Table 57).

As Figure 29 suggests, the strategy having the highest means for all grade levels is encouraging oneself to speak English when being afraid of making a mistake. Also, the strategy having the lowest for all grade levels except for 11th grade is writing down one's feelings in a language learning diary.

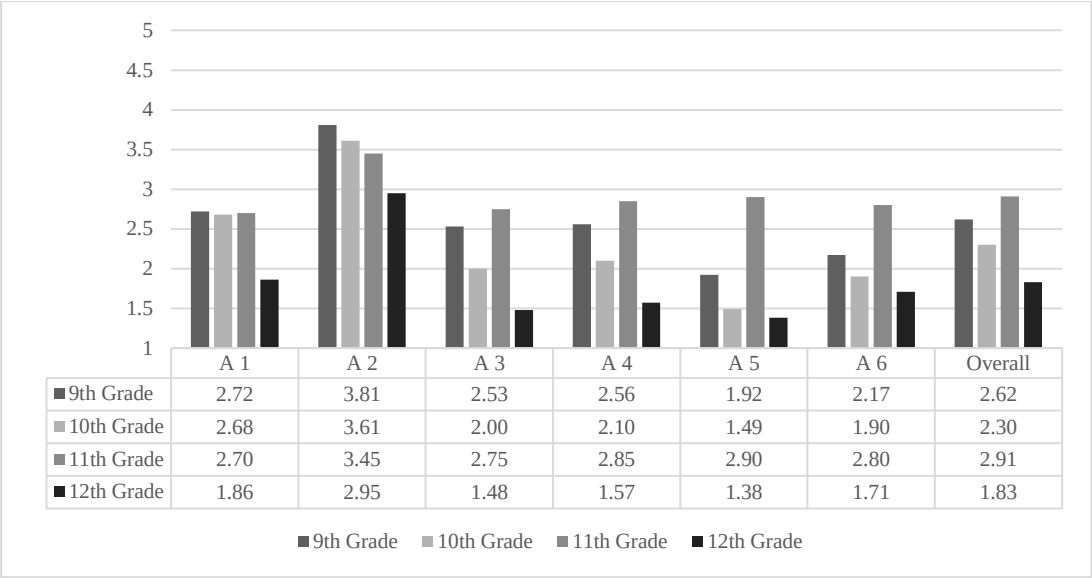


Figure 29. Means of affective strategies across grade level

As the overall means of affective strategies for each grade level as seen in Figure 29 suggest, 11th graders tend to use the strategies more and 12th graders less compared to the other grade levels.

According to the ANOVA test, as Table 58 suggests, there is a statistically significant mean difference among grade levels in terms of the affective strategies of giving a reward or a treat, noticing being tense or nervous and keeping diary to write down feelings.

Table 58
ANOVA for affective strategies: Grade level

	df1	df2	F
Lowering anxiety: Trying to relax (A1)	3	117	1.66
Encouraging: Encouraging oneself to speak (A2)	3	117	1.60
Encouraging: Giving a reward or treat(A3)	3	117	3.97*
Taking emotional temperature: Noticing being tense or nervous (A4)	3	117	3.49*
Taking emotional temperature: Keeping diary to write down feelings (A5)	3	117	5.72*
Taking emotional temperature: Talking to someone about feelings (A6)	3	117	2.38

* $p < 0.05$

A post hoc Tukey HSD test indicates that the significant difference is between 9th and 12th, and 11th and 12th graders in terms of the strategy of giving reward or treat. In terms of the strategy of noticing being tense or nervous, it indicates that the significant difference is between only 11th and 12th graders. Also, the same post hoc test indicates that the significant difference between the strategies of keeping diary to write down feelings is between only 11th and 12th graders.

Social strategies: Grade level

Table 59 below demonstrates social strategies across grade level. The strategies are mainly at medium and low level. The strategy of asking questions in English is at high level for all grade levels. The strategies of asking for help in English and practicing English with others are at high level for 11th graders.

Table 59
Social strategies: Grade level

	9th Grade (n=36)	10th Grade (n=41)	11th Grade (n=20)	12th Grade (n=21)
Asking questions: Asking to slow down or repeat (S1)				
M	3.22	2.49	3.00	2.62
SD	1.38	1.34	1.30	1.53
Asking questions: Asking for correction (S2)				
M	3.11	2.37	3.10	1.33
SD	1.47	1.48	1.41	1.43
Asking questions: Asking for help from natives (S4)				
M	2.89	2.71	3.85	2.24
SD	1.51	1.45	1.09	1.51
Asking questions: Asking questions in English (S5)				
M	4.08	4.22	4.25	3.95
SD	1.03	1.08	1.02	1.36
Cooperating with others: Practicing with others (S3)				
M	3.25	3.37	3.55	3.24
SD	1.42	1.59	1.15	1.64

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

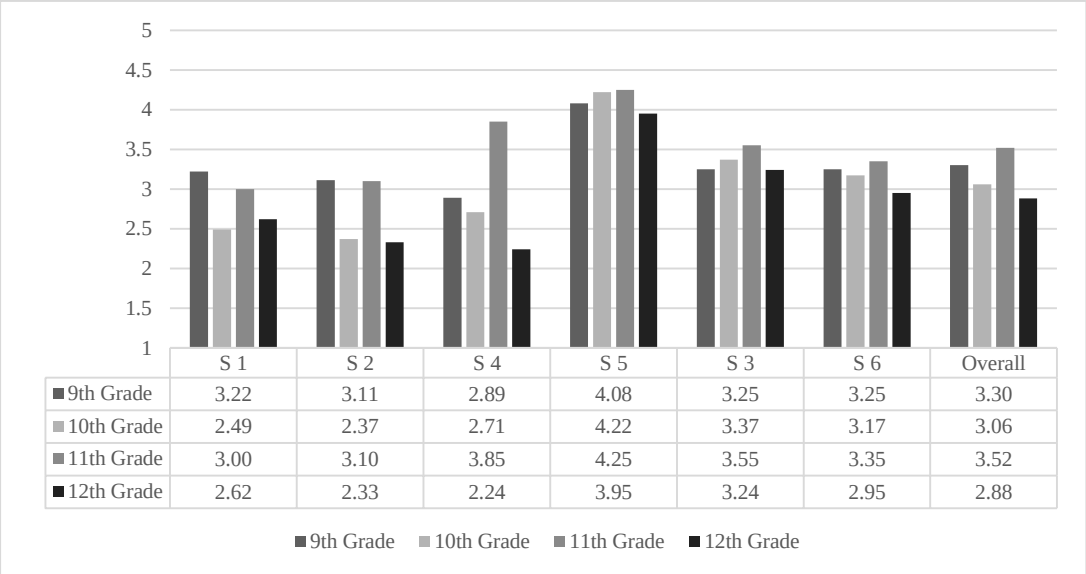
Table 59 (cont'd)
Social strategies: Grade level

		9th Grade (n=36)	10th Grade (n=41)	11th Grade (n=20)	12th Grade (n=21)
Empathizing with others: Learning about the culture (S6)					
	M	3.25	3.17	3.35	2.95
	SD	1.48	1.52	1.39	1.60

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

All the strategies seem to be mainly at medium and low level with the lowest means for 12th graders (Table 59).

As Figure 30 suggests, the most preferred strategy employed by for all grade levels seems to be asking questions in English. Also, the least preferred strategy employed by 9th and 12th graders is asking for help from English speaker, by 10th graders is asking English speakers for one's mistake correction, by 11th graders is asking the other person to slow down while speaking.



	S 1	S 2	S 4	S 5	S 3	S 6	Overall
9th Grade	3.22	3.11	2.89	4.08	3.25	3.25	3.30
10th Grade	2.49	2.37	2.71	4.22	3.37	3.17	3.06
11th Grade	3.00	3.10	3.85	4.25	3.55	3.35	3.52
12th Grade	2.62	2.33	2.24	3.95	3.24	2.95	2.88

Figure 30. Means of social strategies across grade level

As the overall means of social strategies for each grade level as seen in Figure 30 suggest, 11th graders tend to employ the overall strategies more and 12th graders less compared to the other grade levels.

The ANOVA test done for social strategies yields that there is a statistically significant mean difference among grade levels in terms of the strategy of asking help from natives (Table 60).

Table 60
ANOVA for social strategies: Grade level

	df1	df2	F
Asking questions: Asking to slow down or repeat (S1)	3	117	2.07
Asking questions: Asking for correction (S2)	3	117	2.62
Asking questions: Asking for help from natives (S4)	3	117	4.69*
Asking questions: Asking questions in English (S5)	3	117	0.37
Cooperating with others: Practicing with others (S3)	3	117	0.22
Empathizing with others: Learning about the culture (S6)	3	117	0.27

* $p < 0.05$

According to a post hoc Tukey HSD test, this significant difference is between 11th and 10th, and 11th and 12th graders.

Direct and indirect strategies: Proficiency level

Table 61 demonstrates direct and indirect strategies across proficiency level. Both direct and indirect strategies are at medium level in terms of both proficiency levels.

Table 61
Overall direct and indirect strategies: Proficiency level

		Excellent (n=52)	Good (n=65)
Direct Strategies			
	M	3.28	3.33
	SD	0.73	0.66
Indirect Strategies			
	M	3.02	3.13
	SD	0.87	0.89

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

The students considering their proficiency level as good tend to employ direct and indirect strategies more compared to the ones considering their level as excellent (Table 61).

As Figure 31 demonstrates the means including the overall means of direct and indirect strategy uses.

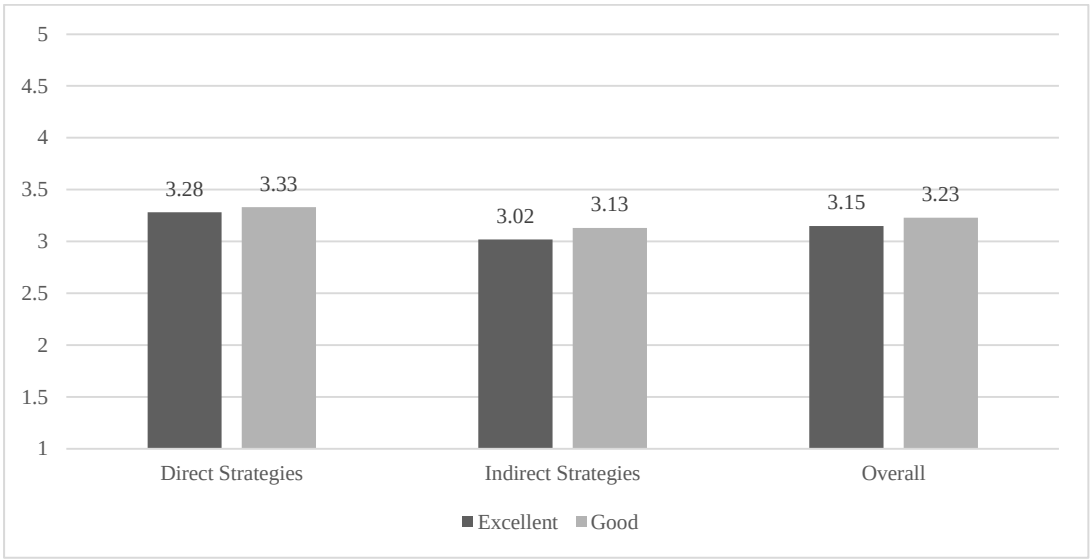


Figure 31. Means of overall direct and indirect strategies regarding proficiency level

Given the overall means of both strategies, the students considering their proficiency level as good tend to employ both strategies more in total compared to the others (Figure 31).

Table 62 demonstrates independent samples t-test conducted to see if there is a mean difference between proficiency levels in terms of proficiency levels.

Table 62
Independent samples t-test for direct and indirect strategies: Proficiency level

			t.	df	p
	F	Sig.			
Direct Strategies	0.14	0.71	0.41	115	0.69
Indirect Strategies	0.001	0.98	0.65	115	0.52

According to the results of the independent samples t-test, there is no statistically significant mean difference between direct and indirect strategies in terms of proficiency level (Table 62).

Table 63 demonstrates all direct and indirect strategies across proficiency level. The use of all the strategies are at medium level. Only cognitive strategies for good proficiency, compensatory strategies for excellent proficiency and metacognitive strategies for good proficiency are at high level.

Table 63
Direct and indirect strategies: Proficiency level

		Excellent (n=52)	Good (n=65)
Memory Strategies			
	M	2.76	3.00
	SD	0.99	0.91

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Table 63 (cont'd)
Direct and indirect strategies: Proficiency level

		Excellent (n=52)	Good (n=65)
Cognitive Strategies			
	M	3.43	3.58
	SD	0.79	0.68
Compensatory Strategies			
	M	3.52	3.36
	SD	0.82	0.74
Metacognitive Strategies			
	M	3.40	3.54
	SD	0.99	0.87
Affective Strategies			
	M	2.48	2.37
	SD	1.16	1.10
Social Strategies			
	M	3.22	3.16
	SD	1.06	1.01

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Except for cognitive strategies, the use of all strategies is higher for good proficiency when compared to excellent proficiency (Table 63).

As Figure 32 suggests, the strategy having the highest mean is cognitive strategies for good proficiency level and compensatory strategies for excellent proficiency level. Also, the strategy having the lowest means for both proficiency levels is affective strategies.

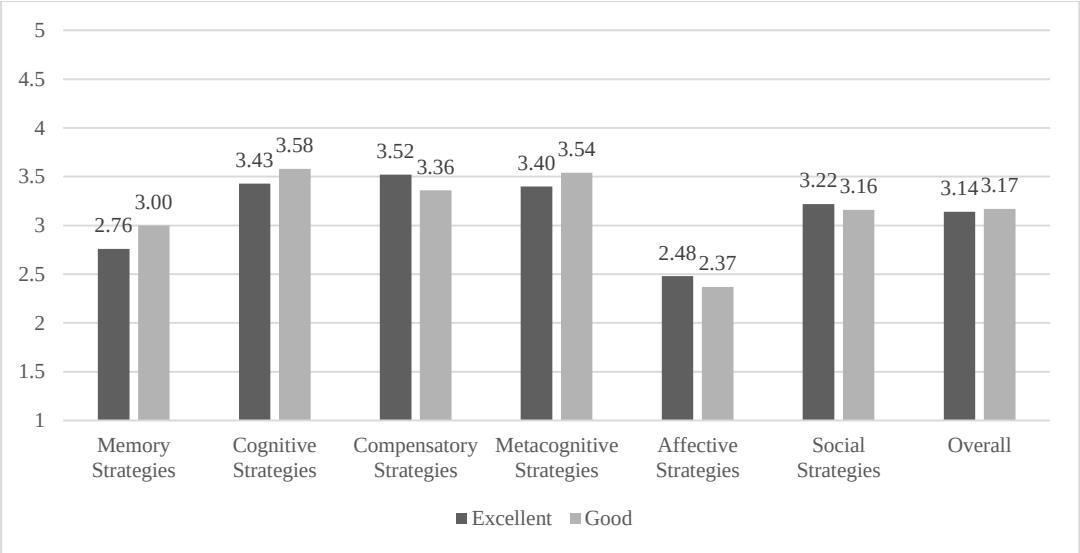


Figure 32. Means of direct and indirect strategies regarding proficiency

Given the overall means of all strategies for each proficiency level, the students considering their level as good tend to employ the strategies more compared to the others (Figure 32).

Table 64 yields the results of an independent samples t-test to see if there is a statistically significant mean difference between proficiency levels.

Table 64
Independent samples t-test for direct and indirect strategies: Proficiency level

			t.	df	p
	F	Sig.			
Memory Strategies	0.48	0.50	1.35	115	0.18
Cognitive Strategies	0.60	0.81	1.14	115	0.26
Compensatory Strategies	0.84	0.36	-1.07	115	0.29
Metacognitive Strategies	0.78	0.38	0.77	115	0.44
Affective Strategies	0.15	0.70	-0.49	115	0.62
Social Strategies	0.34	0.56	-0.30	115	0.77

According to the results, there is no statistically significant mean difference between proficiency levels (Table 64).

Direct strategies: Proficiency level

Table 65 below demonstrates direct strategies as memory, cognitive and compensatory strategies across proficiency level. According to the table, all direct strategies are at medium level except cognitive strategies that is at high level for good proficiency level and compensatory strategies that is at high level for excellent proficiency level.

Table 65
Direct strategies: Proficiency level

		Excellent (n=52)	Good (n=65)
Memory Strategies			
	M	2.76	3.00
	SD	0.99	0.91
Cognitive Strategies			
	M	3.43	3.58
	SD	0.79	0.68
Compensatory Strategies			
	M	3.52	3.36
	SD	0.82	0.74

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

In terms of memory and cognitive strategies, the strategy use is higher among students considering their proficiency level as good. For the students considering their proficiency level as excellent, the use of compensatory strategies is higher (Table 65).

As Figure 33 suggests, the mean of cognitive strategies is the highest for good proficiency level and for excellent proficiency level, the mean of compensatory strategies is the highest. For both proficiency levels, the mean of memory strategies seems to be the lowest.

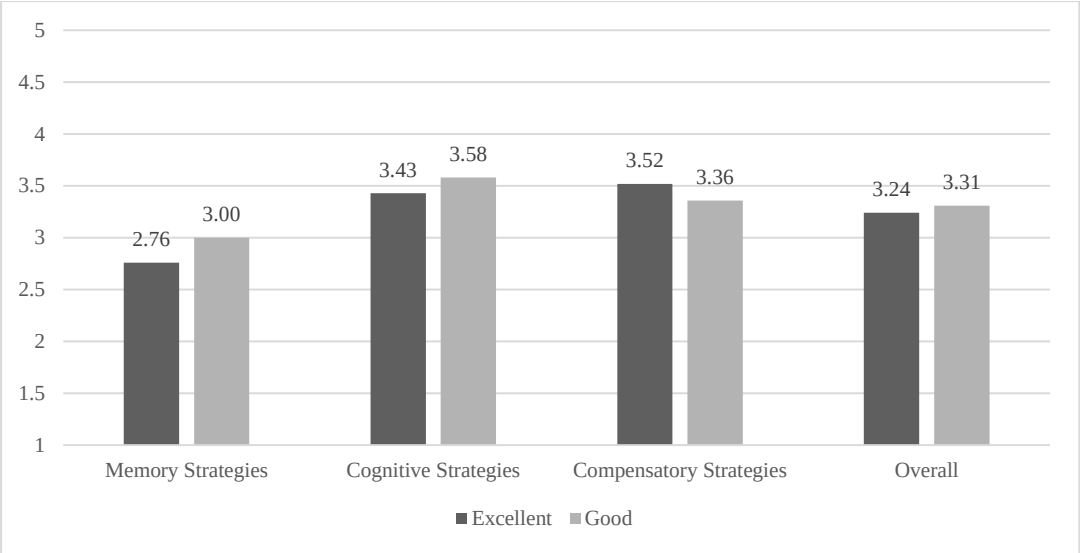


Figure 33. Means of direct strategies regarding proficiency level

Given the overall means of direct strategies for ach proficiency level, the students considering their level as good tend to use direct strategies more compared to the other group (Figure 33).

Table 66 demonstrates if there is any statistically significant mean difference between proficiency levels in terms of direct strategies.

Table 66
Independent samples t-test for direct strategies: Proficiency level

			t.	df	p
	F	Sig.			
Memory Strategies	0.48	0.50	1.35	115	0.18
Cognitive Strategies	0.60	0.81	1.14	115	0.26
Compensatory Strategies	0.84	0.36	-1.07	115	0.29

According to the results of the independent samples t-test conducted accordingly, there is no statistically significant mean difference between proficiency levels in terms of direct strategies (Table 66).

Memory strategies: Proficiency level

Table 67 demonstrates memory strategies across proficiency level. The strategies are mainly at medium level. Only the strategy of establishing a relationship between old and new information is at high level for excellent proficiency level.

Table 67
Memory strategies: Proficiency level

	Excellent (n=52)	Good (n=65)
Creating mental linkages: Relationship between old and new (M1)		
M	3.87	3.48
SD	1.33	1.28
Creating mental linkages: New words in a sentence (M2)		
M	3.44	3.31
SD	1.36	1.29
Applying images and sounds: Sound and image connection (M3)		
M	2.90	3.05
SD	1.50	1.24
Applying images and sounds: Mental picture (M4)		
M	2.92	3.48
SD	1.53	1.28
Applying images and sounds: Rhymes (M5)		
M	2.08	2.20
SD	1.37	1.41
Applying images and sounds: Flashcards (M6)		
M	2.56	2.48
SD	1.65	1.53
Applying images and sounds: Page, board and street signs (M9)		
M	3.10	3.28
SD	1.58	1.46
Reviewing well: Review often (M8)		
M	2.67	2.83
SD	1.42	1.31
Employing action: Physically acting out (M7)		
M	1.98	2.83
SD	1.29	1.31

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Also, the strategy of using rhymes to remember English words is at low level for both proficiency levels, and the strategy of physically acting out new English words is at low level for excellent proficiency level (Table 67).

As Figure 34 suggests except for the strategies of establishing relationship and using new English words in a sentence to remember them, the means of all memory strategies are higher for good proficiency level when compared to excellent proficiency level. In addition, students considering their proficiency level as excellent and good seem to prefer establishing a relationship between old and new information. The least preferred strategy seems to be physically acting out new English words for excellent proficiency level and using rhymes to remember new English words for good proficiency level.

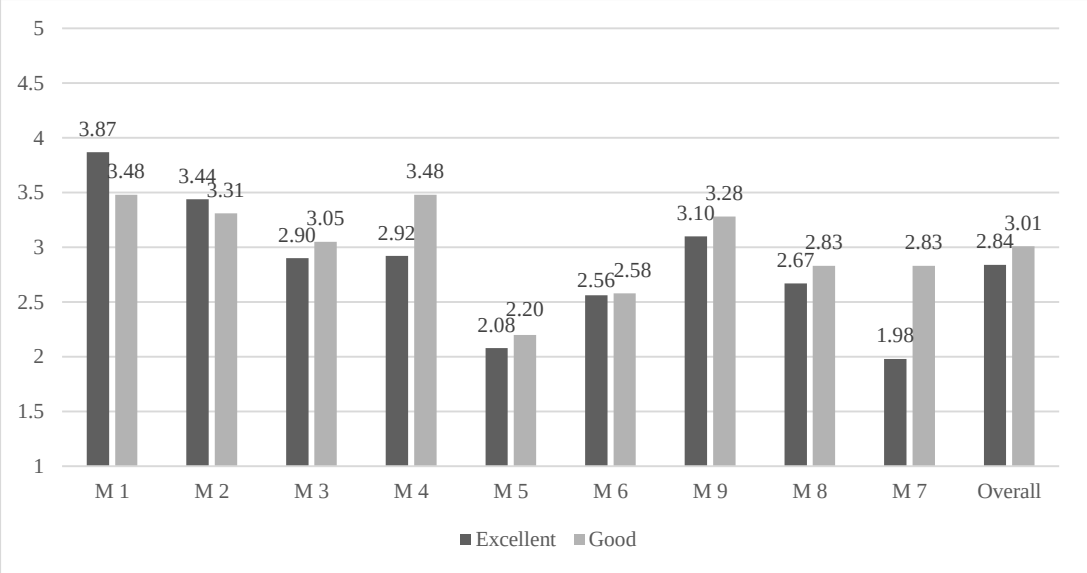


Figure 34. Means of memory strategies regarding proficiency level

Given the overall means of memory strategies or each proficiency level, the students considering their level as good tend to employ memory strategies more compared to the other group (Figure 34).

Table 68 demonstrates the results of an independent samples t-test conducted to see if the differences is statistically significant.

Table 68
Independent samples t-test for memory strategies: Proficiency level

			t.	df	p
	F	Sig.			
Centering learning: Paying attention(M3)	7.11	0.01	0.56	115	0.58
Arranging and planning learning: Finding ways to use English (M1)	0.20	0.89	-1.61	115	0.11
Arranging and planning learning: Finding out to be a better learner (M4)	4.67	0.03	2.09	99.748	0.58
Arranging and planning learning: Planning schedule to study (M5)	0.31	0.58	0.48	115	0.64
Arranging and planning learning: Looking for people to speak English (M6)	1.57	0.21	-0.27	115	0.79
Arranging and planning learning: Looking for opportunities to read (M7)	1.57	0.21	-0.27	115	0.79
Arranging and planning learning: Clear goals to improve (M8)	1.37	0.24	0.62	115	0.53
Evaluating learning: Noticing mistakes (M2)	0.30	0.59	-0.55	115	0.59
Evaluating learning: Thinking about progress (M9)	0.54	0.47	0.64	115	0.52

* $p < 0.05$

According the results of the test, there is no statistically significant mean difference between excellent and god proficiency levels in terms of memory strategies (Table 68).

Cognitive strategies: Proficiency level

Table 69 below demonstrates cognitive strategies across proficiency level. As the table suggests the cognitive strategy use is mainly at high and medium level.

Table 69
Cognitive strategies: Proficiency level

	Excellent (n=52)	Good (n=65)
Practicing: Saying or writing new words (C1)		
M	3.08	3.02
SD	1.40	1.36
Practicing: Speaking like a native (C2)		
M	4.25	4.12
SD	1.17	1.02
Practicing: Practicing the sounds (C3)		
M	3.02	3.37
SD	1.58	1.40
Practicing: Using words in different ways (C4)		
M	3.77	3.60
SD	1.35	1.25
Practicing: Finding patterns (C11)		
M	2.71	2.48
SD	1.36	1.44
Receiving and sending messages: Starting conversation (C5)		
M	4.19	3.78
SD	1.17	1.18
Receiving and sending messages: English TV shows or movies (C6)		
M	4.60	4.58
SD	0.96	0.83
Receiving and sending messages: Reading books (C7)		
M	4.08	4.02
SD	1.23	1.13
Analyzing and reasoning: Skimming the reading carefully (C9)		
M	3.65	3.37
SD	1.24	1.44
Analyzing and reasoning: Looking for similar words (C10)		
M	2.75	3.02
SD	1.49	1.50
Analyzing and reasoning: Dividing words into parts (C12)		
M	3.08	2.80
SD	1.38	1.43

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Table 69 (cont'd)
Cognitive strategies: Proficiency level

	Excellent (n=52)	Good (n=65)
Analyzing and reasoning: No word-for-word translation (C13)		
M	3.35	3.62
SD	1.47	1.26
Creating structure for input and output: Writing in English (C8)		
M	4.40	4.11
SD	0.96	1.02
Creating structure for input and output: Making summaries (C14)		
M	2.85	3.03
SD	1.45	1.39

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Except for the strategies of practicing the sound of English, looking for similar words in Turkish, trying not to translate word-for-word and making summaries of information in English, the other cognitive strategies seem to be employed more by the students having excellent proficiency level (Table 69).

Figure 35 suggests that the strategy having the highest means for both levels is watching English TV shows and movies. Also, the strategy having the lowest means for both levels is trying to find patterns in English.

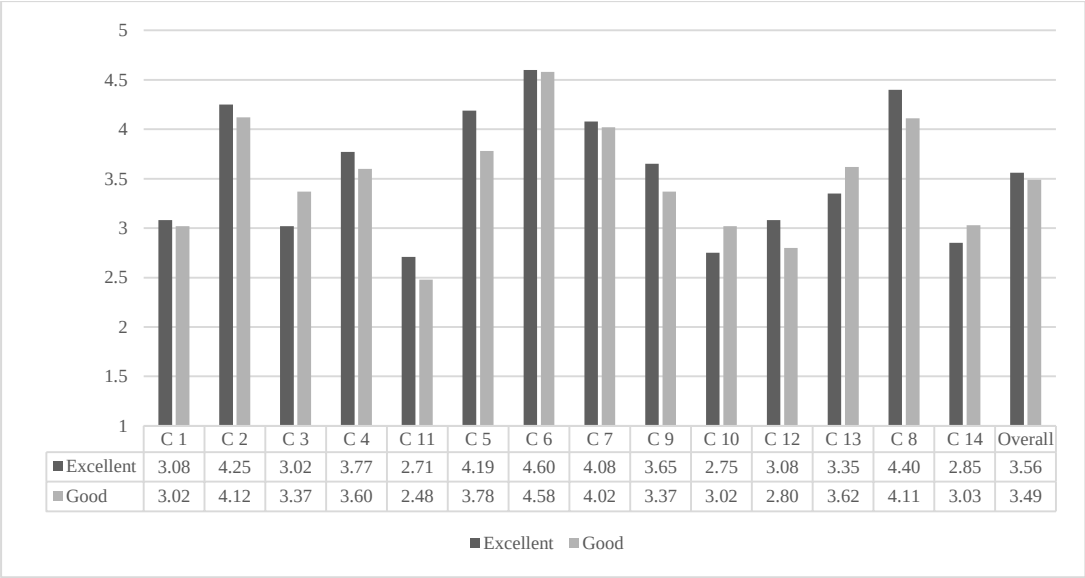


Figure 35. Means of cognitive strategies regarding proficiency level

Given the overall means of cognitive strategies for each proficiency level, the students considering their proficiency level as excellent seem to use cognitive levels more compared to the others (Figure 35).

Table 70 yields the results of an independent samples t-test conducted to see if there is a significant difference between proficiency levels in terms of cognitive strategies.

Table 70
Independent samples t-test for cognitive strategies: Proficiency level

			t.	df	p
	F	Sig.			
Practicing: Saying or writing new words (C1)	0.04	0.84	-0.24	115	0.81
Practicing: Speaking like a native (C2)	0.22	0.64	-0.62	115	0.53
Practicing: Practicing the sounds (C3)	2.41	0.12	1.27	115	0.21
Practicing: Using words in different ways (C4)	0.51	0.48	-0.70	115	0.48
Practicing: Finding patterns (C11)	0.57	0.45	-0.90	115	0.37

Table 70 (cont'd)
Independent samples t-test for cognitive strategies: Proficiency level

			t.	df	p
	F	Sig.			
Receiving and sending messages: Starting conversation (C5)	0.67	0.41	-1.86	115	0.07
Receiving and sending messages: English TV shows or movies (C6)	0.04	0.84	-0.07	115	0.94
Receiving and sending messages: Reading books (C7)	0.003	0.96	-0.282	115	0.78
Analyzing and reasoning: Skimming then reading carefully (C9)	3.96	0.05	-1.13	115	0.26
Analyzing and reasoning: Looking for similar words (C10)	0.007	0.94	0.96	115	0.34
Analyzing and reasoning: Dividing words into parts (C12)	1.02	0.31	-1.06	115	0.29
Analyzing and reasoning: No word-for-word translation (C13)	1.90	0.17	1.07	115	0.29
Creating structure for input and output: Writing in English (C8)	1.66	0.20	-1.61	115	0.11
Creating structure for input and output: Making summaries (C14)	0.36	0.55	0.70	115	0.49

According to the results of the test, as Table 70 suggests, there is no statistically significant mean difference between proficiency levels in terms of cognitive strategies.

Compensatory strategies: Proficiency level

Table 71 includes compensatory strategies for proficiency level. As the table suggests, compensatory strategy use is mainly at high and medium level except for the strategy of making up new words when cannot know the right ones in English for excellent proficiency level.

Table 71
Compensatory strategies: Proficiency level

	Excellent (n=52)	Good (n=65)
Guessing intelligently: Guessing unfamiliar words (C1)		
M	3.75	3.95
SD	1.31	1.05
Guessing intelligently: Not looking up every word (C4)		
M	4.04	4.03
SD	1.15	1.05
Guessing intelligently: Guessing what is to be said next (C5)		
M	3.06	3.18
SD	1.49	1.38
Overcoming limitations in speaking and writing: Using gestures (C2)		
M	3.00	3.46
SD	1.41	1.15
Overcoming limitations in speaking and writing: Making up new words (C3)		
M	2.02	2.65
SD	1.26	1.50
Overcoming limitations in speaking and writing: Using similar words or phrases (C6)		
M	3.92	4.05
SD	1.14	0.99

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Also, compensatory strategies seem to be employed more by the students considering themselves as good in terms of proficiency level compared to the ones considering themselves as excellent. Only the strategy of reading English without looking up every new word seems to be employed more among the students considering themselves as excellent in terms of proficiency level (Table 71).

As Figure 36 suggests, the highest means of both levels for compensatory strategies seem to be the strategies of reading English without looking up every new word and using a similar word or phrase when not thinking of an English word. Also, the

lowest means for both levels are for the strategies of making up new words when not knowing the right ones in English.

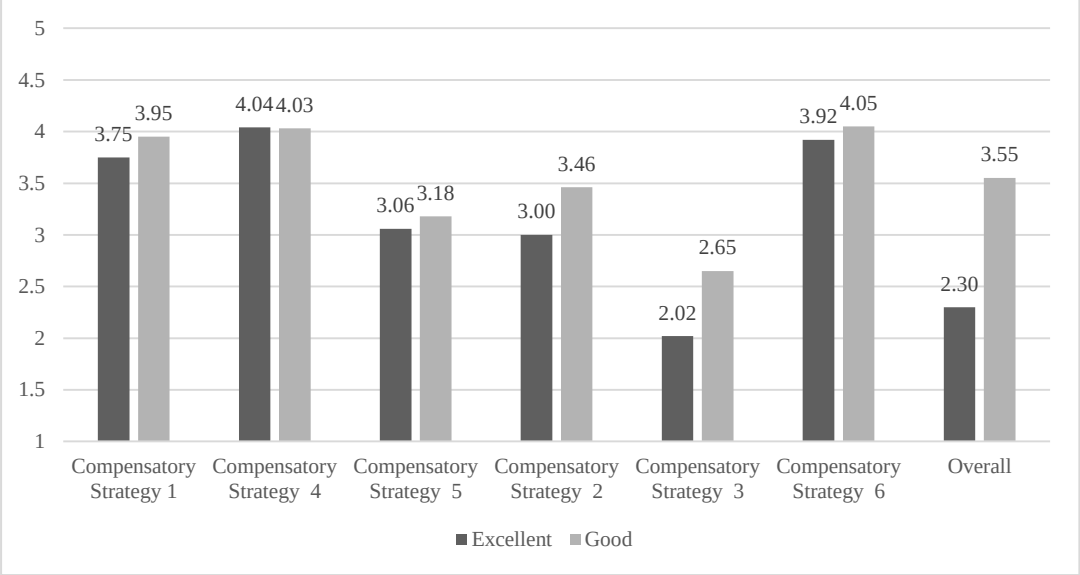


Figure 36. Means of compensatory strategies regarding proficiency level

Given the overall means of compensatory strategies for each proficiency level, the students considering their level as good seem to use compensatory strategies more compared to the others (Figure 36).

Table 72 includes the results of an independent samples t-test conducted to see if the differences are statistically significant.

Table 72
Independent samples t-test for compensatory: Proficiency level

			t.	df	p
	F	Sig.			
Guessing intelligently: Guessing unfamiliar words (C1)	3.83	0.05	0.93	115	0.35
Guessing intelligently: Not looking up every word (C4)	1.10	0.30	-0.04	115	0.97

* p< 0.05

Table 72 (cont'd)
Independent samples t-test for compensatory: Proficiency level

			t.	df	p
	F	Sig.			
Guessing intelligently: Guessing what is to be said next (C5)	0.49	0.48	0.48	115	0.63
Overcoming limitations in speaking and writing: Using gestures (C2)	1.89	0.17	1.95	115	0.05
Overcoming limitations in speaking and writing: Making up new words (C3)	5.62	0.02	2.45	115	0.02*
Overcoming limitations in speaking and writing: Using similar words (C6)	0.70	0.40	0.63	115	0.53

* $p < 0.05$

According to the results as shown in Table 72, there is a statistically significant mean difference between proficiency levels in terms of the strategy of making up new words when not knowing the right ones in English.

Indirect strategies: Proficiency level

Table 73 indicates indirect strategies as metacognitive, affective and social strategies in terms of proficiency levels. As the table suggests, the use of indirect strategies is mainly at medium level for both proficiency levels.

Table 73
Indirect strategies: Proficiency level

		Excellent (n=52)	Good (n=65)
Metacognitive Strategies			
	M	3.40	3.54
	SD	0.99	0.87
Affective Strategies			
	M	2.48	2.37
	SD	1.16	1.10
Social Strategies			
	M	3.22	3.16
	SD	1.06	1.01

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Only the use of metacognitive strategies for good proficiency level is at high level and affective strategies for good proficiency level is at low level (Table 73).

As Figure 37 suggests, the means of strategies for both levels are the highest for metacognitive strategies and the lowest for affective strategies.

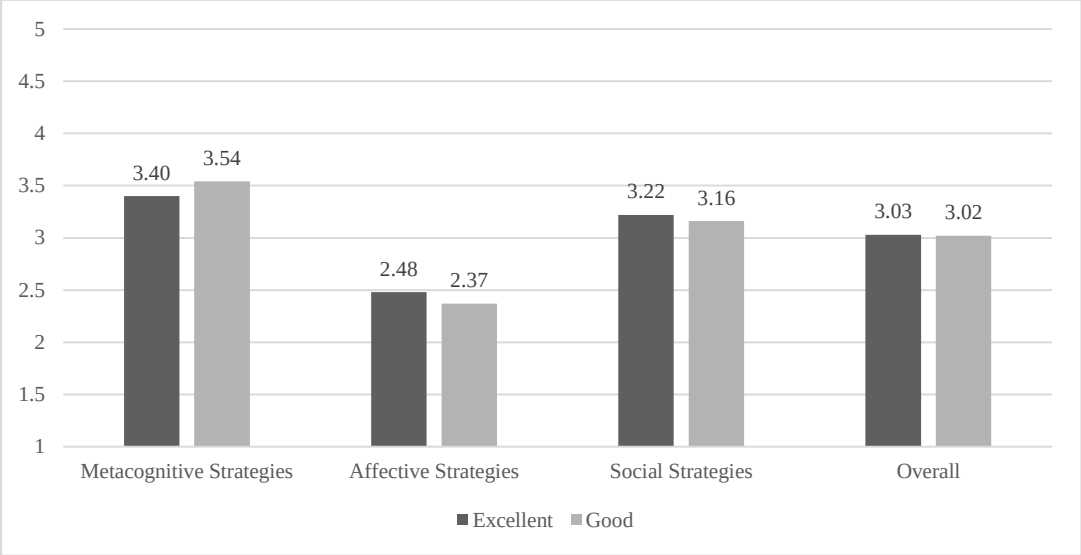


Figure 37. Means of indirect strategies regarding proficiency level

The overall means of both proficiency levels are close to each other, the use of strategies of the students considering their level as excellent seem to use indirect strategies slightly more (Figure 37).

Table 74 yields the results of an independent samples t-test to see if the differences are statistically significant.

Table 74
Independent samples t-test for indirect strategies: Proficiency level

			t.	df	p
	F	Sig.			
Metacognitive Strategies	0.78	0.38	0.77	115	0.44
Affective Strategies	0.15	0.70	-0.49	115	0.62
Social Strategies	0.34	0.56	-0.30	115	0.77

* $p < 0.05$

According to the results, as demonstrated in Table 74, there is no statistically significant mean difference between proficiency levels in terms of indirect strategies.

Metacognitive strategies: Proficiency level

Table 75 below indicates metacognitive strategies in terms of proficiency levels. As the table suggests, the use of metacognitive strategies by both levels is at high and medium level.

Table 75
Metacognitive strategies: Proficiency level

		Excellent (n=52)	Good (n=65)
Centering learning: Paying attention (M3)			
	M	3.92	3.86
	SD	1.23	1.13
Arranging and planning learning: Finding ways to use English (M1)			
	M	4.12	3.58
	SD	1.11	1.24
Arranging and planning learning: Finding out to be a better learner (M4)			
	M	3.25	3.58
	SD	1.33	1.30
Arranging and planning learning: Planning schedule to study (M5)			
	M	2.73	2.83
	SD	1.43	1.44

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Table 75 (cont'd)
Metacognitive strategies: Proficiency level

	Excellent (n=52)	Good (n=65)
Arranging and planning learning: Looking for people to speak English (M6)		
M	3.48	3.26
SD	1.53	1.42
Arranging and planning learning: Looking for opportunities to read (M7)		
M	3.67	3.46
SD	1.34	1.26
Arranging and planning learning: Clear goals for improvement (M8)		
M	3.08	3.49
SD	1.40	1.26
Evaluating learning: Noticing mistakes (M2)		
M	3.88	3.66
SD	1.10	1.12
Evaluating learning: Thinking about progress (M9)		
M	3.04	3.46
SD	1.41	1.36

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Among all medium level strategy uses, the means of the strategy of planning a schedule to have enough time to study English seem to be the lowest for both proficiency levels (Table 75).

As it is indicated in Figure 38, the students considering their proficiency level as excellent tend to employ the strategy of trying to find ways to use English more. As for the ones considering their level as good tend to use the strategy of paying attention when someone is speaking English. The least preferred metacognitive strategy by both proficiency levels is the strategy of planning a schedule to have enough time to study English.

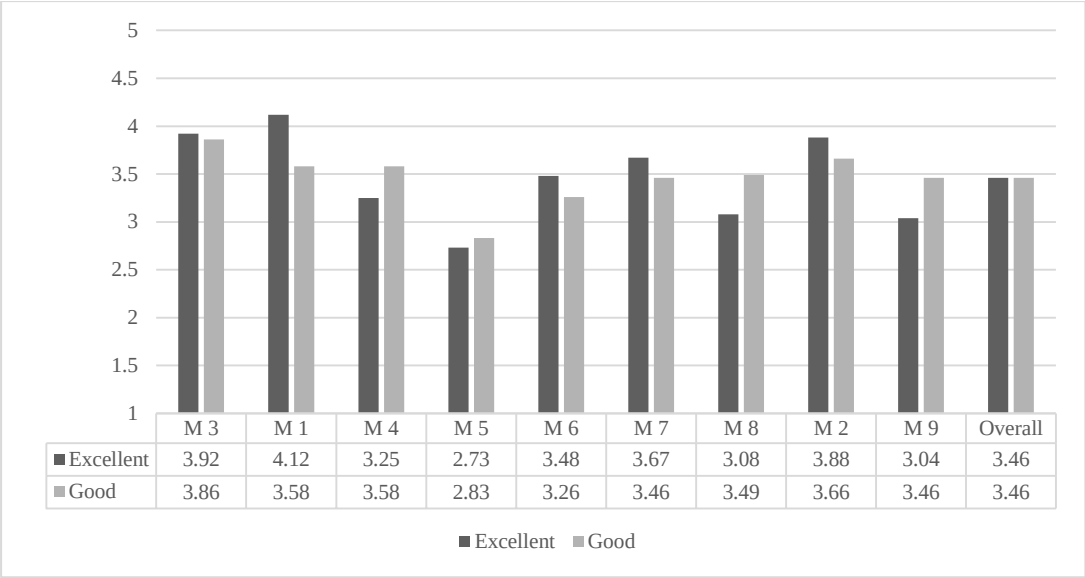


Figure 38. Means of metacognitive strategies regarding proficiency level

Given the overall means of metacognitive strategies for each proficiency level, despite individual mean differences by strategy, the overall use of metacognitive strategies seems to be at the same level (Figure 38).

Table 76 demonstrates the results of an independent samples t-test done to see if there is any statistically significant mean difference between proficiency levels in terms of metacognitive strategies.

Table 76
Independent samples t-test for metacognitive strategies: Proficiency level

			t.	df	p
	F	Sig.			
Centering learning: Paying attention (M3)	0.54	0.46	-0.28	115	0.78
Arranging and planning learning: Finding ways to use English (M1)	1.86	0.18	-2.41	115	0.18
Arranging and planning learning: Finding out to be a better learner (M4)	0.90	0.77	1.37	115	0.17

Table 76 (cont'd)
Independent samples t-test for metacognitive strategies: Proficiency level

			t.	df	p
	F	Sig.			
Arranging and planning learning: Planning schedule to study (M5)	0.04	0.84	0.37	115	0.71
Arranging and planning learning: Looking for people to speak English (M6)	0.61	0.44	-0.80	115	0.42
Arranging and planning learning: Looking for opportunities to read (M7)	0.27	0.60	-0.80	115	0.42
Arranging and planning learning: Clear goals to improve (M8)	0.53	0.47	1.69	115	0.10
Evaluating learning: Noticing mistakes (M2)	0.31	0.18	-2.41	115	0.02
Evaluating learning: Thinking about progress (M9)	0.09	0.77	1.64	115	0.10

According to the results, as seen in Table 76, there is no statistically significant mean difference between proficiency levels in terms of metacognitive strategies.

Affective strategies: Proficiency level

Table 77 indicates affective strategies across proficiency level. As it is indicated in the table, the use of all the affective strategies, except for the strategy of noticing English mistakes and using that information to help one do better which is at high level, are at low level.

Table 77
Affective strategies: Proficiency level

	Excellent (n=52)	Good (n=65)
Lowering anxiety: Trying to relax (A1)		
M	2.27	2.77
SD	1.57	1.59
Encouraging: Encouraging oneself to speak (A2)		
M	3.50	3.57
SD	1.528	1.43

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Table 77 (cont'd)
Affective strategies: Proficiency level

	Excellent (n=52)	Good (n=65)
Encouraging: Giving a reward or treat(A3)		
M	2.08	2.26
SD	1.43	1.43
Taking emotional temperature: Noticing being tense or nervous (A4)		
M	2.13	2.37
SD	1.48	1.46
Taking emotional temperature: Keeping diary to write down feelings (A5)		
M	1.83	1.86
SD	1.48	1.45
Taking emotional temperature: Talking to someone about feelings (A6)		
M	2.04	2.14
SD	1.44	1.49

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Being in the same level of use, the use of all of the strategies increase among the students considering their proficiency level as good (Table 77).

As Figure 38 suggests the highest means of both strategies are for the strategy of noticing English mistakes and using that information to help one do better. Also, the strategy of planning a schedule to have enough time to study English has the lowest means for both levels.

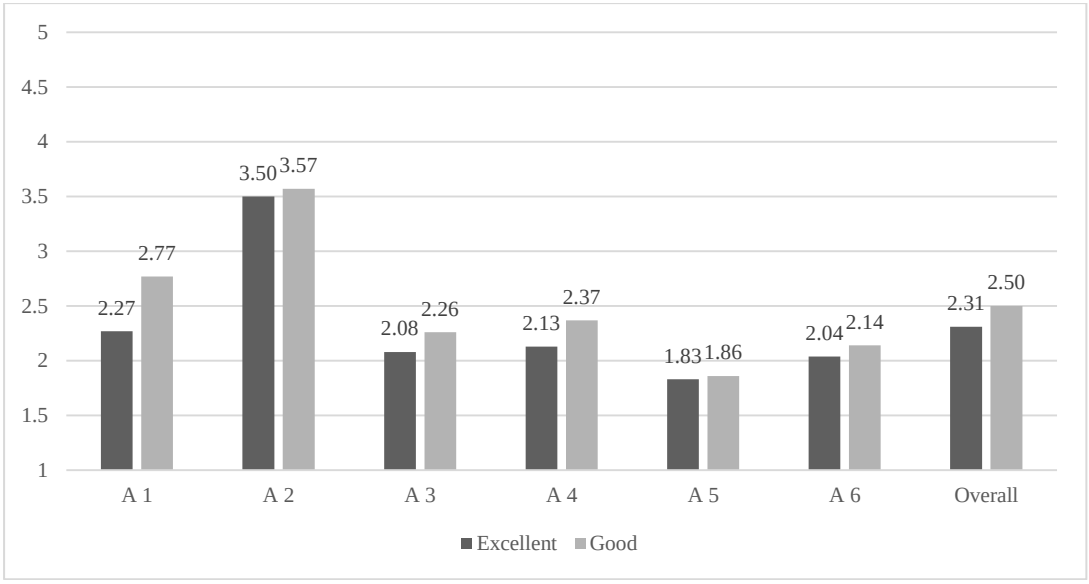


Figure 39. Means of affective strategies regarding proficiency level

Given the overall means of affective strategies for each proficiency level, the students considering their level as good tend to employ affective strategies more compared to the others (Figure 39).

Table 78 demonstrates the results of an independent samples t-test done to see if there is any statistically significant mean difference.

Table 78
Independent samples t-test for affective strategies: Proficiency level

			t.	df	p
	F	Sig.			
Lowering anxiety: Trying to relax (A1)	0.12	0.73	1.70	115	0.09
Encouraging: Encouraging oneself to speak (A2)	0.67	0.41	0.25	115	0.80
Encouraging: Giving a reward or treat(A3)	0.006	0.94	0.70	115	0.49
Taking emotional temperature: Noticing being tense or nervous (A4)	0.10	0.92	0.86	115	0.39
Taking emotional temperature: Keeping diary to write down feelings (A5)	0.005	0.94	0.13	115	0.90

Table 78 (cont'd)
Independent samples t-test for affective strategies: Proficiency level

			t.	df	p
	F	Sig.			
Taking emotional temperature: Talking to someone about feelings (A6)	0.61	0.44	0.37	115	0.72

According to the results, as seen in Table 78, there is no statistically significant mean difference between proficiency levels in terms of affective strategies.

Social strategies: Proficiency level

Table 79 below indicates social strategies in terms of proficiency levels and as the table suggests, the social strategy use is mainly at medium level.

Table 79
Social strategies: Proficiency level

	Excellent (n=52)	Good (n=65)
Asking questions: Asking to slow down or repeat (S1)		
M	2.71	2.89
SD	1.46	1.36
Asking questions: Asking for correction (S2)		
M	2.71	2.72
SD	1.59	1.42
Asking questions: Asking for help from natives (S4)		
M	2.71	3.00
SD	1.54	1.47
Asking questions: Asking questions in English (S5)		
M	4.21	4.08
SD	1.19	1.04
Cooperating with others: Practicing with others (S3)		
M	3.21	3.45
SD	1.47	1.48
Empathizing with others: Learning about the culture (S6)		
M	2.92	3.42
SD	1.48	1.47

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Only the strategy of asking questions is used more by the ones having excellent proficiency level (Table 79).

As Figure 40 indicates, the strategies of asking the other person to slow down while speaking, asking English speakers to correct one's mistakes while speaking and asking for help in English have the same means for excellent proficiency level. Also, the strategy having the lowest means for both levels is asking English speakers to correct one's mistakes while speaking with a mere mean difference.

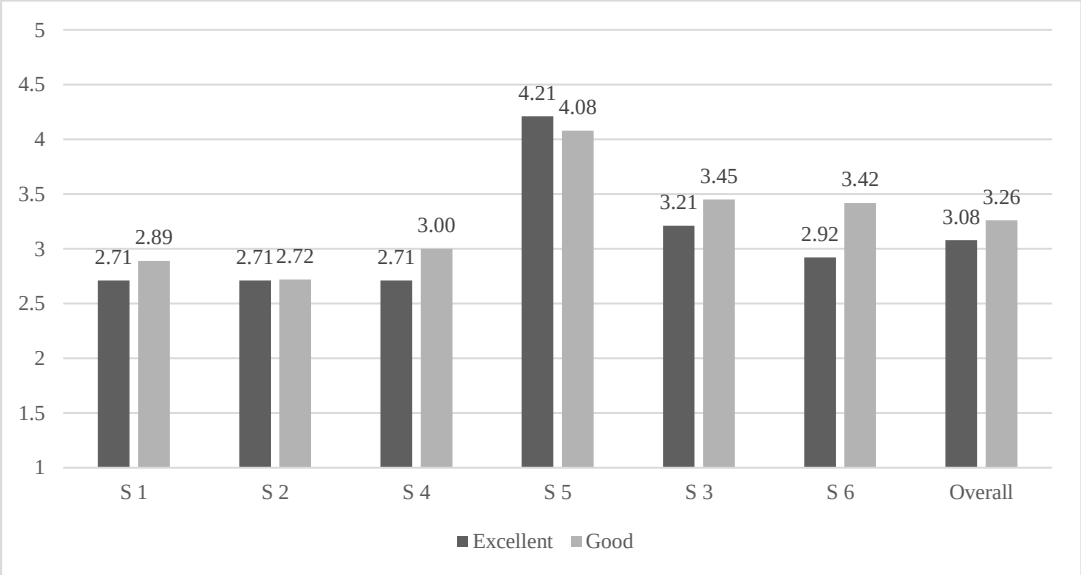


Figure 40. Means of social strategies regarding proficiency level

Given the overall means of social strategies for each proficiency level, the students considering their proficiency level as good tend to employ social strategies more compared to the ones considering their level as excellent. (Figure 40).

Table 80 yields the results of an independent samples t-test to see if the differences are statistically significant.

Table 80
Independent samples t-test for social strategies: Proficiency level

			t.	df	p
	F	Sig.			
Asking questions: Asking to slow down or repeat (S1)	1.76	0.19	0.69	115	0.49
Asking questions: Asking for correction (S2)	2.68	0.10	0.04	115	0.97
Asking questions: Asking for help from natives (S4)	0.96	0.33	1.03	115	0.30
Asking questions: Asking questions in English (S5)	0.76	0.38	-0.65	115	0.52
Cooperating with others: Practicing with others (S3)	0.05	0.83	0.85	115	0.40
Empathizing with others: Learning about the culture (S6)	0.32	0.57	1.80	115	0.08

According to the results, as seen in Table 80, there is no statistically significant mean difference between proficiency levels in terms of social strategies.

Direct and indirect strategies: Importance given to proficiency

Table 81 suggests direct and indirect strategy use in terms of importance given to proficiency level. According to the table, the use of direct and indirect strategies is both at medium level. However, only indirect strategies employed by the students considering proficiency level is not important are at low level.

Table 81
Overall direct and indirect strategies: Importance given to proficiency

		Very Important (n=87)	Important (n=25)	Not Important (n=6)
Direct Strategies				
	M	3.42	3.08	2.54
	SD	0.65	0.66	0.60
Indirect Strategies				
	M	3.22	2.83	2.22
	SD	0.85	0.81	0.94

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

The levels of importance given to proficiency seems to be higher for direct strategies compared to indirect strategies (Table 81).

According to Figure 41, the means of use of both direct and indirect strategies seem to decrease starting from the students considering proficiency level as very important to not important.

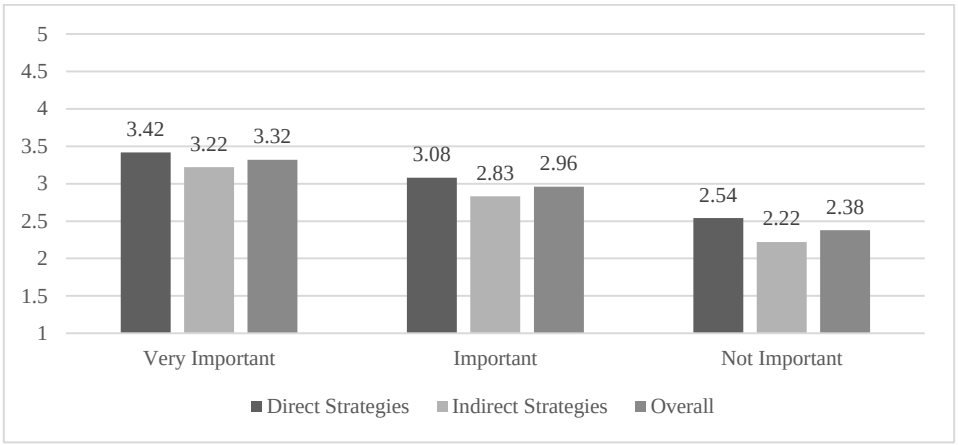


Figure 41. Means of overall direct and indirect strategies regarding importance given to proficiency

Given the overall means of both strategies, the students considering proficiency level as very important tend to use both strategies more and the ones considering the level as not important less (Figure 41).

As Table 82 suggests, the ANOVA test was conducted in order to see if there is a statistically significant mean difference among the importance given. The results yield a statistically significant mean difference in terms of importance given to proficiency levels for both direct and indirect strategies.

Table 82
ANOVA for overall direct and indirect strategies: Importance given to proficiency

	df_1	df_2	F
Direct Strategies	2	117	6.90*
Indirect Strategies	2	117	5.36*

* $p < 0.05$

A post hoc Tukey HSD test indicates that such a difference is between students for whom proficiency is very important and not important with regards to both direct and indirect strategies (Table 82).

Table 83 demonstrates the use of all direct and indirect strategies According to the table, the use of the strategies is mainly at medium level in terms of the levels of importance given to proficiency level. The use of cognitive, compensatory and metacognitive strategies by the students considering proficiency level as very important is at high level.

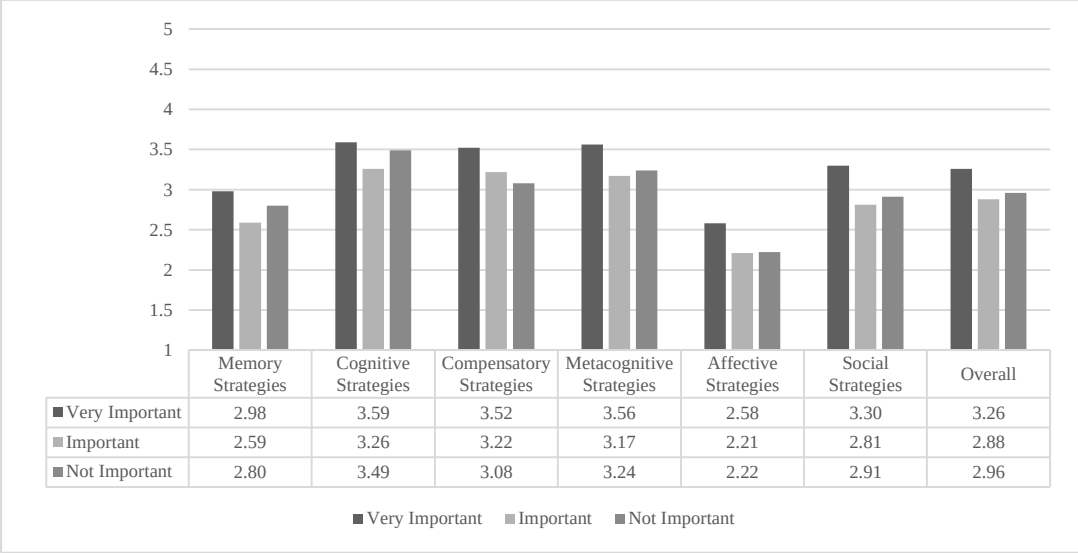
Table 83
Direct and indirect strategies: Importance given to proficiency

		Very Important (n=87)	Important (n=25)	Not Important (n=6)
Memory Strategies				
	M	2.98	2.59	2.80
	SD	0.95	0.86	1.25
Cognitive Strategies				
	M	3.59	3.27	3.49
	SD	0.72	0.74	0.59
Compensatory Strategies				
	M	3.52	3.22	3.08
	SD	0.79	0.73	0.60
Metacognitive Strategies				
	M	3.56	3.17	3.24
	SD	0.94	0.92	0.61
Affective Strategies				
	M	2.48	2.21	2.22
	SD	1.12	1.11	1.17
Social Strategies				
	M	3.30	2.81	2.92
	SD	1.03	0.89	1.19

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

On the other hand, the use of affective strategies by the ones considering proficiency level as important and not important is at low level (Table 83).

As Figure 42 suggests, the means of importance levels among all strategies are the highest for cognitive and the lowest for affective strategies.



	Memory Strategies	Cognitive Strategies	Compensatory Strategies	Metacognitive Strategies	Affective Strategies	Social Strategies	Overall
Very Important	2.98	3.59	3.52	3.56	2.58	3.30	3.26
Important	2.59	3.26	3.22	3.17	2.21	2.81	2.88
Not Important	2.80	3.49	3.08	3.24	2.22	2.91	2.96

Figure 42. Means of direct and indirect strategies regarding importance given to proficiency

Given the overall means of all strategies for each level of importance given, the students considering proficiency level as very important seem to employ the strategies more and the ones considering the importance level as important less (Figure 42).

As Table 84 suggests, the ANOVA test was conducted to see if there is a statistically significant mean difference in terms of importance given to proficiency level for the subcategories of direct and indirect strategies.

Table 84
ANOVA for direct and indirect strategies: Importance given to proficiency

	df_1	df_2	F
Memory Strategies	2	117	1.67
Cognitive Strategies	2	117	1.99
Compensatory Strategies	2	117	2.15
Metacognitive Strategies	2	117	1.93
Affective Strategies	2	117	0.66
Social Strategies	2	117	2.46

The results of the test yield no such a difference among the strategies (Table 83).

Direct strategies: Importance given to proficiency

Table 85 indicates the use of direct strategies as memory, cognitive and compensatory strategies in terms of importance given to proficiency level. According to the table, the use of direct strategies is mainly at medium level.

Table 85
Direct strategies: Importance given to proficiency

		Very Important (n=87)	Important (n=25)	Not Important (n=6)
Memory Strategies				
	M	2.98	2.59	2.80
	SD	0.95	0.86	1.25
Cognitive Strategies				
	M	3.59	3.27	3.49
	SD	0.72	0.74	0.59
Compensatory Strategies				
	M	3.52	3.22	3.08
	SD	0.79	0.73	0.60

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Cognitive strategies which is at high level for the students regarding proficiency level as very important and not important, and compensatory strategies which is at high level for the ones regarding proficiency as very important (Table 85).

As Figure 43 suggests, the means of the use of cognitive strategies are the highest whereas memory strategies have the lowest means in terms of each level of importance given to proficiency.

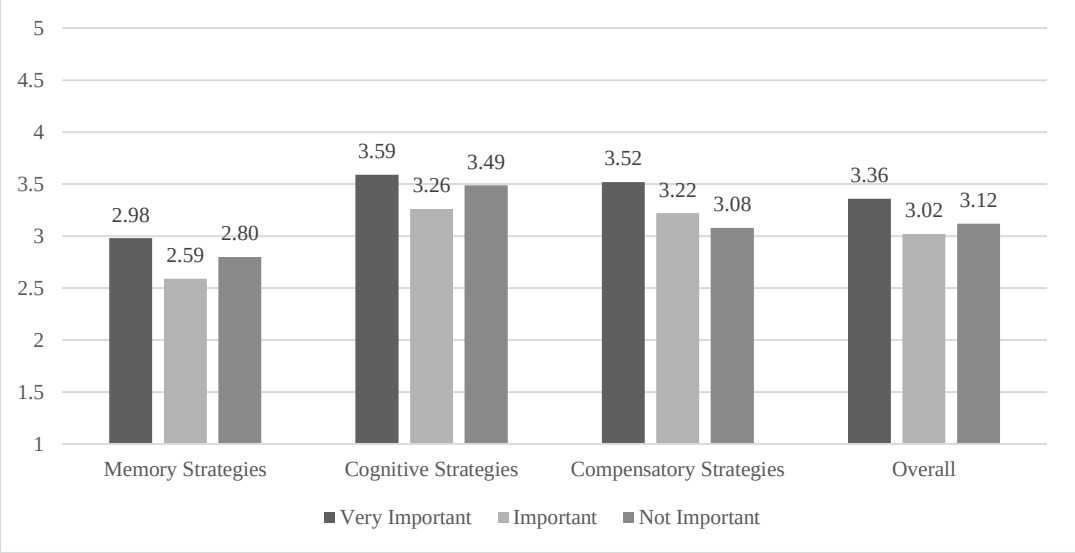


Figure 43. Means of direct strategies regarding importance given to proficiency

Overall, the use of direct strategies seems to be higher among students considering proficiency as very important and lower among the ones considering proficiency as not important (Figure 43).

As Table 86 suggest, the ANOVA test was conducted to see if there is a statistically significant mean difference in terms of importance given to proficiency level for the direct strategies.

Table 86
ANOVA for direct strategies: Importance given to proficiency

	df_1	df_2	F
Memory Strategies	2	117	1.67
Cognitive Strategies	2	117	1.99
Compensatory Strategies	2	117	2.15

The results of the test yield no such a difference between the subcategories (Table 86).

Memory strategies: Importance given to proficiency

Below Table 87 indicates memory strategies according to importance given to proficiency level. As the table suggests, the use of memory strategies is mainly at medium and low level. Only the strategies of establishing relationship between new and old information and using new English words in a sentence to remember them are at high level for students considering proficiency as very important.

Table 87
Memory strategies: Importance given to proficiency

	Very Important (n=87)	Important (n=25)	Not Important (n=6)
Creating mental linkages: Relationship between old and new (M1)			
M	3.79	3.40	2.67
SD	1.24	1.35	1.63
Creating mental linkages: New words in a sentence (M2)			
M	3.51	2.96	3.00
SD	1.23	1.43	1.79
Applying images and sounds: Sound and image connection (M3)			
M	3.11	2.80	1.67
SD	1.36	1.29	0.82
Applying images and sounds: Mental picture (M4)			
M	3.39	3.00	1.67
SD	1.40	1.32	1.03
Applying images and sounds: Rhymes (M5)			
M	2.23	2.04	1.33
SD	1.43	1.27	0.82
Applying images and sounds: Flashcards (M6)			
M	2.64	2.24	1.50
SD	1.61	1.51	0.84

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

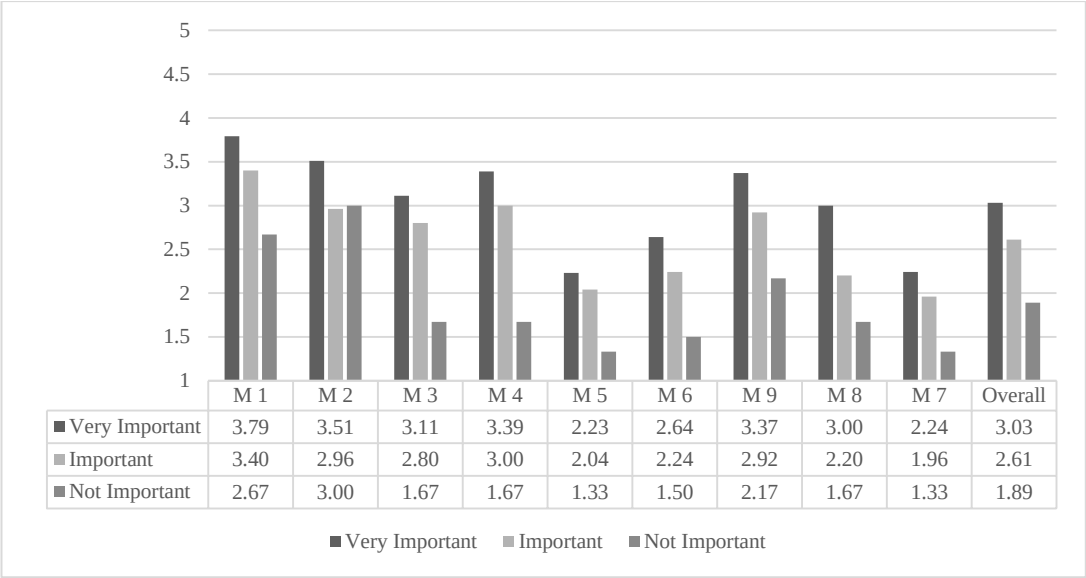
Table 87 (cont'd)
Memory strategies: Importance given to proficiency

	Very Important (n=87)	Important (n=25)	Not Important (n=6)
Applying images and sounds: Page, board and street signs (M9)			
M	3.37	2.92	2.17
SD	1.51	1.50	1.17
Reviewing well: Review often (M8)			
M	3.00	2.20	1.67
SD	1.38	1.04	0.82
Employing action: Physically acting out (M7)			
M	2.24	1.96	1.33
SD	1.44	1.31	0.82

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Except for the strategy of using new English words in a sentence to remember, the use of all memory strategies seems to decrease from the level of very important and not important (Table 87).

The importance level of very important has the highest mean for establishing relationships between old and new information and the lowest mean for using rhymes to remember English words. The level of important has the highest mean for establishing relationships and the lowest for physically acting out English words. As for the level of not important, it has the highest mean for using new English words in a sentence and the lowest for physically acting out (Figure 44).



	M 1	M 2	M 3	M 4	M 5	M 6	M 9	M 8	M 7	Overall
Very Important	3.79	3.51	3.11	3.39	2.23	2.64	3.37	3.00	2.24	3.03
Important	3.40	2.96	2.80	3.00	2.04	2.24	2.92	2.20	1.96	2.61
Not Important	2.67	3.00	1.67	1.67	1.33	1.50	2.17	1.67	1.33	1.89

Figure 44. Means of memory strategies regarding importance given to proficiency

Given the overall means of memory strategies for each importance level, the students considering proficiency level as very important tend to employ memory strategies more and the ones considering the level as not important less (Figure 44).

As it is indicated in Table 88, the ANOVA test was conducted to see if there is a statistically significant mean difference among the levels of importance given to proficiency with regards to memory strategies. The results indicate that there is a statistically significant mean difference regarding the strategies of connecting sound and images and reviewing often.

Table 88
ANOVA for memory strategies: Importance given to proficiency

	df_1	df_2	F
Creating mental linkages: Relationship between old and new (M1)	2	117	2.77
Creating mental linkages: New words in a sentence (M2)	2	117	1.96
Applying images and sounds: Sound and image connection (M3)	2	117	3.62*
Applying images and sounds: Mental picture (M4)	2	117	4.85
Applying images and sounds: Rhymes (M5)	2	117	1.28
Applying images and sounds: Flashcards (M6)	2	117	1.93

* $p < 0.05$

Table 88 (cont'd)
ANOVA for memory strategies: Importance given to proficiency level

	df_1	df_2	F
Applying images and sounds: Page, board and street signs (M9)	2	117	2.42
Reviewing well: Review often (M8)	2	117	5.96*
Employing action: Physically acting out (M7)	2	117	1.45*

* $p < 0.05$

A post hoc Tukey HSD test indicated that this difference is between the students for whom proficiency is very important and not important for the strategy of making sound and image connections. As for the strategy of reviewing often, the difference is between the students for whom proficiency level is very important and not important, and for whom it is very important and important (Table 88).

Cognitive strategies: Importance given to proficiency

Table 89 below demonstrates the cognitive strategy use with regards to importance given to proficiency level. According to the table, the general use of cognitive strategies is mainly at high and low level.

Table 89
Cognitive strategies: Importance given to proficiency

		Very Important (n=87)	Important (n=25)	Not Important (n=6)
Practicing: Saying or writing new words (C1)				
	M	3.03	3.00	3.17
	SD	1.41	1.26	1.47
Practicing: Speaking like a native (C2)				
	M	4.36	3.84	2.83
	SD	0.94	1.18	1.60
Practicing: Practicing the sounds (C3)				
	M	3.44	2.76	2.00
	SD	1.44	1.48	1.27
Practicing: Using words in different ways (C4)				
	M	3.76	3.56	2.67
	SD	1.26	1.29	1.63

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Table 89 (cont'd)
Cognitive strategies: Importance given to proficiency

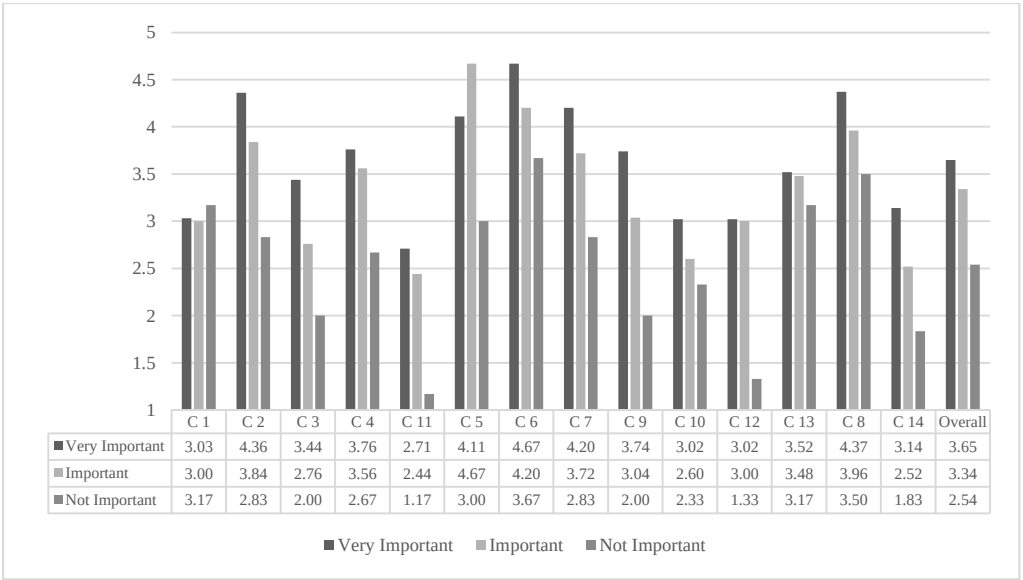
	Very Important (n=87)	Important (n=25)	Not Important (n=6)
Practicing: Finding patterns (C11)			
M	2.71	2.44	1.17
SD	1.42	1.29	0.41
Receiving and sending messages: Starting conversation (C5)			
M	4.11	3.60	3.00
SD	1.09	1.32	1.55
Receiving and sending messages: English TV shows or movies (C6)			
M	4.67	4.44	3.67
SD	0.77	1.04	1.63
Receiving and sending messages: Reading books (C7)			
M	4.20	3.72	2.83
SD	1.06	1.31	1.60
Analyzing and reasoning: Skimming the reading carefully (C9)			
M	3.74	3.04	2.00
SD	1.31	1.21	1.27
Analyzing and reasoning: Looking for similar words (C10)			
M	3.02	2.60	2.33
SD	1.51	1.32	1.75
Analyzing and reasoning: Dividing words into parts (C12)			
M	3.02	3.00	1.33
SD	1.40	1.35	0.82
Analyzing and reasoning: No word-for-word translation (C13)			
M	3.52	3.48	3.17
SD	1.28	1.50	1.84
Creating structure for input and output: Writing in English (C8)			
M	4.37	3.96	3.50
SD	0.86	1.17	1.52
Creating structure for input and output: Making summaries (C14)			
M	3.14	2.52	1.83
SD	1.37	1.33	1.60

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Also, there are strategies used at low level only by the students considering that proficiency level is not important. These strategies are practicing the sounds in

English, trying to find patterns in English, skimming a reading passage carefully, dividing the meaning of an English word into parts and making summaries of information that is heard or read (Table 89).

As Figure 45 suggests, except for the strategy of saying or writing new English words several times, the means of all the cognitive strategy use are the lowest for the students considering proficiency as not important. Also, the means of all strategies, except for the strategy of starting conversation in English, are the highest for the ones considering proficiency as very important. The least preferred strategy seems to be trying to find patterns in English and the most preferred one seems to be watching English TV shows or movies among all importance levels.



	C 1	C 2	C 3	C 4	C 11	C 5	C 6	C 7	C 9	C 10	C 12	C 13	C 8	C 14	Overall
Very Important	3.03	4.36	3.44	3.76	2.71	4.11	4.67	4.20	3.74	3.02	3.02	3.52	4.37	3.14	3.65
Important	3.00	3.84	2.76	3.56	2.44	4.67	4.20	3.72	3.04	2.60	3.00	3.48	3.96	2.52	3.34
Not Important	3.17	2.83	2.00	2.67	1.17	3.00	3.67	2.83	2.00	2.33	1.33	3.17	3.50	1.83	2.54

Figure 45. Means of cognitive strategies regarding importance given to proficiency

Given the overall means of cognitive strategies for each importance level, the students considering proficiency as not important tend to employ cognitive strategies more compared to the other students (Figure 45).

According to the ANOVA test done for cognitive strategies with regards to importance given to proficiency level, there is a statistically significant mean difference among levels of importance given to proficiency in terms of strategies of trying to speak like a native, practicing the sounds, finding patterns, watching English TV shows or movies, reading English books, skimming and then reading carefully, dividing words into parts, writing in English and making summaries as seen in Table 90.

Table 90
ANOVA for cognitive strategies: Importance given to proficiency

	df_1	df_2	F
Practicing: Saying or writing new words (C1)	2	117	0.04
Practicing: Speaking like a native (C2)	2	117	7.75*
Practicing: Practicing the sounds (C3)	2	117	4.42*
Practicing: Using words in different ways (C4)	2	117	2.13
Practicing: Finding patterns (C11)	2	117	3.75*
Receiving and sending messages: Starting conversation (C5)	2	117	3.98
Receiving and sending messages: English TV shows or movies (C6)	2	117	3.88*
Receiving and sending messages: Reading books (C7)	2	117	5.14*
Analyzing and reasoning: Skimming then reading carefully (C9)	2	117	7.15*
Analyzing and reasoning: Looking for similar words (C10)	2	117	1.25
Analyzing and reasoning: Dividing words into parts (C12)	2	117	4.32*
Analyzing and reasoning: No word-for-word translation (C13)	2	117	0.19
Creating structure for input and output: Writing in English (C8)	2	117	3.53*
Creating structure for input and output: Making summaries (C14)	2	117	1.17*

* $p < 0.05$

A post hoc Tukey HSD test indicates that the difference is between the students for whom proficiency is very important and not important for speaking like a native, reading English books, dividing words into parts. Also, the same test shows that the difference is among all levels of importance given to proficiency for skimming and then reading carefully, yet yields no difference for practicing the sounds, writing in English and making summaries. A post hoc Dunnett's C test indicates that the difference is between the ones for whom proficiency level is not important and

important and for whom it is not important and very important for finding patterns yet yields no difference for watching English TV shows or movies (Table 90).

Compensatory strategies: Importance given to proficiency

Table 91 demonstrates the compensatory strategies with regards to importance given to proficiency. According to the table, the use of compensatory strategies is mainly at high and medium level in terms of proficiency level.

Table 91
Compensatory strategies: Importance given to proficiency

	Very Important (n=87)	Important (n=25)	Not Important (n=6)
Guessing intelligently: Guessing unfamiliar words (C1)			
M	3.93	3.56	4.00
SD	1.09	1.36	1.55
Guessing intelligently: Not looking up every word (C4)			
M	3.32	3.16	4.33
SD	1.21	1.38	1.98
Guessing intelligently: Guessing what is to be said next (C5)			
M	4.07	3.80	3.67
SD	1.09	1.16	0.82
Overcoming limitations in speaking and writing: Using gestures (C2)			
M	3.02	3.40	2.50
SD	1.46	1.29	1.21
Overcoming limitations in speaking and writing: Making up new words (C3)			
M	2.34	2.28	2.83
SD	1.43	1.31	2.04
Overcoming limitations in speaking and writing: Using similar words or phrases (C6)			
M	4.09	3.68	3.83
SD	0.91	1.31	1.60

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Only the strategy of making up new words when not understanding the right ones in English for the students considering proficiency is very important and important is at low level (Table 91).

As Figure 46 suggests, except for the strategies of using gestures when not thinking of an English word and using similar words or phrases when not thinking of an English word, the means of the strategies are the highest for the students considering proficiency level is not important. Also, except for the strategies of trying to guess what the other person will say next in English and using similar words or phrases when not thinking of an English word, the means of all the strategies are the lowest among the students considering proficiency as important.

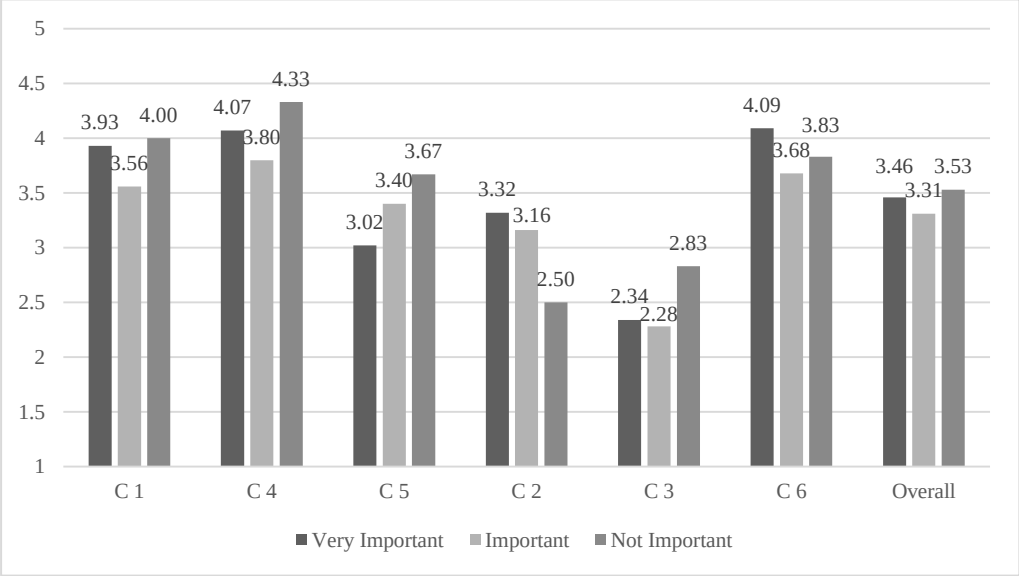


Figure 46. Means of compensatory strategies regarding importance given to proficiency

Given the overall means of compensatory strategies for each importance level, the students considering proficiency level as not important seem to employ compensatory strategies more compared to the other students (Figure 46).

As Table 92 suggests, the ANOVA test was conducted to yield if there is a significant mean difference among levels of importance given to proficiency level in terms of compensatory strategies.

Table 92
ANOVA for compensatory strategies: Importance given to proficiency

	df1	df2	F
Guessing intelligently: Guessing unfamiliar words (C1)	2	117	1.02
Guessing intelligently: Not looking up every word (C4)	2	117	1.22
Guessing intelligently: Guessing what is to be said next (C5)	2	117	0.37
Overcoming limitations in speaking and writing: Using gestures (C2)	2	117	0.84
Overcoming limitations in speaking and writing: Making up new words (C3)	2	117	1.13
Overcoming limitations in speaking and writing: Using similar words (C6)	2	117	1.58

The results of the test indicate no statistically significant mean difference among compensatory strategies (Table 92).

Indirect strategies: Importance given to proficiency

Table 93 demonstrates the overall indirect strategies as metacognitive, affective and social strategies and according to the table, the use of the overall indirect strategies is mainly at medium level. Only metacognitive strategies for the students considering proficiency as very important are at high level.

Table 93
Indirect strategies: Importance given to proficiency

		Very Important (n=87)	Important (n=25)	Not Important (n=6)
Metacognitive Strategies				
	M	3.56	3.17	3.24
	SD	0.94	0.92	0.61
Affective Strategies				
	M	2.48	2.21	2.22
	SD	1.12	1.11	1.17
Social Strategies				
	M	3.30	2.81	2.92
	SD	1.03	0.89	1.19

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Also, as Table 93 suggests, affective strategy use is at low level for the students considering proficiency as important and very important.

As Figure 47 suggests, the most preferred indirect strategy seems to be metacognitive strategies and the least preferred one is affective strategies by all levels of proficiency.

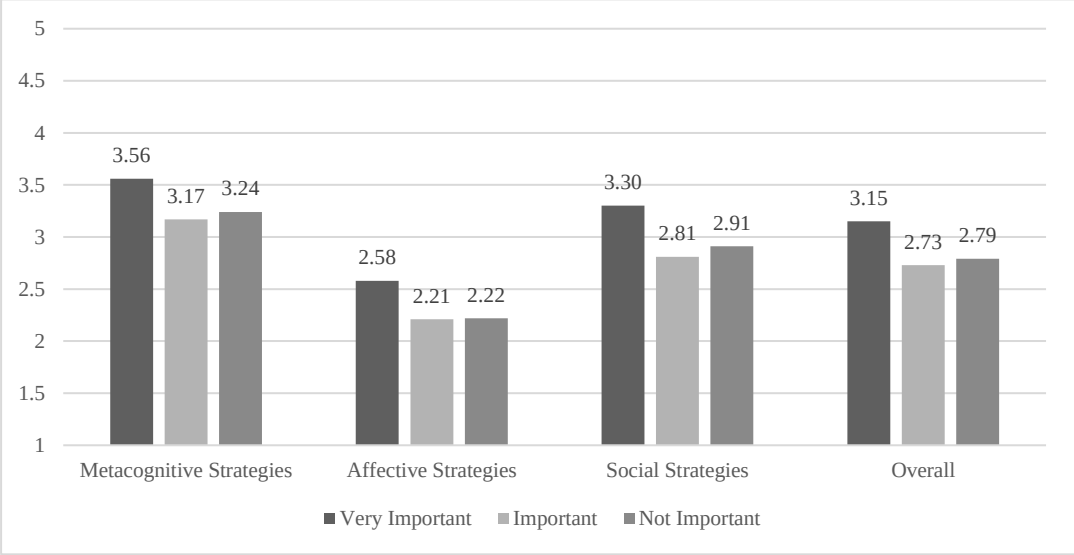


Figure 47. Means of indirect strategies regarding importance given to proficiency

Overall, the students considering proficiency level as very important seem to have the highest and the ones considering proficiency as not important seem to have the lowest means of indirect strategies (Figure 47).

As Table 94 suggests, the ANOVA test was conducted to see if there is a statistically significant mean difference in terms of importance given to proficiency level for indirect strategies.

Table 94
ANOVA for indirect strategies: Importance given to proficiency

	df_1	df_2	F
Metacognitive Strategies	2	117	1.93
Affective Strategies	2	117	0.66
Social Strategies	2	117	2.46

The results of the test yield no statistically significant mean difference among the indirect strategies (Table 94).

Metacognitive strategies: Importance given to proficiency

Table 95 below indicates metacognitive strategies with regards to importance given to proficiency level. According to the table, the use of metacognitive strategies is at high level for the students considering proficiency as very important. Only the strategy of planning a schedule to have enough time to study is at medium level for such students.

Table 95
Metacognitive strategies: Importance given to proficiency

	Very Important (n=87)	Important (n=25)	Not Important (n=6)
Centering learning: Paying attention (M3)			
M	4.11	3.32	3.00
SD	0.98	1.31	1.90
Arranging and planning learning: Finding ways to use English (M1)			
M	3.97	3.52	2.83
SD	1.10	1.26	1.84
Arranging and planning learning: Finding out to be a better learner (M4)			
M	3.61	3.04	2.67
SD	1.26	1.31	1.63
Arranging and planning learning: Planning schedule to study (M5)			
M	2.92	2.44	2.17
SD	1.26	1.29	1.60

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Table 95 (cont'd)
Metacognitive strategies: Importance given to proficiency level

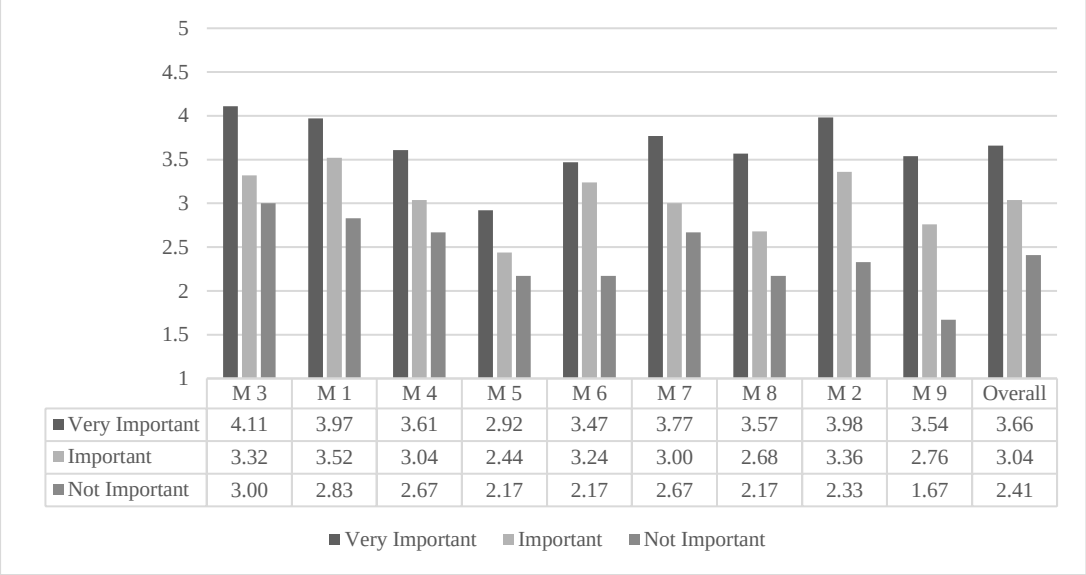
		Very Important (n=87)	Important (n=25)	Not Important (n=6)
Arranging and planning learning: Looking for people to speak English (M6)				
	M	3.47	3.24	2.17
	SD	1.43	1.45	1.60
Arranging and planning learning: Looking for opportunities to read (M7)				
	M	3.77	3.00	2.67
	SD	1.21	1.23	1.86
Arranging and planning learning: Clear goals for improvement (M8)				
	M	3.57	2.68	2.17
	SD	1.27	1.15	1.60
Evaluating learning: Noticing mistakes (M2)				
	M	3.98	3.36	2.33
	SD	0.98	1.11	1.51
Evaluating learning: Thinking about progress (M9)				
	M	3.54	2.76	1.67
	SD	1.42	0.93	0.82

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Also, for the ones considering proficiency as important, the use of metacognitive strategies is at medium level. Only the strategy of trying to find ways to use English is at high level for these students. As for the ones considering proficiency as not important, the use of the strategies is mainly at low level (Table 95).

As Figure 48 suggests, for the students regarding proficiency as very important, the highest mean is for paying attention when someone is speaking English and the lowest mean is planning a schedule to have enough time to study English. For the ones regarding proficiency as important, the highest mean is finding ways to use English and the lowest is planning a schedule to have enough time to study English.

As for not important level, the highest mean is paying attention when someone is speaking English and the lowest is thinking about progress in learning English.



	M 3	M 1	M 4	M 5	M 6	M 7	M 8	M 2	M 9	Overall
Very Important	4.11	3.97	3.61	2.92	3.47	3.77	3.57	3.98	3.54	3.66
Important	3.32	3.52	3.04	2.44	3.24	3.00	2.68	3.36	2.76	3.04
Not Important	3.00	2.83	2.67	2.17	2.17	2.67	2.17	2.33	1.67	2.41

Figure 48. Means of metacognitive strategies regarding importance given to proficiency

As for the overall means of metacognitive strategies for each importance level, the students considering proficiency level as very important seem to employ more and the ones seeing proficiency level as not important less (Figure 48).

As it is indicated in Table 96, according to the ANOVA test conducted the see if there is a statistically significant mean difference among the levels of importance given to proficiency in English in terms of metacognitive strategies, there is such a difference with regards to strategies such as paying attention, finding ways to use English, looking for opportunities to read, setting clear goals to improve, noticing mistakes and thinking about self-progress.

Table 96
ANOVA for metacognitive strategies: Importance given to proficiency

	df_1	df_2	F
Centering learning: Paying attention(M3)	2	117	6.98*
Arranging and planning learning: Finding ways to use English (M1)	2	117	3.57*
Arranging and planning learning: Finding out to be a better learner (M4)	2	117	3.03
Arranging and planning learning: Planning schedule to study (M5)	2	117	1.70
Arranging and planning learning: Looking for people to speak English (M6)	2	117	2.40
Arranging and planning learning: Looking for opportunities to read (M7)	2	117	5.30*
Arranging and planning learning: Clear goals to improve (M8)	2	117	7.48*
Evaluating learning: Noticing mistakes (M2)	2	117	9.49*
Evaluating learning: Thinking about progress (M9)	2	117	8.23*

* $p < 0.05$

A post hoc Dunnett C test reveals that the difference is between the students thinking that proficiency level is very important and important in terms of the strategy of paying attention and between the ones saying not important and very important, and very important and important in terms of the strategy of thinking about the progress. However, the test fails to yield such a difference for the strategy of finding ways to practice English. According to a post hoc Tukey HSD test, the strategy of noticing mistakes differs between the students saying the level of proficiency is very important and not important and the ones saying it is very important and important. In terms of looking for opportunities, the difference is between the students considering the level is very important and important. In terms of the strategy of setting clear goals differs between the students considering the level very important and not important and the ones saying very important and important (Table 96).

Affective strategies: Importance given to proficiency

Table 97 demonstrates affective strategies with regards to importance given to proficiency. According to the table, the use of affective strategies is mainly at low and medium level. Only the strategy of encouraging oneself to speak is at high level for the students considering proficiency as very important and important.

Table 97
Affective strategies: Importance given to proficiency

	Very Important (n=87)	Important (n=25)	Not Important (n=6)
Lowering anxiety: Trying to relax (A1)			
M	2.69	2.36	1.33
SD	1.61	1.55	0.83
Encouraging: Encouraging oneself to speak (A2)			
M	3.60	3.68	1.83
SD	1.46	1.14	1.33
Encouraging: Giving a reward or treat(A3)			
M	2.25	2.20	1.33
SD	1.50	1.26	0.82
Taking emotional temperature: Noticing being tense or nervous (A4)			
M	2.21	2.60	1.83
SD	1.48	1.44	1.33
Taking emotional temperature: Keeping diary to write down feelings (A5)			
M	1.78	2.24	1.00
SD	1.41	1.67	0.00
Taking emotional temperature: Talking to someone about feelings (A6)			
M	2.07	1.48	1.00
SD	1.45	1.56	0.00

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

The use of affective strategies is at low level for the students considering proficiency as not important. Also, the use of affective strategies decreases starting from the students considering proficiency as very important to the ones considering it as not important (Table 97).

As Figure 49 suggests, the most preferred affective strategy seems to be the strategy of encouraging oneself to speak English. The least preferred strategy seems to be the strategy of noticing being tense while using English for the level of very important, giving oneself a reward when doing well in English for the level of important. For

the level of not important, the least preferred strategies are writing down feelings and talking to someone else about feelings.

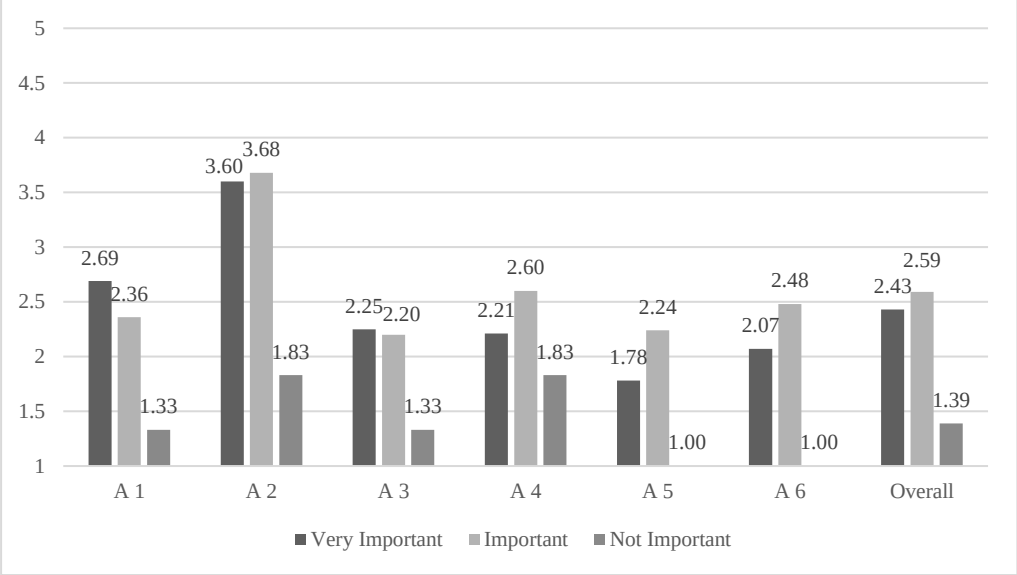


Figure 49. Means of affective strategies regarding importance given to proficiency

The overall means of the use of the strategies tend to be higher for the levels of important. The level of not important has the lowest means for all affective strategies (Figure 49).

As Table 98 suggests, according to the results of the ANOVA test conducted, there is statistically significant mean difference among the importance levels given to proficiency in terms of the strategy of encouraging oneself to speak.

Table 98
ANOVA for affective strategies: Importance given to proficiency

	df1	df2	F
Lowering anxiety: Trying to relax (A1)	2	117	2.33
Encouraging: Encouraging oneself to speak (A2)	2	117	4.50*
Encouraging: Giving a reward or treat(A3)	2	117	1.17
Taking emotional temperature: Noticing being tense or nervous (A4)	2	117	0.98
Taking emotional temperature: Keeping diary to write down feelings (A5)	2	117	2.07

* $p < 0.05$

Table 98 (cont'd)
ANOVA for affective strategies: Importance given to proficiency level

	df1	df2	F
Taking emotional temperature: Talking to someone about feelings (A6)	2	117	2.65

* $p < 0.05$

A post hoc Tukey HSD test demonstrates that the difference is between the students saying the level of proficiency is not important and very important and the ones saying not very important and important (Table 98).

Social strategies: Importance given to proficiency

Table 99 demonstrates social strategies with regards to importance given to proficiency level. According to the table, the use of social strategies is mainly at medium level. The strategy of practicing English with other students is at high level for the students considering proficiency as very important.

Table 99
Social strategies: Importance given to proficiency

	Very Important (n=87)	Important (n=25)	Not Important (n=6)
Asking questions: Asking to slow down or repeat (S1)			
M	2.93	2.56	2.33
SD	1.43	1.36	1.03
Asking questions: Asking for correction (S2)			
M	2.83	2.28	2.83
SD	1.49	1.40	1.72
Asking questions: Asking for help from natives (S4)			
M	2.98	2.60	2.50
SD	1.46	1.58	1.64
Asking questions: Asking questions in English (S5)			
M	4.33	3.68	3.17
SD	0.97	1.18	1.60
Cooperating with others: Practicing with others (S3)			
M	3.52	2.80	3.00
SD	1.44	1.44	1.67

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

Table 99 (cont'd)
Social strategies: Importance given to proficiency

	Very Important (n=87)	Important (n=25)	Not Important (n=6)
Empathizing with others: Learning about the culture (S6)			
M	3.40	2.52	2.83
SD	1.44	1.39	1.84

(High-always or almost always used:4.50 to 5.00, High -usually used:3.50 to 4.49, Medium-sometimes used:2.50 to 3.49, Low -generally not used:1.50 to 2.49, Low -never or almost never used:1.00 to 1.49)

The strategy of asking questions in English is at high level for the students considering proficiency as very important whereas the same strategy is at medium level for the ones considering proficiency as important (Table 99).

As Figure 50 suggests, the highest means of the use of affective strategies among all importance levels is for the strategy of asking questions in English. The lowest mean for the importance level of very important and important is asking English speakers for correction. As for the importance level of not important, the lowest mean is the strategy of asking the other person to slow down when they cannot understand.

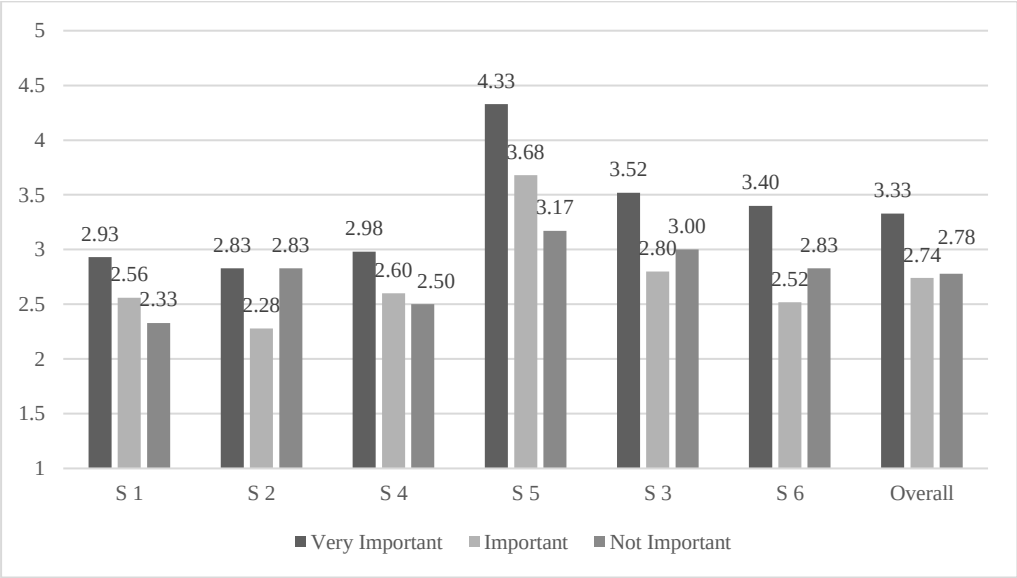


Figure 50. Means of social strategies regarding importance given to proficiency

Given the overall means of social strategies for each importance level, the students regarding proficiency as very important seem to employ social strategies more and the ones regarding the level as important less (Figure 50).

As Table 100 suggests, according to the ANOVA test conducted, there is a statistically significant mean difference among the level of importance given to proficiency level in terms of the social strategies of asking questions in English and learning about the culture.

Table 100
ANOVA for social strategies: Importance given to proficiency level

	df1	df2	F
Asking questions: Asking to slow down or repeat (S1)	2	117	1.07
Asking questions: Asking for correction (S2)	2	117	1.35
Asking questions: Asking for help from natives (S4)	2	117	0.81
Asking questions: Asking questions in English (S5)	2	117	6.41*
Cooperating with others: Practicing with others (S3)	2	117	2.55
Empathizing with others: Learning about the culture (S6)	2	117	3.78*

A post hoc Tukey HSD test demonstrates that the difference in terms of asking questions in English is between the students considering proficiency is very important and not important. In terms of the strategy of learning about the culture, the difference is between the students saying proficiency level is very important and important (Table 100).

CHAPTER 5: DISCUSSION

Introduction

This chapter initially features an overview of the study and then focuses on the major findings regarding LLS use with respect to the following: age, gender, grade level, proficiency level and importance given to proficiency within the existing literature. The findings are followed by implications for practice, implications for further research and limitations.

Overview of the study

In this study, Oxford's (1990) language learning strategies were utilized in order to analyze the language learning strategies used by the students at a high school offering bilingual degrees. To this end, the researcher first described direct and indirect language learning strategies used by the students, and then measured if there were any differences in language learning strategies caused by age, gender, grade level, proficiency level and importance given to proficiency level. Therefore, the study tried to answer the following questions:

1. What direct and indirect language learning strategies are used by the students of a high school offering bilingual degrees?
2. Are there any differences in the use of language learning strategies based on age, gender, grade level, proficiency level and importance given to proficiency level?

Discussion of the major findings

Given the overall results of both descriptive and inferential analysis under each variable, one can state that memory and metacognitive strategies include statistically

significant differences more, and compensatory and affective strategies less, compared to the other strategies, which is in line with the studies conducted in the area of bilingual education and suggesting bilingual education reinforces memory and metacognitive as well as cognitive skills (Adesope et al., 2010; Christoffels et al., 2013; Hong, 2006; Bialystok, n.d.; Yayla, Kozikoglu & Celik, 2016). The inferential results fail to indicate where the differences are for cognitive and metacognitive strategies measured under the variable of grade level and for some of the strategies measured under importance given to proficiency.

In descriptive terms, regardless of the variables, affective strategies overall seem to be employed remarkably at low levels compared to the other strategies as it is also inferentially observed in some related research studies (Acunsal, 2005; Şen, 2009; Altunay, 2014; Gerami & Baighlou, 2016; Yayla, Kozikoglu & Celik, 2016). The details and possible reasons regarding these are mentioned and discussed below.

Strategy use and age

Bilingual high school students do not seem to favor strategy use when overall direct and indirect strategy use is analyzed. All responses across ages fall into medium-range use, and based on the ANOVA results, there is no significant difference among the age range. However, as also seen in Table 101, when individual direct strategies are analyzed, one can observe an increase in use across age in the categories of cognitive and compensatory strategies; nevertheless, the only significant difference is noted under memory strategies with respect to the following: *reviewing English lessons often* and *physically acting out new English words*.

Table 101
Strategy use and age

	Descriptive Analysis	Inferential Analysis
Direct Strategies		
Memory Strategies	**Mainly at medium to low level**	**14 and 17-year-olds** **14 and 18-year-olds** **15 and 18-year-olds** **16 and 18-year-olds**
Cognitive Strategies	Mainly at high level	-
Compensatory Strategies	Mainly at high level	-
Indirect Strategies		
Metacognitive Strategies	**Mainly at high level**	**14 and 18-year-olds** **15 and 18-year-olds** **16 and 18-year-olds** **17 and 18-year-olds**
Affective Strategies	Mainly at low level	-
Social Strategies	Mainly at medium level	-

When indirect strategies are analyzed and as seen in Table 101, while metacognitive strategy use seems to be relatively high, affective strategy use tends to range from low to medium. When metacognition is analyzed in detail, one can observe that two sub-strategies, in particular, yield significant difference across age for the strategies of *trying to find out to be a better learner in English* and *thinking about one's progress in learning English*.

Age has been regarded as an important factor in bilingualism and in bilingual education context, the importance of age seems to be highlighted and studied by the age of 14 as late immersion (Baker 2007) and by the age of 16 as very late immersion (Shaw, Imam & Hughes, 2015). Similarly, in the studies conducted to define the traits of a successful language learner and LLS use, the age variable, especially along with the cognitive stage of the learners, has been an important component (Rubin 1975; Stern 1974).

As far as the age variable is concerned in this study, only memory and metacognitive strategies yield significant differences, and cognitive strategies, along with metacognitive strategies, seem to have significant differences yet only according to descriptive results. When the age groups are compared, it can be stated that the younger the students are the more they employ memory and metacognitive strategies. Especially the 18-year-olds are less likely and 14-year-olds are more likely to employ the strategies compared to the other age groups. Therefore, 14-year-olds seem to be formulating new sentences using their prior knowledge, creating opportunities to practice, and monitoring their own learning process more, which is in line with Rubin's (1975) definition of "a good language learner".

The reason behind such a result could be related to cognitive and bilingual development based on age just as the suggestions of Baker (2007): When the students are younger, they could put more emphasis on memory and metacognitive strategies.

Strategy use and gender

Although both males and females seem to employ overall direct and indirect strategies at medium level, the independent samples t-test results demonstrate no significant difference between genders. Analyzing the direct strategies individually as seen in Table 102, one can say that females significantly employ more of the memory strategies of *using flashcards to remember new English words* and *remembering new English words or phrases through their location on a page, board or a street sign*, and of the cognitive strategies of *starting conversations in English*, *watching English language TV shows spoken in English or going to movies spoken in*

English and *writing notes, messages, letters or reports in English.* Nevertheless, males significantly employ more of the compensatory strategies of *making up new words if cannot know the right one in English* and *trying to guess what the other person will say next in English*.

Table 102
Strategy use and gender

	Descriptive Analysis	Inferential Analysis
Direct Strategies		
Memory Strategies	**Mainly at medium level**	**Females**
Cognitive Strategies	**Mainly at medium and high level**	**Females**
Compensatory Strategies	**Mainly at medium and high level**	**Males**
Indirect Strategies		
Metacognitive Strategies	**Mainly at medium level**	**Females**
Affective Strategies	Mainly at low level	-
Social Strategies	**Mainly at medium level**	**Females**

When indirect strategies are analyzed as seen in Table 102 above, it seems that metacognitive and social strategies are used at high level by the females with statistically significant results and low level by the males whereas affective strategies are used mostly at low level by both genders without any statistical significance. When metacognition is analyzed in detail, one can observe that the significant difference is observed for the strategies of *noticing one's English mistakes and using that information to help do better* and *looking for opportunities to read as much as possible in English*. Under the detailed analysis of social strategies, the significant difference is seen for the strategy of *practicing English with other students*.

The overall results indicate that the females opt to employ more LLSs except for compensatory strategies compared to males. When it is compared to the SILL-related studies conducted on mainly university and senior high school students, it is observed that the case is similar with minor differences. Thus, females use more LLSs especially social, affective and compensatory ones than males who tend to employ cognitive and metacognitive strategies more (Green & Oxford, 1995; Ku 1995; Hong-Nam & Leavell, 2006; Alhaisoni, 2012; Liu, 2013; Li, 2005; Sadeghi & Khonbi, 2015; Yayla, Kozikoglu & Celik, 2016). Very similarly to one of the studies (Yayla, Kozikoglu & Celik, 2016), affective strategies seem to be the least preferred strategy by both genders.

In terms of gender, except for the affective strategies, it was found that the descriptive differences are found to be statistically important for some strategies under each strategy group. Therefore, based on Rubin's definition of "a good language learner" (1975), females are willing to communicate, tend to formulate new sentences with their prior knowledge, create opportunities to practice, monitor their own learning process and infer the meaning of any kind of text whereas males are good guessers. Based on the results, it could be said that none of the genders seem to be inhibited as the descriptive analysis results regarding affective strategies suggested in bilingual context. Therefore, gender variable, with mostly low usage levels and no statistical results for affective strategies, could have a neutral factor on LLS preferences and use.

Strategy use and grade level

The students from all grade levels seem to employ overall direct and indirect strategies at medium level. As Table 103 suggests, the ANOVA results suggest that the 11th graders significantly use more indirect strategies compared to the 12th graders. When analyzed individually, the memory strategies of *reviewing English lessons often* and *remembering new English words or phrases by remembering their location on the page, board or street sign* are used significantly more by the 9th and 10th graders than the 12th graders. Despite the ANOVA results for the cognitive strategy of *trying not to translate word-for-word*, the post hoc test fail to indicate where the difference is. Analyzing the indirect strategies in detail, one can observe that, there seems to be a significant difference among grade levels for the metacognitive strategy of *finding out to be a better learner* yet a pot hoc test failed to determine where the difference is. For affective strategies, the strategy of *giving oneself a reward or treat when doing well in English* is significantly used more by the 9th than the 12th graders; the strategy of *noticing being tense or nervous while studying or using English* and the strategy of *writing down one's feelings in a language learning diary* are used significantly more by the 11th than the 12th graders. The social strategy of *asking for help from English speakers* are significantly used more by the 11th graders when compared to the 10th and 12th graders.

Table 103
Strategy use and grade level

	Descriptive Analysis	Inferential Analysis
Direct Strategies		
Memory Strategies	**Mainly at low level**	9th and 12th graders 10th and 12th graders
Cognitive Strategies	Mainly at high level	No post-hoc
Compensatory Strategies	Mainly at high level	-

Table 103 (cont'd)
Strategy use and grade level

	Descriptive Analysis	Inferential Analysis
Indirect Strategies		
Metacognitive Strategies	Mainly at high level	No post hoc
Affective Strategies	**Mainly at medium and low level**	**9th and 12th graders** **11th and 12th graders**
Social Strategies	**Mainly at medium level**	**11th and 10th graders** **11th and 12th graders**

Also, as Table 103 suggests, 9th graders seem to employ memory, cognitive, compensatory and metacognitive strategies, and 11th graders seem to employ affective and social strategies significantly more than 12th graders in overall descriptive terms. That is, it seems that as the grade level increases, the students are less likely to employ LLSs in general. However, as for cognitive and metacognitive strategies, the post hoc test failed to yield any difference despite the ANOVA results. Therefore, the case is valid for memory, affective and social strategies, so one can state that 9th graders opt to formulate new sentences with prior knowledge more, are more likely to be uninhibited than the 12th graders as Rubin (1975) would suggest. Also, very similarly, the 11th graders are more likely to be uninhibited and willing to communicate than the 12th graders. Nevertheless, for affective and social strategies, one would expect similar significant differences for the strategies of *trying to relax whenever feeling afraid of English*, *talking to someone else about the feelings while learning English*, and *asking English speakers for correction while talking* respectively. In the literature, the studies regarding grade level and LLS use in bilingual context seem rather rare and limited. That is why, the results under grade level variable could be associated with the results under age variable. As it has already been suggested, the 14 and 18-year-olds use memory and metacognitive strategies significantly different from each other. The 14-

year-olds employ the strategies more just as do the 9th graders compared to the 18-year-olds or the 12th graders.

Strategy use and proficiency level

Both the students considering their proficiency level as "good" and "excellent" seem to employ overall direct and indirect strategies at medium level. However, there is no statistically significant mean difference in terms of proficiency level as the independent samples t-test results suggested. As Table 104 suggests, when analyzed separately under direct strategies, one can observe that the compensatory strategy of *making up new words when not knowing the right ones in English* is employed significantly more by the students considering their proficiency as "good". When analyzed separately under indirect strategies, no significant difference was observed under metacognitive, affective and social strategies in terms of proficiency level.

Table 104
Strategy use and proficiency level

	Descriptive Analysis	Inferential Analysis
Direct Strategies		
Memory Strategies	Mainly at medium level	-
Cognitive Strategies	Mainly at high and medium level	-
Compensatory Strategies	**Mainly at high level**	**"good"**
Indirect Strategies		
Metacognitive Strategies	Mainly at medium level	-
Affective Strategies	Mainly at low level	-
Social Strategies	Mainly at medium level	-

While learners having higher proficiency levels tend to use more LLSs compared to the ones having lower proficiency levels (Green & Oxford, 1995; Bremner 1999;

Griffiths, 2003; Alhaisoni 2012) and tend to use cognitive, metacognitive, affective and social strategies (Brauer, 1997; Norton & Toohey, 2001), the overall descriptive results of the study suggest that memory, compensatory, affective and social strategies seem to be utilized more by the students having lower proficiency level, which is similar to the findings of Gan, Humphreys and Hamp-Lyons' research concluding that less proficient students seem to employ memory strategies more (2004). Nevertheless, the results indicate that the only statistically significant difference falls under compensatory strategies. Therefore, it could be stated that the students having lower proficiency are more likely to be better guessers through *making up new words when not knowing right ones in English* compared to the ones having higher proficiency (Rubin, 1975). This could be due to the fact that less successful learners may feel compelled to compensate their shortcomings stemming from proficiency. Also, in descriptive terms, less successful learners seem to have greater use of some of the memory strategies, especially the strategies of *finding ways to use English*, *planning a schedule to study English* and *looking for opportunities to read*, although the differences are statistically insignificant.

Strategy use and importance given to proficiency

As also the ANOVA results suggest, direct and indirect strategies seeming to be used more by the students considering proficiency as "very important" and less by the ones considering it as "not important" include a significant difference. Analyzing the direct strategies separately in detail, as also seen in Table 105, one can say that the memory strategies of *connecting the sounds of a new word and an image of picture of the word to help remember the word, reviewing English lessons often and physically acting out new English words* are used significantly more by the students

considering proficiency as “very important”. The cognitive strategies of *trying to talk like native English speakers*, *reading for pleasure in English* and *finding the meaning of an English word by dividing into parts that one does not understand* are employed significantly more by the students considering proficiency as “very important” than the ones saying “not important”. The same strategies of *first skimming an English passage then going back and reading carefully*, and *trying to find patterns in English* are used significantly more by the students considering proficiency as “very important” than the ones considering it as “important” and “very important”. Nevertheless, despite the ANOVA results, post hoc tests fail to yield where the differences are for the same strategies of *practicing the sounds of English*, *watching English language TV shows or going to movies spoken in English*, *writing notes, messages, letters or reports in English*, and *making summaries of information heard or read in English*.

Table 105
Strategy use and importance given to proficiency

	Descriptive Analysis	Inferential Analysis
Direct Strategies		
Memory Strategies	**Mainly at medium and low level**	**“very important” and “not important”** **“very important” and “important”**
Cognitive Strategies	**Mainly at medium level**	**“very important” and “not important”** **“very important” and “important”** **For some no post hoc**
Compensatory Strategies	Mainly at high level	-
Indirect Strategies		
Metacognitive Strategies	**Mainly at medium level**	**“very important” and “not important”** **“very important” and “important”** **For some no post hoc**

Table 105 (cont'd)
Strategy use and importance given to proficiency

	Descriptive Analysis	Inferential Analysis
Affective Strategies	**Mainly at low level**	**"very important" and "not important"** **"important" and "very important"**
Social Strategies	**Mainly at medium level**	**"very important" and "not important"** **"very important" and "important"**

Analyzed separately in detail, as seen in Table 105, the metacognitive strategies of *paying attention when someone is speaking English* and *looking for opportunities to read as much as possible in English* are used significantly more by the students considering proficiency as "very important" than the ones saying "important". The strategies of *noticing one's English mistakes and using the information to help one do better, having clear goals for improving English skills* and *thinking about the progress in learning English* are employed significantly more by the students saying "very important" than the ones saying "important" and "not important". Lastly, despite the ANOVA results, the post hoc test fails to indicate where the difference is for the same strategy of *trying to find as many ways as one can use English*. The affective strategies include a significance only for the strategy of *trying to relax whenever one feels afraid of using English*; the students saying that proficiency is "not important" employ the strategy significantly less than the ones saying "very important" and "important". The social strategies include the significant difference for the strategies of *asking questions in English* and *trying to learn about the culture of English speak*ers. Given this, the students considering proficiency as "very important" employ the former significantly more than the ones saying "not important", and the latter significantly more than the ones saying "important".

The students considering proficiency level as very important seem to employ memory, cognitive, metacognitive and social strategies more. Compensatory strategies seem to be used more by the ones considering proficiency as not important but the study yielded no statistical significance. Affective strategies seem to be used more by the ones considering proficiency as important. The related studies conducted (Kayaoğlu, 2013; Kaplan, 2016) indicate similar results for metacognitive, memory and compensatory strategies yet they seem to be rare and limited in bilingual context. The results of this study suggest that the more students give high importance to being proficient in English, the more memory, cognitive, metacognitive and social strategies they employ. On the other hand, it seems that in descriptive terms compensatory strategies are used more by the students for whom proficiency is not regarded as important. Affective strategies are used significantly more by the ones considering proficiency as important. In contrast, they are used at very low levels and almost never by the ones for whom being proficient is not important. Given the above-mentioned proficiency variable, it could be claimed that the students having good command of English tend to use more compensatory strategies. However, under the variable of importance given to this proficiency level, students are more likely to use compensatory strategies as they consider proficiency level as "not important".

That affective strategies are used at highly low levels by the students considering being proficient as "not important" and mostly more by the students regarding proficiency as "important", and not by the ones saying "very important" could be due to the fact that the latter group is more likely to be uninhibited as Rubin (1975) and Stern (1974), and Rubin and Thompson (1982) would suggest. The students for

whom proficiency is “very important” may be more confident to employ the strategies more than the ones considering proficiency as “important” and “not important”.

Implications for practice

Language learning strategies are considered as *teachable* and so could be taught to learners either implicitly or explicitly (Rubin, 1975; Cohen, 1977; Oxford, 2003; Chamot, 2005; Cohen, 2007; Zareva & Fomina, 2012). Once learners become relatively more aware of LLSs, they may start monitoring their learning processes and become relatively more autonomous (Rubin, 1975; Oxford, 2003; Chamot, 2005; Nostratinia, Saveiy & Zaker, 2014) as LLS awareness encourage learner autonomy.

In addition, as Oxford (1990) advocates, as well as the learners, teachers could be trained as far as LLSs are concerned in order to be more helpful and considerate for their students on their path of learning a second or foreign language. In this way, teachers could consider learners’ differences in terms of their age, gender, grade level, proficiency level and importance given to this level to detect on which variable the frequency of LLS use depends. As a result, they can also incorporate them into the process of teaching and learning through effective teaching methods and techniques and development of teaching resources (Griffiths, 2003; Acunsal, 2005; Şen, 2009; Gerami & Baighlou, 2011; TEPAV, 2011). Therefore, related teacher education and training programmes may include some explicit emphasis on the concept of LLSs, especially for the strategies used at low and medium level, and on how they could be utilized to develop language learning skills.

Implications for further research

Initially, to increase the possibility of detecting the differences in a post hoc analysis followed by an ANOVA, the sample size could be amplified.

Being used at very low levels under each strategy within each variable, affective strategies seem not to be affected by gender, so further research should be conducted to see if this is the only case for bilingual context and to measure if there are different factors affecting the students' affective strategy preferences.

Prospective researchers could consider that age and grade level may overlap each other and prepare a background questionnaire accordingly.

A multiple case study, including another school offering bilingual programmes, could be conducted to take a broader perspective to the case of LLSs in bilingual context.

A comparative case which includes a private school implementing the national curriculum could be conducted to see if the similar variables differ based on national and IB curriculum contexts.

A multiple case study, including IB MYP and DP school students, could be conducted to study the use of LLSs in bilingual contexts from a broader perspective.

An experimental study can be conducted in order to see the effects of strategy training and instruction on students' LLS awareness and use.

A correlational study can also be considered to observe whether there is a relationship between LLS preferences, LLS use frequency and students' linguistic and academic performance.

Limitations

This study is limited to Turkish native students attending a private bilingual high school, ranging from14 to 18-year-olds. In the background questionnaire (see Appendix A) students' starting age to the school was not included. As the size of the sample is relatively small, location of the differences ANOVA indicated could not be detected for some strategies under some variables. Also, despite the fact that cognitive stage is a factor in bilingualism and strategy use, the differences regarding cognitive strategies were mainly observed in descriptive terms.

REFERENCES

Acunsal, B.H.Ü. (2005). *A study on language learning strategies of 8th grade students according to their nationality, academic achievement and gender* (Unpublished master's thesis). Retrieved from Council of Higher Education Thesis Center. (188583).

Adesope, O.O., Thompson, T. Tracy, L., & Ungerleider, C. (2010). A systematic review and meta-analysis of the cognitive correlates of bilingualism. *Review of Educational Research, 80*(2). 207-245. doi: 10.3102/0034654310368803

Alhaisoni, E. (2012). Language learning strategy use of Saudi EFL students in an intensive English learning context. *Asian Social Science, 8*(13), 115-127.

Altunay, D. (2014). Language learning strategies used by distance learners of English: A study with a group of Turkish distance learners of EFL. *Turkish Online Journal of Distance Education, 15*(3), 291-305. doi:10.17718/tojde.30083

Asadifard, A., & Biria, R. (2013). Affect and strategy use: The relationship between EFL learners' self-esteem and language learning strategies. *TPLS Theory and Practice in Language Studies, 3*(9), 1685-1609. doi:10.4304/tpls.3.9.1685-1690

Baker, C., & Jones, S.P. (1998). Encyclopedia of bilingualism and bilingual education. NY: Multilingual Matters. Retrieved from https://www.amazon.com/Encyclopedia-Bilingualism-Bilingual-Education-Colin/dp/1853593621

Baker, C. (2007). *Foundations of bilingual education and bilingualism*. Bristol: Multilingual Matters.

Baker, C. (2011). *Foundations of bilingual education and bilingualism* (5th ed.). Buffalo, NY: Multilingual Matters. Retrieved from https://www.amazon.com/Foundations-Bilingual-Education-Bilingualism/dp/1847693555

Baxter, P., & Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *The Qualitative Report, 13*(4), 346-559.

Bilingual education (n.d.). In *Merriam-Webster's online dictionary*. Retrieved from http://www.merriam-webster.com/

Bialystok, E., & Craik, F.I.M. (2010). Cognitive and linguistic processing in the bilingual mind. *Current Directions in Psychological Science, 19*(1), 19-23. doi: 10.1177/0963721409358571

Brauer, J. Z. (1997). *Learning strategies of native English-speaking fourth grade students in a two-way bilingual education program* (Unpublished doctoral dissertation). Boston University School of Education, Boston.

Bremner, S. (1999). Language learning strategies and language proficiency: Investigating the relationship in Hong Kong. *Canadian Modern Review, 55*(4), 490-514.

Cambridge International Examinations. (n.d). Implementing the curriculum with Cambridge: A guide for school leaders. Retrieved from http://www.cie.org.uk/images/134557-implementing-the-curriculum-with-cambridge.pdf

Cambridge International Examinations. (2017). Cambridge IGCSE provides rigorous preparation for the IB diploma. Retrieved from

http://www.cie.org.uk/programmes-and-qualifications/cambridge-secondary-2/cambridge-igcse/igcse-to-ib/

Carmines, E.G., Zeller, R.A. (1979). *Reliability and validity assessment*. Newbury Park, CA: Sage Publications.

Chamot, A.U. (2004). Issues in language learning strategy research and teaching. *Electronic Journal of Foreign Language Teaching*, *1*(1), 14-26.

Chamot, A.U. (2005). Language learning strategy instruction: Current issues and research. *APL Annual Review of Applied Linguistics, 25*, 112-130. doi:10.1017/s0267190505000061

Chang, F. (2009). *Language learning strategies of Taiwanese college level EFL/ESL students* (Unpublished doctoral dissertation). Alliant International University, San Diego.

Chin, A. (2015). Impact of bilingual education on student achievement. *IZA World of Labor* 1-10. doi:10.15185/izawol.131

Christoffels, I.K., Haan, A. M., Steenbergen, L.S., Wildenberg, W.P.M., Colzato, L.S. (2015). Two is better than one: Bilingual education promotes the flexible mind. *Psychological Research, 79*(3), 371-379. doi: 10.1007/s00426-014-0575-3

Cohen, A.D. (1977). Successful second language speakers: A review of research literature. *The Journal of the Israel Association for Applied Linguistics, 1*, 3-21.

Cohen, A.D., & Aphek, E. (1981). Easifying second language learning. *Studies in Second Language Acquisition, 3*(2), 221-236.

Cohen, A.D. (2007). *Language learning strategies: Thirty years of research and practice.* Macaro, E. (Ed.). New York: Oxford University Press.

Colon, J., Hidalgo, N, Nevarez, A., & Garcia-Blanco, A.M. (1990). *Entitlements of Latino students in the Massachusetts public educational school system: Some legal and policy considerations*. Boston, MA: Mauricio Gastón Institute for Latino Community Development and Public Policy.

Cummins, J. (1981). The role of primary language development in promoting educational success for language minority students. In California State Department of Education (Ed.), *Schooling and language minority students: A theoretical framework* (pp. 3-49). Los Angeles: California State University.

Cummins, J. (2003). Bilingual education: Basic principles. In Dewaele, J. M., Hausen, A., & Wei, L. (Eds.), Bilingual education: Beyond basic principles (56-66). Great Britain: Cromwell Press Ltd.

Dörnyei, Z. (2005). *The psychology of the language learner: Individual differences in second language acquisition*. Mahwah, NJ: L. Erlbaum.

Education Brief 3. (2015). Bilingual learners and bilingual education. Cambridge International Examinations. Retrieved from http://www.cie.org.uk/images/271190-bilingual-learners-and-bilingual-education.pdf

Education First (2015). *EF EPI 2015 country fact sheet*. Retrieved from www.ef.com/epi

Education First (2015). *EF English proficiency index*. Retrieved from www.ef.com/epi

Education First (2016). *EF English proficiency index*. Retrieved from http://www.ef.com.tr/epi/regions/europe/turkey/

Ferguson, C.A, Houghton, C., & Wells, M.H (1977). *Bilingual education: An international perspective.* In B. Spolsky & R. Cooper (Eds.) *Frontiers of bilingual education* (pp. 159-194). Rowley, MA: Newbury House.

Gan, Z., Humphreys, G., & Hamp-Lyons, L. (2004). Understanding successful and unsuccessful EFL students in Chinese universities. *The Modern Language Journal, 88*(2), 229-244.

García, O. (2009). *Bilingual education in the 21st century: A global perspective*. Malden, MA: Wiley-Blackwell Pub.

Gardner, R.C., & Lambert, W.E. (1972). Motivational variables in second language acquisition. In R. C. Gardner & W. Lambert (Eds.). *Attitudes and motivation in second language learning* (pp. 119-216). Rowley, MA: Newbury House.

Gerami, M.H., & Baighlou, S.M.G. (2011). Language learning strategies used by successful and unsuccessful Iranian EFL students. *Procedia-Social and Behavioral Sciences, 29*, 1567-1576.

Gravetter, F., & Wallnau, L. (2014). *Essentials of statistics for the behavioral sciences* (8th ed.). Belmont, CA: Wadsworth.

Green, J.M., & Oxford, R. (1995). A closer look at learning strategies, L2 proficiency, and gender. *TESOL Quarterly, 29*(2), 261-297.

Griffiths, C. (2003). Patterns of language learning strategy use. *System, 31*(3), 367-383.

Hong, K. (2006). *Beliefs about language learning and language learning strategy use in an EFL context: A comparison study of monolingual Korean and bilingual Korean-Chinese university students* (Doctoral dissertation). University of North Texas, Texas.

Hong-Nam, K., & Leavell, A.G. (2006). Language learning strategy use of ESL students in an intensive English learning context. *System, 34*(3), 399-415. doi:10.1016/j.system.2006.02.002

IBO-International Baccalaureate Organization. (2009). Making the PYP happen: A curriculum framework for international primary education. Retrieved from http://occ.ibo.org/ibis/occ/home/pyp_e_library.cfm?subject=pypxx

IBO-International Baccalaureate Organization. (2013). Diploma programme language and literature. Retrieved from http://occ.ibo.org/ibis/occ/home/subjectHome.cfm?subject=ayeng

IBO- International Baccalaureate Organization Language Policy (2014). Information on the International Baccalaureate's support for languages, language courses and of instruction. Retrieved from http://www.ibo.org/globalassets/ib-language-policy-en.pdf

IBO-International Baccalaureate Organization. (2015). Middle years programme language A: Language and literature guide. Retrieved from http://occ.ibo.org/ibis/occ/home/subjectHomeMYP.cfm?subject=langa

IBO-International Baccalaureate Organization. (2017a). Why the IB is different. Retrieved from http://www.ibo.org/benefits/why-the-ib-is-different/

IBO-International Baccalaureate Organization (2017b). Teaching the IB in your language. Retrieved from http://www.ibo.org/benefits/teaching-ib-in-your-language/

IBO-International Baccalaureate Organization (2017c). Benefits for students. Retrieved from http://www.ibo.org/benefits/benefits-for-students/

İlhan, D., & Aydın, H. (2015). Perception of higher education faculty members on bilingual education in Turkey. *Journal of Education and Training Studies, 3*(3), 146-155. doi: 10.11114/jets.v3 i3.694

Kang, S.Y. (2012). *Individual differences in language acquisition: Personal traits and language learning strategies of Korean university students studying English as a foreign language* (Doctoral dissertation). Indiana State University, Indiana.

Kaplan, Y.Ü. (2016). *Exploring the relationship between students' beliefs about language learning and language learning strategies in a high school context in Turkey* (Unpublished master's thesis). Retrieved from Council of Higher Education Thesis Center. (441412)

Kayaoğlu, M. (2013). Poor and good learners' language beliefs and their influence on their language learning strategy use. *Novitas-ROYAL (Research on Youth and Language), 7*(1), 36-54.

Ku, P.N., (1995): Strategies associated with proficiency and predictors of strategy choice: A study of language learning strategies of EFL students at three educational levels in Taiwan (Unpublished doctoral dissertation). Indiana University, Indiana.

Lambert, W.E. (1980). The social psychology of language: A perspective for the 1980s. In H. Giles, W.P. Robinson, & P.M. Smith (Eds.), *Language: Social psychological perspectives*. Oxford: Pergamon.

Li, A. (2005). *A look at Chinese ESL students' use of learning strategies in relation to their English language proficiency, gender and perceived language difficulties -A quantitative study*. Paper presented at the Independent Learning Association Conference Inaugural, Wellington.

Liu, H. (2013). Effects of foreign language anxiety and perceived competence on learning strategy use. *International Journal of English Linguistics IJEL, 3*(3), 76-87. doi:10.5539/ijel.v3n3p76

Marefat, H. (2003). The impact of teaching direct language learning strategies on vocabulary by EFL learners. *The Reading Matrix*, *3*(2), 47-62.

Marsh, D., Oksman-Rinkinen, P, & Takala, S. (1996). *Mainstream Bilingual education in the Finnish vocational sector*. University of Jyväskylä.

Mocinic, A. (2011). Bilingual education. *Metodicki Obzori, 13*(6), 175-182.

Naiman, N., Fröhlich, M., Stern, H.H., & Todesco, A. (1978). The good language learner. Grenfell, M. (Ed.). Toronto: Ontario Institute for Studies in Education.

Nosratinia, M., Saveiy, M., & Zaker, A. (2014). EFL learners' self-efficacy, metacognitive awareness, and use of language learning strategies: How are they associated? *TPLS Theory and Practice in Language Studies, 4*(5), 1080-1092. doi:10.4304/tpls.4.5.1080-1092.

Norton, B., & Toohey, K. (2001). Changing perspectives on good language learners. *TESOL Quarterly, 35*(2), 307-322.

Nunan, D. (2000). Language learning methodology. Harlow: Pearson Education Ltd.

O'Malley, J.M., & Chamot, A.U. (1990). *Learning strategies in second language acquisition*. Cambridge: Cambridge University Press.

O'Sullivan, M. (2015). Bilingual education. *Cambridge Outook The Magazine for Cambridge Schools Worldwide, 18*, 6-7.

Oxford, R.L. (1986). Second language learning strategies: Current research and implications for practice. *ERIC*, 1-53.

Oxford, R.L. (1990). *Language learning strategies: What every teacher should know*. Boston: Heinle & Heinle.

Oxford, R.L. (2003). Language learning styles and strategies: An overview. GALA, 1-25.

Pacific Policy Research Center. (2010). *Successful bilingual and immersion education models/programs.* Honolulu: Kamehameha Schools, Research & Evaluation Division.

Ping, W. (2016). Understanding bilingual education: An overview of key notions in the literature and implications for Chinese university EFL education. *Cambridge Journal of Education*, 1-18. doi:10.1080/0305764x.2015.1118439

Purpura, J.E. (1999). *Learner strategy use and performance on language tests: A structural equation modelling approach*. Cambridge: University of Cambridge Local Examinations Syndicate.

Reiss, M.A. (1985). The good language learner: Another look. *Canadian Modern Language Review*, *41*(3), 511-523.

Rivera, L. (2002). A review of the literature on bilingual education. Boston: Gastón Institute Publications.

Rivera, C., Tressler, T.R., McCreadie, J., & Ballantyne, K. (2014). *IB diploma programme study: Factors influencing students to earn a bilingual diploma* (Report No. Final Reports). Washington: The George Washington University Center for Equity and Excellence in Education.

Roberts, C. A. (1995). Bilingual education program models: A framework for understanding. *The Bilingual Research Journal*, *19*(3). 369-378.

Rubin, J. (1975). What the "Good Language Learner" can teach us. *Teachers of English to Speakers of Other Languages, Inc. (TESOL), 9*(1), 44-51.

Rubin, J. (1975). What the good language learner can teach us. *TESOL Quarterly, 9*(1), 41. doi:10.2307/3586011

Rubin, J. (1981). Study of cognitive processes in second language learning. *Applied Linguistics, 11*(2), 117-131. doi:10.1093/applin/2.2.117

Rubin, J., & Thompson, I. (1982). *How to be a more successful learner*. Boston: Heinle & Heinle.

Russell, A. (2010). *Assessment of strategy inventory of language learning (SILL) in students learning a second language*. Chattanooga, MA: Graduate School of Psychology of The University of Tennessee, Chattanooga.

Sadeghi, K., & Khonbi, Z. A. (2015). Language learning aptitude (LLA) and language learning strategy (LLS) use among Iranian university EFL students: Patterns and relationships. *Eurasian Journal of Applied Linguistics, 1*, 77-96.

Sarıca, N. (2014). Idiosyncrasy in native language acquisition and linguistic transfers in second language acquisition. *International Journal of Language Academy, 2*(4), 554-563.

Stern, H. H. (1974). What can we learn from the good language learner. Unpublished paper presented at the Ontario Modern Language Teachers' Association, April 19-20.

Shaw, S., Imam, H., & Hughes, S. (2015). Research in bilingual education. *Cambridge Outook The Magazine for Cambridge Schools Worldwide, 18*, 18-19.

Şen, H. (2009). *A comparison of EFL teachers' perceptions of language learning strategies (LLSs) and learners' reported use of LLSs in their English*

language classes (Unpublished master's thesis). Retrieved from Council of Higher Education Thesis Center. (250804)

TEL2L- Teacher education by learning through two Languages (2017). Models of bilingual education. Retrieved from http://www.unavarra.es/tel2l/eng/Worldcontext.htm

TEPAV (2011). *Türkiye'nin İngilizce açığı*. Ankara: Koru, S. & Akesson, J.

TEPAV (2013). *Turkey national needs assessment of state school English language learning.* Ankara: British Council.

TEPAV (2015). *The state of English in higher education in Turkey*. Ankara: British Council.

Tuncer, U. (2009). How do monolingual and bilingual language learners differ in use of learning strategies while learning a foreign language? Evidences from Mersin University. *Procedia Social and Behavioral Sciences*, 1, 852-856.

United Nations Educational, Scientific and Cultural Organization (2003). *Education in a multilingual world*. Paris.

Vrettou, A. (n.d.). Language learning strategy use by elementary school students of English in Greece. *Major Trends in Theoretical and Applied Linguistics*, 407-430.

Yayla, A., Kozikoglu, I., & Celik, S. N. (2016). A comparative study of language learning strategies used by monolingual and bilingual learners. *European Scientific Journal, 26*(12), 1-20.

Zareva, A., & Fomina, A. (2012). Strategy use of Russian pre-service TEFL students: Using a strategy for program effectiveness evaluation. *International Journal of English Studies, 13*(1), 68-88.

APPENDIX A: Background Questionnaire

(This questionnaire is developed by Rebecca L. Oxford)

Version for Speakers of Other Languages Learning English

Version 7.0 (ESL/EFL) © R.L.Oxford, 1990

<table>
<tr><td>1. Age</td><td colspan="4">2. Male ☐
Female ☐</td></tr>
<tr><td>3. Grade level:</td><td colspan="4">4. How long have you been learning English?</td></tr>
<tr><td colspan="5">5. How do you rate your proficiency in English, compared with native speakers?</td></tr>
<tr><td>(Circle one of these options):</td><td>Excellent</td><td>Good</td><td>Fair</td><td>Poor</td></tr>
<tr><td colspan="5">6. How important is it for you to become proficient in English?</td></tr>
<tr><td>(Circle one of these options):</td><td colspan="2">Very important</td><td>Important</td><td>Not important</td></tr>
<tr><td colspan="5">7. Why do you want to learn the language in English? :
…….. interested in the language.
…….. interested in the culture.
…….. have friends who speak the language
…….. required to take a language course to graduate.
…….. need it for my future career.
…….. need it for travel.
…….. other (explain) ……..……..
……..</td></tr>
</table>

APPENDIX B: SILL

(developed by Rebecca L. Oxford)

Version for Speakers of Other Languages Learning English

Version 7.0 (ESL/EFL) © R.L.Oxford, 1990

This form of the Strategy Inventory For Language Learning (SILL) is for students of English as a second or foreign language. You will find statements about learning English. Read each statement and mark the response that tells how true of you the statement is. Answer in terms of how well the statement describes you. Do not answer how you think you should be, Or what other people do. There are no right or wrong answers to these statements. This usually takes about 20-30 minutes to complete. If you have any questions, let the teacher know immediately.	1= Never or never true of me	2= Usually not true of me	3= Somewhat true of me	4= Usually true of me	5= Always or almost true of me

PART A :

1. I think of relationships between what I already know and new things I learn in English.	**1**	**2**	**3**	**4**	**5**
2. I use new English words in a sentence so I can remember them.	**1**	**2**	**3**	**4**	**5**
3. I connect the sound of a new English word and an image of picture of the word to help me remember the word.	**1**	**2**	**3**	**4**	**5**
4. I remember a new English word by making a mental picture of situation in which the word might be used.	**1**	**2**	**3**	**4**	**5**
5. I use rhymes to remember new English words.	**1**	**2**	**3**	**4**	**5**
6. I use flashcards to remember new English words.	**1**	**2**	**3**	**4**	**5**
7. I physically act out new English words.	**1**	**2**	**3**	**4**	**5**
8. I review English lessons often.	**1**	**2**	**3**	**4**	**5**
9. I remember new English words or phrases by remembering their location on the page, on the board, or on a street sign.	**1**	**2**	**3**	**4**	**5**

PART B :

10. I say or write new English words several times.	**1**	**2**	**3**	**4**	**5**
11. I try to talk like native English speakers.	**1**	**2**	**3**	**4**	**5**
12. I practice the sounds of English.	**1**	**2**	**3**	**4**	**5**
13. I use English words I know in different ways.	**1**	**2**	**3**	**4**	**5**
14. I start conversations in English.	**1**	**2**	**3**	**4**	**5**
15. I watch English language TV shows spoken in English or go to movies spoken in English.	**1**	**2**	**3**	**4**	**5**
16. I read for pleasure in English.	**1**	**2**	**3**	**4**	**5**
17. I write notes, messages, letters, or reports in English.	**1**	**2**	**3**	**4**	**5**
18. I first skim an English passage (read over the passage quickly) then go back and read carefully.	**1**	**2**	**3**	**4**	**5**
19. I look for words in my own language that are similar to new words in English.	**1**	**2**	**3**	**4**	**5**
20. I try to find patterns in English.	**1**	**2**	**3**	**4**	**5**
21. I find the meaning of English word by dividing it into parts that I understand.	**1**	**2**	**3**	**4**	**5**
22. I try not to translate word-for-word.	**1**	**2**	**3**	**4**	**5**
23. I make summaries of information that I hear or read in English.	**1**	**2**	**3**	**4**	**5**

APPENDIX B: SILL (cont'd)

PART C :

24. To understand unfamiliar English words, I make guesses.	**1**	**2**	**3**	**4**	**5**
25. When I can think of a word during a conversation in English, I use gestures.	**1**	**2**	**3**	**4**	**5**
26. I make up new words if I do not know the right ones in English.	**1**	**2**	**3**	**4**	**5**
27. I read English without looking up every new word.	**1**	**2**	**3**	**4**	**5**
28. I try to guess what the other person will say next in English.	**1**	**2**	**3**	**4**	**5**
29. If I can't think of an English word, I use a word or phrase that means the same thing.	**1**	**2**	**3**	**4**	**5**

PART D :

30. I try to find as many ways as I can to use my English.	**1**	**2**	**3**	**4**	**5**
31. I notice my English mistakes and use that information to help me do better.	**1**	**2**	**3**	**4**	**5**
32. I pay attention when someone is speaking English.	**1**	**2**	**3**	**4**	**5**
33. I try to find out how to be a better learner in English.	**1**	**2**	**3**	**4**	**5**
34. I plan my schedule so I will have enough time to study English.	**1**	**2**	**3**	**4**	**5**
35. I look for people I can talk to in English.	**1**	**2**	**3**	**4**	**5**
36. I look for opportunities to read as much as possible in English,	**1**	**2**	**3**	**4**	**5**
37. I have clear goals for improving my English skills.	**1**	**2**	**3**	**4**	**5**
38. I think about my progress in learning English.	**1**	**2**	**3**	**4**	**5**

PART E :

39. I try to relax whenever I feel afraid of using English.	**1**	**2**	**3**	**4**	**5**
40. I encourage myself to speak English even when I am afraid of making a mistake.	**1**	**2**	**3**	**4**	**5**
41. I give myself a reward or treat when I do well in English.	**1**	**2**	**3**	**4**	**5**
42. I notice if I am tense or nervous when I'm studying or using English.	**1**	**2**	**3**	**4**	**5**
43. I write down my feelings in a language learning diary.	**1**	**2**	**3**	**4**	**5**
44. I talk to someone else about how I feel when I am learning English.	**1**	**2**	**3**	**4**	**5**

PART F :

45. If I do not understand something as an English word, I ask the other person to slow down or say it again.	**1**	**2**	**3**	**4**	**5**
46. I ask English speakers to correct me when I talk.	**1**	**2**	**3**	**4**	**5**
47. I practice English with other students.	**1**	**2**	**3**	**4**	**5**
48. I ask for help from English speakers.	**1**	**2**	**3**	**4**	**5**
49. I ask questions in English.	**1**	**2**	**3**	**4**	**5**
50. I try to learn about the culture of English speakers.	**1**	**2**	**3**	**4**	**5**