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SELF-REGULATING CAPACITY IN VOCABULARY LEARNING AMONG
TRILINGUAL LEARNERS IN HIGHER EDUCATION CONTEXT

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Higher Education Context

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September 2024

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 Teaching English as a Foreign Language.

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ABSTRACT

Self-Regulating Capacity in Vocabulary Learning Among Trilingual Learners in Higher Education Context

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MA in Teaching English as a Foreign Language

Advisor: Asst. Prof. Dr. Necmi Akşit

September 2024

This study aimed to examine the self-regulating capacity in vocabulary learning among trilingual learners in higher education context. Focusing on students enrolled in a trilingual bachelor's program at a foundation university in Türkiye, this study investigated if the perceived overall use of self-regulating capacity in vocabulary learning differed among trilingual learners based on gender, type of high school, years of undergraduate education, achievement as measured by the CGPA, achievement in the core English language classes, and participation in English and French preparatory program. Utilizing a cross-sectional single site survey, data were gathered from 83 students using the *Self-Regulatory Vocabulary Learning Capacity Scale* (Tseng et al., 2006) questionnaire was administered. The findings reveal that among five facets of the instrument, *Environmental Control* strategies were the most commonly employed, while *Metacognitive Control* strategies were the least utilized. Achievement in the first core Freshman English course emerged as a significant factor regarding the employment of self-regulatory strategies in vocabulary learning. In contrast, factors such as gender, type of high school, students' CGPA scores, participation in English and French preparatory programs and lastly their achievement in the second core Freshman English course did not reveal any significant differences. Finally, the results showed, for all five-facets, achievement in the first core Freshman English course was a significant factor; additionally, it was found that English preparatory program participation plays a substantial role in the use of *Emotion Control* strategies among students when learning vocabulary.

Keywords: self-regulation, self-regulated learning (srl), self-regulating capacity in vocabulary learning. vocabulary learning strategies, trilingual learners

ÖZET

Yükseköğretim Bağlamında Üç Dilli Öğrencilerin Kelime Öğreniminde Öz

Düzenleme Kapasitesi

Nihan Şahin

Yabancı Dil Olarak İngilizce Öğretimi Yüksek Lisans Programı

Tez Danışmanı: Dr. Öğr. Üyesi Necmi Akşit

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Bu çalışma, yükseköğretim bağlamında üç dilli öğrencilerin kelime öğreniminde öz-düzenleme kapasitelerini araştırmıştır. Türkiye’de bir vakıf üniversitesinde üç dilli lisans programına kayıtlı öğrenciler üzerine odaklanan bu çalışma, algılanan genel öz-düzenleme kapasitesinin cinsiyet, mezun olunan lise türü, lisans eğitimi yılı, genel not ortalaması, ortak İngilizce derslerindeki başarı ve İngilizce ile Fransızca hazırlık programlarına katılım gibi faktörlere göre farklılık gösterip göstermediği incelenmiştir. Kesitsel tek saha araştırması yöntemi kullanılarak, kayıtlı 83 öğrenciden veri toplanmış ve “Kelime Öğrenimi için Öz-Düzenleme Kapasitesi Ölçeği” (Tseng ve diğerleri, 2006) uygulanmıştır. Bulgular, ölçeğin beş boyutu arasında *Çevresel Kontrol* stratejilerinin en yaygın olarak kullanılan stratejiler olduğunu, buna karşın *Metabolişsel Kontrol* stratejilerinin en az kullanılan stratejiler olduğunu ortaya koymuştur. Birinci sınıfta ilk dönemde verilen ortak İngilizce dersindeki başarı, kelime öğreniminde öz-düzenleme kapasitesi stratejilerinin kullanılmasında anlamlı bir faktör olduğu, diğer yandan cinsiyet, lise türü, öğrencilerin genel not ortalamaları, İngilizce ve Fransızca hazırlık programlarına katılım ve son olarak birinci sınıfta ikinci dönemde verilen ortak İngilizce dersindeki başarılarının anlamlı bir farklılık göstermediği bulunmuştur. Son olarak, kullanılan enstrümanın beş boyutunun tamamında, birinci sınıfta ilk dönemde verilen ortak İngilizce dersindeki başarının anlamlı bir faktör olduğu ve ayrıca İngilizce hazırlık programına katılımın öğrencilerin kelime öğrenirken *Duygu Kontrol* stratejilerini kullanmalarında etkili bir rol oynadığı bulunmuştur.

Anahtar kelimeler: Öz-Düzenleme, Öz -Düzenlemeli Öğrenme, Kelime Öğrenimi için Öz Düzenleme Kapasitesi, Kelime Öğrenme Stratejileri, Üç Dilli Öğrenciler

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CHAPTER 1: INTRODUCTION

Introduction

This chapter begins by providing background information on the focus of the study. It then introduces the problem statement, emphasizing the gaps in the literature regarding self-regulating capacity in vocabulary learning. Next, the chapter continues with the purpose of the study and the research questions the study seeks to answer. Following this, the significance of the study is explored, detailing its potential contributions to research and practice. Finally, the key terms relevant to the study are defined to ensure clarity.

Background

Language learning strategies (LLS) are conscious techniques and behaviors that learners employ to facilitate language acquisition. These strategies have been defined and categorized by various researchers. Rubin (1975) identified LLS as techniques and devices used by learners to acquire knowledge, distinguishing between strategies that directly affect learning and those that contribute indirectly, and later categorizing them into cognitive, metacognitive and social strategies. O'Malley and Chamot (1990) expanded on this by classifying LLS into metacognitive, cognitive, social and affective strategies. Oxford (1990) further expanded the understanding of LSS And created the Strategy Inventory for Language Learning (SILL) to assess their use. Her later work (2011) proposed the Strategic Self-Regulation Model, integrating self-regulation principles into LLS.

Self-regulation in learning (SRL) is a proactive, self-directed process that involves setting goals, monitoring progress, and adapting behaviors to achieve academic success (Zimmerman, 2002). Metacognition research in the late 1970s and early 1980s further enhanced the understanding of individual differences. Various scholars have highlighted different aspects of SRL, such as strategic management of achievement (Risemberg & Zimmerman, 1997) and the active and constructive nature of goal-setting and self-monitoring (Pintrich, 2000). The process of self-regulation is cyclical, involving phases of forethought, performance and self-reflection (Campillo & Zimmerman, 2003).

Vocabulary Learning Strategies (VLS) are a specialized subset of LLS that focus on the acquisition of vocabulary in a second language. Schmitt (2000) emphasizes that VLS, such as memorization, repetition, and note-taking, are critical for vocabulary learning. Various taxonomies of VLS have been developed to categorize VLS strategies (Gu & Johnson, 1996; Schmitt, 1997; Stöffer, 1997).

The concept of self-regulating capacity in vocabulary learning refers to learners' ability to control and manage their vocabulary acquisition processes. Tseng, Dörnyei and Schmitt (2006) introduced the concept of Self-Regulating Capacity in Vocabulary Learning Scale (SRCvoc) to measure "learner's underlying capacity that will result in strategy use" (Dörnyei & Ryan, 2015, p. 159). According to Schmitt and Tseng (2008), this new scale rather than paying attention to particular behavioral patterns, it targets to measure capacity to regulate strategic vocabulary learning behaviors.

The SRCvoc is psychometrically validated instrument designed to measure learners' capacity to regulate their vocabulary learning. Developed from Dörnyei's (2001) taxonomy of action-control strategies, SRCvoc (Dörnyei & Ryan, 2015;

Tseng et al., 2006) is a self-reported questionnaire consisting five facets:

Commitment control, Metacognitive control, Satiation Control, Emotion control and Environmental control.

Problem

Vocabulary plays a critical role in language acquisition, yet while numerous studies have focused on vocabulary learning strategies (VSL), there is a noticeable gap in the research that explores the underlying processes beyond mere strategy use (Dörnyei & Ryan, 2015; Gu & Johnson, 2018; Mizumoto & Takeuchi, 2024; Nation, 2022). Specifically, investigating learners' capacity for self-regulation—particularly, their ability to enhance their learning and manage their motivation—emerges as an important area of study (Dörnyei, 2001; Dörnyei, 2005; Dörnyei, Tseng & Schmitt, 2006). Furthermore, it has been found that becoming a self-regulated learner has positive impacts vocabulary learning outcomes (Mizumoto & Takeuchi, 2024; Tseng et al., 2006).

Similar to research on language learning strategies, within the context of self-regulating capacity in vocabulary learning, individual differences such as cultural context, gender, academic disciplines and language background including the experiences of trilingual learners, provide a platform for further research (e.g., Amirian et al., 2015; Cho, 2023 ; Choung, 2016 ; Fatemipour& Najafgholikhan, 2015; Katsarou& Kambakis-Vougiouklis, 2020; Kossakowska-Pisarek, 2016; Lee, 2008; Mizumoto& Takeuchi, 2021; Ping et al., 2015; Kherzrlou & Sadeghi, 2012; Sarkeshikian et al., 2018; Hoa & Uyen, 2023; Zaper, 2018).

In the Turkish context, studies on the use of Self-Regulatory Strategies are limited but expanding this research could provide more avenues for understanding the self-regulating capacity in vocabulary learning within this context, as well as

offer comparative data for other researchers (Ayhan & Payan, 2023; Bayraktar-Çepni, 2021; Bilican, 2012; Bilican & Yeşilbursa, 2015; Elçin, 2018; Fındık, 2020; İstifçi, 2024; İnan, 2013).

The current research landscape in vocabulary acquisition underscores the need to better understand self-regulation in general and self-regulating capacity in vocabulary learning in particular. It is imperative to consider the individual differences that may influence self-regulating capacity in vocabulary learning outcomes. Additionally, the limited number of studies on self-regulating capacity in vocabulary learning in the Turkish context presents an opportunity for further exploration, promising valuable comparative data that could enrich our understanding of this complex phenomenon.

Purpose

The primary purpose of this study was to examine self-regulating capacity in vocabulary learning, and it was conducted within a trilingual bachelor's program at a foundation university in Türkiye. This study also aimed to investigate if this self-regulating capacity in vocabulary learning differed among trilingual learners based on gender, type of high school, years of undergraduate education, achievement as measured by CGPA, achievement in core language classes, and participation in English and French Preparatory programs.

Research Questions

The study aimed to address the following research questions:

1. To what extent do the trilingual learners enrolled in a three-language bachelor's program at a foundation university in Türkiye self-regulate their capacity in vocabulary learning?

2. Does the self-regulating capacity in vocabulary learning differ among trilingual learners based on gender, type of high school, years of undergraduate education, achievement as measured by CGPA, achievement in core language classes, and participation in English and French Preparatory programs?

Significance

This study contributes to the body of research on the often-overlooked area of self-regulating capacity in vocabulary learning, particularly within the context of English and French as a foreign language and more specifically within a trilingual bachelor's program in particular. By providing insights through a single-site survey, this research study sheds light on how learners self-regulate their capacity in vocabulary learning.

While vocabulary learning strategies (VLS) have been extensively studied, there is a significant gap in understanding the underlying processes that enable learners to self-regulate their capacity in vocabulary learning (Bayraktar-Çepni, 2021; Bilican, 2012). This study aims to fill the gap by extending beyond mere strategy use to explore how learners actively control and enhance their learning outcomes. By examining self-regulating capacity, this research seeks to provide a deeper understanding of how learners manage their learning behaviors to become more autonomous.

The significance of this research also lies in its potential to offer insights into how individual differences, such as gender, educational background, and academic performance affect self-regulating capacity in vocabulary learning. Understanding these factors is crucial for providing tailored support that can enhance learning outcomes (Fatemipour & Najafgholikhani, 2015; Gao & Hu, 2020). Empowering

learners to become aware of their self-regulating capacity in vocabulary learning may help them identify their strengths and weaknesses, thereby facilitating a more purposeful approach to vocabulary learning (Tseng et al., 2006; Teng et al. 2024).

Furthermore, by utilizing the SRCvoc, this study employs a psychometrically validated tool (Tseng et al., 2006) to assess learners' ability to self-regulate their capacity in vocabulary learning. The findings from this research can provide valuable comparative data for other researchers, contributing to the broader understanding of self-regulating capacity in vocabulary learning across higher education institutions in Türkiye, and other cultural educational settings.

Additionally, this study has practical implications for teaching methodologies and learner support mechanisms. By fostering students' self-regulation skills, instructors can create an environment that promote autonomy, helping learners to become more self-directed in their studies (Schunk & Zimmerman, 2007).

In conclusion, this study bridges a critical gap in the literature by providing a comprehensive understanding of self-regulating capacity in vocabulary learning, with implications for both research and practice. The results could inform language education programs, ultimately enhancing the educational experience and outcomes of learners in bilingual or multilingual environments.

Definition of Key Terms

Commitment control: “which helps to preserve or increase the learners’ original goal commitment (e.g. keeping in mind favourable expectations or positive incentives and rewards; focusing on what would happen if the original intention failed)” (Tseng et al., 2006, p.85).

Metacognitive control: “which involves the monitoring and controlling of concentration, and the curtailment of any unnecessary procrastination

(e.g. identifying recurring distractions and developing defensive routines; focusing on the first steps to take when getting down to an activity)” (Tseng et al., 2006, p.85-86).

Satiation control: “which helps to eliminate boredom and to add extra attraction or interest to the task (e.g. adding a twist to the task; using one’s fantasy to liven up the task)” (Tseng et al., 2006, p.86).

Emotion control: which concerns the management of disruptive emotional states or moods, and the generation of emotions that will be conducive to implementing one’s intentions (e.g. self-encouragement; using relaxation and meditation techniques)” (Tseng et al., 2006, p.86).

Environmental control: “which helps to eliminate negative environmental influences and to exploit positive environmental influences by making the environment an ally in the pursuit of a difficult goal (e.g. eliminating distractions; asking friends to help and not to allow one to do something)” (Tseng et al., 2006, p.86).

Self-Regulated Learning (SRL): Self-regulation is a proactive and self-directed process in which learners “search for and then apply personalized strategic learning mechanisms” (Tseng et al., 2006, p.79).

English Medium Instruction (EMI): “The use of English language to teach academic subjects (other than English itself) in countries or jurisdictions where the first language of the majority of the population is not English” (Macaro et al., 2017, p.37).

Foreign Language: “... language studied in an environment where it is not the primary vehicle for daily interaction and where input in that language is restricted” (Oxford, 2003, p.1).

CHAPTER 2: REVIEW OF RELATED LITERATURE

Introduction

This study focuses on how the trilingual learners in an English as Medium of Instruction context at a foundation university in Türkiye perceive their strategic self-regulating capacity in vocabulary. It also explores potential differences in self-regulating capacity in vocabulary learning (SRCvoc) based on gender, high-school type, year of study, achievement as measured by CGPA, achievement in ENG101, achievement in ENG102, and English and French preparatory program participation. The chapter begins with a brief information about Self-Regulated Learning and it is followed by Language Learning Strategies and Self-Regulation. It then continues to provide information regarding Vocabulary Learning Strategies which is followed by an extensive literature review related to the study, providing theoretical insights into Self-Regulating Capacity in Vocabulary Learning. The chapter introduces the tool, its purpose, while explaining its components and limitations providing a literature review based on theoretical basis. Finally, it emphasizes global and national studies on the utilization of SRCvoc in various contexts.

Self-Regulated Learning

In contrast to today's learner-centered approach, education in the 19th century was considered as a formal discipline that required students to overcome personal challenges and limitations, which could lead to failure, in order to benefit from the school's curriculum. During that time, conceptions of self-regulatory development were rare (Zimmerman, 2002). However, with the emergence of psychology as a

science in the 20th century, there was a growing recognition of individual differences in the field of education (Zimmerman, 2002). Progressive educators like John Dewey and Maria Montessori advocated for changes to the curriculum to accommodate these differences, including homogeneous grouping of the students by age or ability, introducing perceptual-motor learning tasks, and training in practical skills. These shifts laid the groundwork for more individualized approaches to learning, which eventually included the concept of self-regulation (Zimmerman, 2002).

The late 1970s and early 1980s saw increased research on metacognition and social cognition, contributing to a new understanding of individual differences among learners. Metacognition, defined as “the awareness of and knowledge about one’s own thinking” (Zimmerman 2002, p.65), encouraged students to set goals and engage in self-monitoring to enhance achievement and personal efficacy (Schunk, 1989, as cited in Zimmerman, 2002).

Self-regulation is a proactive and self-directed process in which “learners transform their mental abilities into academic skills” (Zimmerman, 2002, p. 65). It involves “self-generated thoughts, feelings, and behaviors that are oriented to attaining goals” (p. 65). This process requires learners to engage in self-reflection, recognize their strengths and limitations and continuously improve their learning methods.

Various scholars have defined self-regulation to highlight different aspects of this complex process. For instance, Risemberg and Zimmerman (1997) define as “strategic efforts to manage their own achievement through specific beliefs and processes” (p.105). Brown et al. (1999) define it as “the capacity to plan, guide and monitor one’s behavior flexibly in the face of changing circumstances” (p.162). Zimmerman (2000) views self-regulation within the frame of a cyclical process and

defines it as “...self-generated thoughts, feelings, and actions that are planned and cyclically adapted to the attainment of personal goals” (p.14). In a similar vein, Zimmerman (2002) explains the notion as “... not a mental ability or an academic performance skill; rather it is the self-directive process by which learners transform their mental abilities into academic skills” (p.65). Pintrich (2000) emphasizes its active and constructive nature where “learners set goals for their learning and then attempt to monitor, regulate, and control their cognition, motivation and behavior, guided and constrained by their goals and the contextual features in the environment” (p.453). By providing a more general definition, Baumeister and Vohs (2004) describe the term as an individual’s attempt to change their responses and inner states. Another definition of self-regulation by Baumeister and Vohs (2004) is “... people regulating their thoughts, emotions, impulses or appetites and task performances” (p.2). Trommsdorff (2009) argues that self-regulation refers to the conscious effort to alter the internal processes and behaviors to achieve personal goals. Etkin (2018) defines self-regulation as “a learning process in which one manages their emotions, behaviours, and attitudes, to reach an ideal level of stimulation where they are best able to learn” (p.35).

Self-regulation does not consist of exclusive knowledge of the skill rather it includes self-awareness, self-motivation and behavioral skills to apply knowledge adequately (Zimmerman, 2002). Oort and Vrugt (2007) argue that self-regulation is one of the critical aspects of students’ learning concerning academic achievement. Moreover, Wolters (2003) states that “[s]elf-regulated learners are autonomous, reflective and efficient learners, and have the cognitive and metacognitive abilities as well as motivational beliefs and attitudes needed to understand, monitor and direct their own learning” (p.189).

Nation (2022) highlights the importance of knowing the principles behind learning and how to use strategies as it provides learners to have a critical perspective regarding their learning and it allows them to reflect on the ways of improving it. Similarly, Schmitt (1997) mentions the importance of the using strategies in the acquisition of the second language, encouraging learners to adopt an active role in the learning process. Proactive self-regulators “set learning goals, implement effective learning strategies, monitor and assess their goal progress, establish a productive environment for learning and maintain a sense of self-efficacy for learning” (Schunk & Zimmerman, 2011, p.1).

Zimmerman (1989) argues that students who use specific strategies with the intention of achieving academic goals based on self-efficacy perceptions are qualified as self-regulated. “Self-regulated learning has emerged as an important concept in education, with models such as Zimmerman’s (2000) social cognitive framework elucidating the processes of forethought, performance control and self-reflection involved” (Mizumoto, Takeuchi & Teng, 2024, p.2).

The phases of self-regulation, as outlined by Campillo and (2003) include the following cyclical phases.

- Forethought Phase
 - Task Analysis (Goal setting, Strategic planning)
 - Self-Motivation Beliefs (Self-efficacy, Outcome expectations, Intrinsic interest/value, Learning goal orientation)
- Performance Phase
 - Self-Control (Self-instruction, Imagery. Attention focusing, Task strategies)
 - Self-Observation (Self-recording, Self-experimentation)

- Self-Reflection Phase
 - Self-Judgement (Self-evaluation, Attribution)
 - Self-Reaction (Self-satisfaction/affect; Adaptive/defensive)

Language Learning Strategies & Self-Regulation

There are several definitions with respect to language learning strategies. Cohen et.al (1996) suggest “They are the conscious thoughts and behaviors used by students to facilitate language learning tasks and to personalize the language learning process” (p.1). In other words, Cohen (1998) describes these strategies as “learning processes which are consciously selected by the learner” (p.4).

Rubin (1975) defined language learning strategies as “techniques or devices which a learner may use to acquire knowledge” (p. 43). She suggested there are good and successful language learners, arguing that they possess three key strategies: being a good guesser, having a strong drive to communicate, and being willing to make mistakes to communicate. Rubin (1981) further refined her conceptualizations by distinguishing between strategies that directly affect learning, and processes that contribute indirectly. In her work in 1987, Rubin expanded the categorization, outlining three major strategy types: learning, communication and social strategies. Learning strategies were further divided into cognitive *clarification/verification*, *guessing/inductive inferencing*, *deductive reasoning*, *practice*, *memorization*, and *monitoring*) and metacognitive (*planning*, *prioritizing*, *setting goals*, and *self-management*).

Chamot and O’Malley (1990) defined language learning strategies as “...special thoughts or behaviors that individuals use to help them comprehend, learn, or retain new information ...” (p.1). They (1990) further elaborated that within the context of second language acquisition, these strategies could be categorized into

four main groups: “*metacognitive* (e.g. selective attention, monitoring evaluating), *cognitive* (e.g. rehearsal, organization, referencing, summarizing), *social strategies* (*communication and practice*), and *affective strategies* (emotional control)”.

Oxford (1990) defined language learning strategies as “specific actions taken by the reader to make a learning easier, faster, more enjoyable, more self-directed, more effective and more transferable to new situations” (p.8). Building on previous research, Oxford (1990) expanded the understanding of language learning strategies (LLSs) and created the Strategy Inventory for Language Learning (SILL) to assess their use.

Oxford (2011) later acknowledged her earlier categorization of LLSs needed to be more streamlined. This led her to propose a new model, the Strategic Self-Regulation Model, which has three core strategies: cognitive, affective and sociocultural-interactive. The new model includes a fourth dimension called metastrategies: metacognitive, meta-affective and meta-sociocultural-interactive. This new model represented an effort to integrate principles of self-regulation into the understanding of learning strategies (Dörnyei & Ryan, 2015).

Research consistently highlights that language learning strategy use is influenced by a complex interplay of factors (Dörnyei & Ryan, 2015):

- Cultural context: Cultural beliefs, perceptions and educational experiences shape learners’ strategy preference
- Gender: Studies reveal gender differences in strategy use, with females often reporting greater use than males. However, proficiency level appears to be a stronger predictor of strategy use than gender.
- Academic disciplines and language background. Research demonstrates that strategy use varies across disciplines and language

backgrounds for example “trilingual students used strategies more frequently than bilinguals” (p. 152).

- Motivation and beliefs: Strategy use is inherently linked to other ID factors, such as motivation, learning strategies and beliefs.

The typical approach to measuring learning strategy use and the broader concept of self-regulated learning has been through self-report questionnaires (Dörnyei & Ryan, 2015):

Grounded in a social cognitive perspective on motivation and self-regulated learning, a self-report questionnaire, called the Motivated Strategies for Learning Questionnaire (MSLQ), was developed by Paul Pintrich and his colleagues (Pintrich et al., 1991, as cited in Dörnyei & Ryan, 2015). The questionnaire was divided into two sections: I. Cognitive and metacognitive strategies, which included *Metacognitive self-regulation* section, and II. Resource management strategies.

Oxford’s (1990) SILL has consistently been the most frequently utilized tool for evaluating the implementation of language learning strategies. Her framework categorized LLSs into six main groups, divided into direct and indirect strategies. The former consist of memory, cognitive, and compensation strategies; the latter consist of metacognitive, affective and social strategies.

Dörnyei, Schmitt and Tseng (2006) developed a scale, called the Self-Regulating Capacity in Vocabulary Learning Scale (SRCvoc), which was designed to measure “learner’s underlying capacity that will result in strategy use”. The instrument had strong psychometric properties in terms of self-regulating capacity in vocabulary learning composed of the following broad aspects: “*commitment control, metacognitive control, satiation control, emotion control and environment control*” (Dörnyei & Ryan, 2015, p. 159).

Vocabulary Learning Strategies

As stated by Nation (2022), vocabulary learning strategies (VLS) are a particular aspect of language learning strategies, and research on VLS mostly aligns with the studies on broader language learning strategy use implying the importance of having a range of useful strategies and using them strategically. Schmitt (2000) proposes that vocabulary learning can be enhanced through the use of VLSs, and Bilican (2012) highlights that common strategies include memorization, repetition and note-taking. Schmitt (2000) further acknowledges the wide variety of VLSs.

Stöffer (1995) emphasizes the significance of personalized learning strategies. The instrument, Vocabulary Learning Strategies Inventory [VOLSI] developed by Stöffer (1995), consists of 53 items with a 5-point Likert type measurement scale indicating frequency regarding the use of vocabulary learning. “53 items were clustered around nine dimensions pertaining to the area of vocabulary learning” (Stöffer, 1995, p.147). Stöffer’s (1995) nine categories of the classification of VLS as follows:

- strategies involving authentic language use,
- strategies involving creative activities,
- strategies used for self-motivation,
- strategies used to create mental linkages,
- memory strategies,
- visual/auditory strategies,
- strategies involving physical action,
- strategies used to overcome anxiety (p.92)

Gu and Johnson (1996) developed another taxonomy of vocabulary learning strategies under metacognitive regulation and cognitive strategies organized around

Oxford's (1990) LLS classification. As stated by Nation (2022), Gu and Johnson (1996) also developed a substantial list divided into beliefs about vocabulary learning, metacognitive regulation, guessing strategies, dictionary strategies, note-taking strategies, memory strategies (rehearsal), memory strategies (encoding), and activation strategies (p.317-318). Their questionnaire consists of 91 items with the aim of exploring if there were correlations between the employed strategies and learners' vocabulary size.

Schmitt (1997) developed his taxonomy following Oxford's LLS classification under two major strategies discovery strategies and consolidation strategies. However, according to Schmitt (1997), Oxford's LLS taxonomy was not sufficiently detailed to categorize vocabulary learning strategies in particular thus, in addition to the sub-categories for his taxonomy which are social strategies, memory strategies, cognitive strategies and metacognitive strategies he added a new sub-category called determination strategies. His taxonomy consists of 58 items and a five-point Likert type measurement scale.

Another classification was developed by Nation (2022). Nation's (2022) taxonomy tries to divide "(1) aspects of vocabulary knowledge (what is involved in knowing a word) from (2) sources of vocabulary knowledge, and (3) learning processes" (p.318). The taxonomy consists of four strategy groups, planning: choosing what to focus and when, sources: finding information about words, processes: establishing knowledge and skill in use: and enriching knowledge (Nation, 2022).

As active strategy use is essential, multiple VLS are usually used concurrently (Schmitt, 2000). Additionally, "vocabulary is not learned in a linear manner; rather, it is learned incrementally through multiple exposures" (Schmitt &

Tseng, 2008, p.383). Vocabulary acquisition occurs in various ways, and the extent of knowing and recognizing a word can vary in different levels (Schmitt, 2000). It is also essential to consider that the teaching and learning of vocabulary should be systematic and networked (Nation, 1990). According to Schmitt (2000), when recommending vocabulary learning strategies to learners, it is critical to consider that learning strategies rely on different variables such as proficiency level, motivation and the purposes of L2 learning and L1 and the learner's culture. Furthermore, variables such as L1, age, and exposure affect second language vocabulary acquisition. Thus, there are multiple factors to consider.

Nation (2022) mentions that in addition to enhancing the quality of vocabulary learning, and encouraging learners to take charge of their own learning, VLS promotes learners to become autonomous. Rivers (2001) states "...autonomy is prerequisite for self-directed language learning" (p.286). Nation's (2022) argument was convincing because Ushioda (1996) suggested "autonomous language learners are by definition motivated learners" (p.2) and Schmitt and Tseng (2008) explain learners who are intrinsically motivated to learn vocabulary are more likely to be in control and ownership of their own learning.

As cited in Mizumoto and Takeuchi (2024), according to Tseng et al., 2006) "In the domain of L2 (second language) vocabulary acquisition, self-regulated vocabulary learning refers specifically to the degree to which learners actively control their own learning process" (p.2) and this approach has a positive impact on vocabulary learning outcomes. Intrinsic motivation and self-regulating capacity are essential parts of strategic behaviors and as mentioned by Schmitt and Tseng (2008) as well as having the tactics of acquiring set of vocabulary learning, learners also have the will which derives from motivation, to reach their goals. Furthermore, as the

strategy use is not directly affected by the motivation driven by choice but must be channeled through self-regulation (Schmitt & Tseng, 2008). Finally, as stated by, Mizumoto, Takeuchi and Teng (2024), from their choice of strategies to assessment of the outcomes, every learner exert some control over vocabulary learning and while this perspective provides a deeper understanding of various strategies and individuals to utilize other approaches to enhance their lexical knowledge, it is leading to an increase in the application of SRL framework regarding vocabulary learning.

Self-Regulating Capacity in Vocabulary Learning

Schmitt (2000) highlights that memorization, repetition and taking notes are the most common vocabulary learning strategies. While Nation (2022) states “Self-motivation, an essential component of autonomy is central to continued effective learning” (p. 319.) Oxford (2017) noted that a particular vocabulary learning strategy might not be effective for everyone as the effectiveness is influenced by multiple factors. According to the study conducted by Schmitz and Wiese (2006) with self-regulation training, students showed an improvement regarding their self-regulation and there is a significant development in students’ self-directed learning, motivation and self-efficacy. Thus, by promoting self-regulated learning and linking self-regulatory strategies teachers might create an environment for learners to become more autonomous and help them to develop “specific abilities to navigate different (learning) environments” (Reinders & White, 2011, p. 2) beyond instructional settings.

As cited in Teng (2023), according to Schmitt and Tseng (2008) “involvement in vocabulary learning activities is under the direct influence of a

learner's self-regulating capacity" (p.4). In other words vocabulary learning outcomes might be affected by self-regulated learning strategies (Tseng et al, 2006).

In the field of language learning, multiple models of Self-Regulated Learning, consisting various constructs, have been the subject of proposals from various theoretical perspectives sharing one common assumption (Doaee et al., 2018). One of the reasons why Tseng et al. (2006) came up with an alternative conceptual approach to and asses strategic learning within the frame of self-regulation is that Tseng et al. (2006) focuses mostly on the main learner difference of how self-regulated learners who are engaged in strategic learning differs from the other students who do not engage in strategic learning. According to Teng (2023) to understand the role of self-regulated capacity in vocabulary learning, it is essential to focus on how to measure it.

As the language learning domain is conceptually too broad and often requires diverse learning processes, a significant emphasis was placed on vocabulary regarding second language acquisition process, research by Tseng et al. (2006) laid the groundwork to develop an instrument adapted to test the newly-conceived system of self-regulatory capacity grounded in a specific area of second language acquisition domain, vocabulary learning.

In addition, researchers argue that as they are still facing the same issues regarding psychometrically valid instruments in the area of Vocabulary Learning Strategies, to offer a new perspective on the assessment of language learning strategies, Tseng et. al (2006) developed a new framework through the theoretical lens of self-regulated learning by reconceptualizing the strategic learning (Ziegler, 2015) specifically vocabulary learning in a second language which is psychometrically justifiable compared to the previous instruments (Tseng et al.,

2006). Compared to the other instruments in the field assessing foreign language learning, this approach is distinctive as it is situated within one specific domain of the language, vocabulary learning (Bilican & Yeşilbursa, 2013).

Although it caused controversy in the field of strategic foreign language learning, the researchers introduced Self-regulating Capacity in Vocabulary Learning Scale (SRCvoc) in 2006 (Ziegler, 2015). “This measure does not target any specific behavioral patterns but aims to measure the underlying capacity to regulate the strategic learning behaviors of vocabulary” (Schmitt & Tseng, 2008, p.371).

According to Schmitt and Tseng (2008), setting learning goals, choosing and applying vocabulary learning strategies, using monitoring strategy and assessing the learning outcomes are the main components of self-regulated vocabulary learning.

According to Bilican and Yeşilbursa (2013), rather than the conventional emphasis on the results of strategic learning, this approach highlights and focuses on the importance of learners’ efforts to look for their personalized strategic learning mechanism and self-regulation capacity. Unlike the proponents, Rose (2011) argues that replacing and reconceptualizing Dörnyei’s model of strategic learning based on the self-regulation (2005) which is an old system grounded in the framework of motivational control strategies, might create problems.

As Teng states (2023), including in which ways learners plan, how they set their goals, how they monitor, regulate and manage their behaviors during the acquisition process and how they facilitate their learning conditions within the frame of certain conditions, self-regulated vocabulary learning strategies should be examined from multiple perspectives. SRCvoc consists of five facets: (a) commitment control, (b) metacognitive control, (c) satiation control, (d) emotion control and (e) environmental control (Tseng et al., 2006) and “These five facets

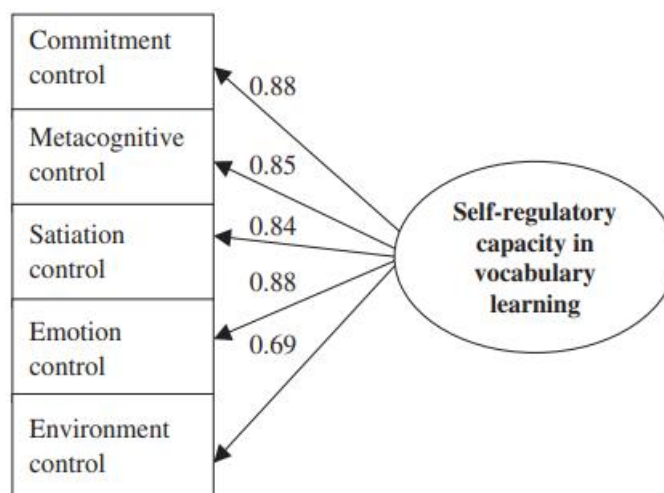
were based on Dörnyei's (2001a) self-regulating system, which draws on a volitional view of self-regulation" (Schmitt & Tseng, 2008, p.371) regarding SRCvoc more information will be provided in the conceptual framework of the study section.

Conceptual Framework of the Study

The conceptual framework of the study is grounded in the research by Tseng et al. (2006) which was developed from Dörnyei's (2001) taxonomy of action control strategies. The self-reported questionnaire, Self-Regulatory Capacity in Vocabulary Learning [SRCvoc] (Tseng et al., 2006) consists of five facets:

- Commitment control, which helps to preserve or increase the learners' original goal commitment.
- Metacognitive control, which involves the monitoring and controlling of concentration, and the curtailing of any unnecessary procrastination.
- Satiation control, which helps to eliminate boredom and to add extra attraction or interest to the task.
- Emotion control, which concerns the management of disruptive emotional states or moods, and the generation of emotions that will be conducive to implementing one's intentions.
- Environmental control, which helps to eliminate negative environmental influences and to exploit positive environmental influences by making the environment an ally in the pursuit of a difficult goal. (Tseng et al., 2006, p. 85-86)

Figure 1 represents the framework of this study as outlined and developed by Tseng et al. (2006).

Figure 1*Conceptual Framework of the Study*

Note. From Tseng, W.-T., Dörnyei, Z., & Schmitt, N. (2006) [Confirmatory factor analysis of the hypothesized model]. In *A new approach to assessing strategic learning: The case of self-regulation in vocabulary acquisition*, *Applied linguistics*, 27(1), 78-102.

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Due to the great deal of uncertainty in the definition of language learning strategies and the inadequate previous instruments regarding the measurement of the capacity of strategic learning (Tseng et al., 2006) this framework was chosen for this current study in an attempt to measure trilingual learners' self-regulation capacity in vocabulary learning.

Validity of the SRCvoc

In the field of second language acquisition, self-regulating capacity in vocabulary learning appears in action and volitional control is considered to be very critical (Mizumoro & Takeuchi, 2011). Alamer et al. (2024) highlight that to assess this construct, the Self-Regulating Capacity in Vocabulary Learning Scale by Tseng et al. (SRCvoc; 2006) is one of the most frequently employed instruments in vocabulary learning. As stated by Doaee et al. (2018) "Tseng et al. (2006) developed and validated the self-regulating capacity in vocabulary learning scale (SRCvoc)" (p.23). A study conducted by Alamer et al. (2024)

showed that the constructs and the validity of SRCvoc were positively and reasonably associated with the achievement in L2 vocabulary. As SRCvoc (Tseng et al., 2006) is considered to be domain-specific instrument (Tseng et al., 2006) and with the significant gap in the literature, regarding the adaptation and utilization of the tool, in their study, Mizumoro and Takeuchi (2011) utilized an adapted and translated version of SRCvoc in a Japanese EFL context as the factor structures were different, but in the Japanese EFL environment SRCvoc scale can be a viable tool for measurement of the self-regulation capacity in vocabulary learning (Mizumoro& Takeuchi, 2011).

According to Trommsdorff (2009), in most of the research regarding self-regulation the focus of the researchers are individual-centered. Furthermore Trommsdorff's (2009) indicates that processes of self-regulation are expected to differ across cultures as the development of self-regulation is embedded in a cultural context. With the aim of investigating the reliability and factor structure of SRCvoc, another study by Doaee et al. (2017) in Iranian EFL context was conducted. As a result of the study, although it is essential to revise the theoretical underpinnings of the instrument, researchers used a translated Persian version of SRCvoc, which was measured through series of factor analyses, in a high-school setting and according to Doaee et al. (2017) to measure self-regulatory vocabulary learning strategies in Iran, the translated Persian version of the instrument is considered to be reliable and valid. Additionally, the findings of the study by Bilican and Yeşilbursa (2013) the translated Turkish version of the SRCvoc (Tseng et al., 2006) appears to be a valid and a reliable instrument in Turkish context to measure the self-regulated vocabulary in high school students; however, adapted version of the instrument required researchers to remove all the “*environmental control* items and two items within the *emotion control*”. In addition, Bilican and Yeşilbursa (2013) claim that further studies need to be conducted in various cultural settings to understand the concept as it is essential to consider that depending on the context, as “processes of self-regulation are assumed to differ cross-culturally” (Trommsdorff, 2009, p.687).

Related Studies

With the shift from the learning strategies to process of improving one's own learning, the use of techniques was set aside while researchers focus more on the self-regulatory process of the learner in vocabulary learning (Tseng et al., 2006). However, in both international and national context, there are not many studies focusing on self-regulating capacity in vocabulary learning. This is also supported by researchers (Bayraktar-Çepni, 2021; Bilican, 2012) stating that lack of studies using SRCvoc (Tseng et al., 2006) demonstrates the gap in the literature.

Lee (2008) conducted a large-scale study with 16,526 first-year high school students taking a nationwide English Achievement Test 2005. The researcher investigated learners' differences in self-regulated learning (SRL) strategies among students at three different EFL achievement levels, as well as between males and females. According to the results, with regards to the achievement among different levels, the high-achieving students reported greater employment of SRL strategies than mid-achieving students who also demonstrated greater use than low-achieving students. Moreover, female participants use SRL strategies more than male participants.

Mizumoto and Takeuchi (2011) conducted a large-scale study in a Japanese English as a Foreign Language setting. During the process of piloting, it became apparent that the factor structures were not the same as the ones in the original study; however, the adapted scale was valid in the Japanese EFL context.

A study conducted in Tehran, Iran by Sadeghi and Kherzrlou (2012) focused on both young learners who are secondary school/ senior high school students and adult learners who are tertiary education/university students' employment of self-regulated vocabulary strategies in texts accompanied by computer-mediated instruction and traditional methods, also comparing their strategy use by students' gender, age and field of education. Using the original SRCvoc (Tseng et al., 2006), the results indicated that the use of strategies in vocabulary was affected by the individual variables. The findings suggested that gender and

field of study were two influential variables in the utilization of self-regulated strategies indicating female learners tend to use more self-regulated strategies compared to males.

In another study, Bilican (2012) investigated general attitudes of high school EFL students to language learning strategies, with an emphasis on vocabulary learning strategies by employing SRCvoc by Tseng et al. (2006). In addition, it is sought to determine if an awareness-raising program of one month for self-regulated vocabulary learning could enhance the autonomous employment of vocabulary learning strategies and increase students' success rates. The results of the study revealed in addition to the need of adaptation of the tool and removal of some of the items, there was no increase in the level of awareness among students.

A study conducted by İnan (2013) by using Turan's *The Self-Regulated Learning Scale* (2009), focused on 240 ELT program university students' relationship between self-regulated learning strategies and their Grade Point Average in Türkiye, revealed that there is a significant relation between use of self-regulated strategies and higher-Grade Point Average (GPA), the more self-regulated learners receive higher grades. Thus, their effort of becoming a self-regulated learner is reflected on their grades by becoming more successful.

Amirian et al. (2015) conducted a study, with 90 English language and literature undergraduate students with a proficiency level ranging from intermediate to advanced in Iran exploring the relationship between Iranian EFL students' self-regulation capacity for vocabulary learning and their vocabulary size. With the implementation of SRCvoc (Tseng et al., 2006) the results revealed compared to the other facets, *metacognitive control* contributed more to the prediction of learners' vocabulary size and freshman students reported to have a higher mean score in their self-regulation capacity.

Ping et al. (2015) investigated 38 Chinese English Foreign Language learners' who are studying at the university of Malaya, perceptions concerning their perceptions and awareness in vocabulary knowledge as well as their needs regarding their strategy use. Researchers utilized an adapted Chinese version of the questionnaire by Gu and Johnson (1996). The findings of the study indicated that EFL learners tend to attach weak

commitment to cognitive strategies and metacognitive strategies in vocabulary learning and the reason why learners were lacking motivation and self-efficacy might be due to the lack of knowledge in strategy employment. Thus, researchers highlighted the need in the enhancement of learners' self-regulation in vocabulary learning through strategy training.

Within the field of self-regulation, Fatemipour and Najafgholikhan (2015) conducted a study with regards to the effect of self-regulated strategy development on EFL learners' vocabulary learning as well as finding a relationship between 60 male and female participants in Iranian context. The results exhibited that, while self-regulated strategy development (SRSD) can positively affect the Iranian EFL learners' vocabulary learning, no significant difference was found among male and female learners.

A study conducted by Bilican and Yeşilbursa (2015) investigated a group of high school EFL students' approach to VLS by employing translated Turkish version of SRCvoc (Tseng et al., 2006) and if one month awareness-raising program for self-regulated vocabulary learning can increase autonomously or not. The results of the study showed that the program did not show changes or enhanced their autonomy regarding the use of self-regulated vocabulary learning.

Another empirical study by Kossakowska-Pisarek (2016) focused on 229 Polish participants' strategy training in the context of positive psychology. The researcher utilized the translated Polish version of SRCvoc and the quasi-experiment dedicated to the application of vocabulary learning strategies. According to the findings, training learners' emotion strategies under self-regulation might allow learners to attain optimal levels of functioning.

Choung (2016) investigated the effects of self-regulation in vocabulary learning for Korean EFL university students. The researcher utilized SRCvoc and Vocabulary Levels Test version 2 (VLT) to gather data. The results revealed that students with strong self-regulating capacities for vocabulary learning managed to get better results on their vocabulary tests and these students also developed their own vocabulary strategies and to create better ones they continuously self-monitored and self-assessed their strategies. Finally,

as stated by the researcher, the study demonstrated that vocabulary acquisition can be boosted by self-regulation.

A study conducted Vujnovic in Croatia (2017), investigated 268 EFL learners' attitude towards vocabulary learning and whether there is a difference among males and females' self-regulation capacity using SRCvoc (Tseng et al., 2006). The result of the study revealed that no significant difference was found between males and females.

Researchers Sarkeshikian et al. (2018) explored the psychometric aspect of SRCvoc (Tseng et al., 2006) and conducted a large-scale study with 1167 high school students in the Iranian EFL context. The study focused on the item level responses and item parcels. However, after the construct validity through statistical analyses, the results suggested that the retheorization of the construct in the Iranian EFL context.

Elçin (2018) examined self-regulating capacity in vocabulary learning of learners with various proficiency levels. These learners were students of Translation and Interpretation Department of Siirt University attending preparatory classes however, the number of the participants were reduced to three during the process of the study. The results of the study revealed that students' self-regulation capacities play a critical role in the effective application of selected strategies when studying vocabulary. According to the findings it was concluded that students' capacity to maintain a balance between positive and negative emotions plays an essential role in their ability to implement the vocabulary learning strategies during the vocabulary learning journey.

Another study was conducted by Zaper (2018), with the aim of examining the development of self-regulated vocabulary learning among Croatian EFL learners with regards to their self-regulating capacity, gender and education level. By administering SRCvoc to 368 EFL learners, the data was collected and results indicated self-regulating capacity, the level of their education and gender do not affect learners' self-regulation in vocabulary learning. Overall, learners report the highest use of *Environmental control* strategies. Additionally, the results also demonstrated that there is a difference between levels of education and contrary to general belief of self-regulation develops in accordance with the

increase in educational levels, the findings suggested primary school students attached stronger emphasis on the use of these strategies compared to secondary school students.

Kambakis-Vougiouklis and Katsarou's (2020) study, the researchers examined 297 Greek university students' VLS and wanted to gain further knowledge of the self-regulating capacity and self-esteem these learners have while learning technical English vocabulary. Thus, Vocabulary Learning Strategies Questionnaire, SRCvoc (Tseng et al., 2006) and Foreign Language Self-Esteem Scale by Hassan (2001) were utilized to collect data. The results revealed that self-regulation correlated with the utilization of 12 vocabulary learning strategies and additionally, pedagogical implications of the study showed that there is a need for the adoption of personalized strategy training programs supported by a social-emotional teaching approach promoting SRL in the Greek EFL context.

Another study by Findık (2020) investigated, regarding their vocabulary achievement, the outcomes and the effects of SRCvoc use into peer tutoring program. The participants of the study were 40 7th grade students studying at a rural public school in Aydın, Türkiye. The researcher utilized the Turkish translated version of SRCvoc (Tseng et al., 2006) and a Background Questionnaire as well as running a pre-test and a post-test. The results indicated that while peer education on vocabulary learning strategies did not show any significance, with peer-teaching there is an increase of the utilization of strategies observed after the post-test.

Within the purpose of investigating the relationship between the self-regulatory capacity of vocabulary learning and vocabulary success, Bayraktar- Çepni (2021) conducted a study among preparatory class students. Using the SRCvoc's (Tseng et al., 2006) Turkish translated version (Bilican & Yeşilbursa, 2013), the obtained data showed that there is a positive relationship between the high vocabulary scores and having higher self-regulatory vocabulary learning capacity compared to the learners with lower scores. Furthermore, the results of the study revealed that with the highest mean score of 3.77, participants mostly keep the environmental issues under control during vocabulary acquisition process.

Teng (2023) examined the effects on the acquisition of new second language words from reading text of three-word focused exercise conditions and to what extent these effects can be predicted by three learner variables including self-regulated capacity in vocabulary learning. The researcher examined 270 Chinese EFL students and the results showed that in order to increase the effectiveness of vocabulary learning self-regulated capacity with other learner-related variables need to be considered.

Cho (2023) investigated Korean high-school students' motivation and self-regulatory capacity in English vocabulary learning by using two instruments; Vocabulary Learning Motivation scale (EVL) and Self-regulatory Capacity in English Vocabulary Learning scale (SCEVL). The findings suggested that advanced learners reported to have greater outcomes regarding, *commitment*, *metacognition*, *satiating*, *emotion*, and *environment control* on the SCEVL and moreover, significant correlations were observed among the knowledge of vocabulary, motivation and self-regulation in English vocabulary learning.

Another study was conducted by Hoa and Uyen (2023) to get more knowledge regarding the self-regulatory capacity in learning English grammar of high-school students in Gia Lai zone. Using Dörnyei's theoretical framework, the results exhibited that males tend to use *metacognitive control* and *emotion control* strategies more while for other constructs both genders reported similar use. Overall, *commitment control* and *environmental control* strategies are the most-developed self-regulatory capacities among students.

Ayhan and Payan's (2023) study examined the relationship between critical thinking and self-regulation in vocabulary learning. To collect data researchers administered Schmitt's Vocabulary Levels Test (2000) to 130 students, critical thinking questionnaire by Honey (2004) and SRCvoc by Tseng et al., (2006) were administered to selected participants. The results demonstrated that the higher the learners' use of self-regulation, the higher their L2 vocabulary knowledge. According to the results no significant difference was found among both males and females.

A study (Işık, 2023) conducted in Batman Türkiye assessed the effect of Web 2.0 tools on 40 secondary school students' vocabulary development and self-regulated

vocabulary learning strategies. The researcher utilized SRCvoc (Tseng et al., 2006) and semi-structured interviews to collect data as well as employing pre-test and post-test. The results of the study revealed that students using Web 2.0 tools increased their employment of *commitment control*, *metacognitive control* and *emotion control* with an increase in their achievement compared to the control group who did not use any Web 2.0 tools but no significant difference was observed concerning the utilization of *environmental* and *satiation* control strategies.

To gain valuable insights into the relationship between growth mindset, self-regulatory capacity in vocabulary learning and vocabulary knowledge, Teng, Mizumoto and Takeuchi (2024) conducted research using SRCvoc (Tseng et al., 2006). The researchers collected data from 259 Chinese college students. The results of the study indicated that it is very likely that by improving vocabulary acquisition, growth mindset in vocabulary learning may lead to improved self-regulation in the learning process. Moreover, findings suggested that higher-achiever learners tend to have better self-regulation skills compared to low-achievers.

İstifçi (2024) conducted a researcher recently to determine whether there is a significant relationship between EFL learners' self-regulated learning regarding their gender and with respect to their English proficiency level. The data was collected by utilizing the adapted questionnaire by Dündar and Köksal (2018) and it was collected from elementary and upper-intermediate students studying in a preparatory program and the findings of the study revealed that proficiency level did not affect the strategy use in self-regulated learning, additionally, the significant gender differences was found. Finally, the result also indicated that the employment of self-regulatory strategies outside of the classroom, encouraged students to become more autonomous.

CHAPTER 3: METHOD

Introduction

This chapter describes the research design and the participants of the study as well as provides information regarding the setting, instrumentation, data collection and analysis procedures.

Research Design

To reiterate, the study aimed to address the following research questions:

1. To what extent do the trilingual learners enrolled in a three-language bachelor's program at a foundation university in Türkiye self-regulate their capacity in vocabulary learning?
2. Does the self-regulating capacity in vocabulary learning differ among trilingual learners based on gender, type of high school, years of undergraduate education, achievement as measured by CGPA, achievement in core language classes, and participation in English and French Preparatory programs?

This study investigates the perceptions of trilingual learners in an EMI context regarding their strategic self-regulating capacity in vocabulary learning. To address the first questions, the researcher utilized a cross-sectional single-site survey. According to Fraenkel and Wallen (2006), "A cross-sectional survey collects information from a predetermined population" at one point in time (p.391). This method is particularly useful for examining the current beliefs, behaviors, and other variables of interests within a specific group (Maier et al., 2023).

To investigate the potential differences in learners' perceived use of Self-Regulatory Strategies (Tseng et al., 2006) by the abovementioned variables, the researcher employed a causal-comparative design. "In causal-comparative research, the researcher attempts to determine the cause, or reason, for existing differences in behavior or status of groups or individuals" (Gay & Mills, 2012, p.250). As stated by Gao and Hu (2020), being a high achiever and underachiever, having different backgrounds, resources, and social environments could affect the employment of the self-regulatory strategies used by trilingual learners differ by the given grouping variables.

Context

The study was conducted at a foundation EMI (English Medium Instruction) university in Ankara, Türkiye, which offers a trilingual (English, French and Turkish) Translation and Interpretation program. This setting was chosen because it was the only EMI university out of three institutions offering trilingual translation and interpretation program with the same language combinations of English, French and Turkish. High school graduates begin their undergraduate studies with separate English and French preparatory programs, demonstrating language proficiency through either the institution's proficiency exams or recognized external exams. The English preparatory program requires passing the university's proficiency exam, TOEFL iBT, or IELTS. The French preparatory program mandates passing the DELF B2 exam (Diplôme d'Études en Langue Française) which corresponds to the B2 level of the Common European Framework of Reference for Languages (CEFR) (Institut français de Turquie, n.d.), or successful program completion. Students who are enrolled in the French preparatory program are assumed to have no prior

knowledge of French language and are expected to continue learning French throughout their undergraduate studies.

The university does not require a certificate of proficiency in Turkish or offer Turkish preparatory program as Turkish is recognized as the students' native language.

Undergraduate studies then continue in all three languages: English, French and Turkish. In addition, all students must take ENG101 and ENG102 EAP (English for Academic Purposes) courses, which focus on equipping students with academic English skills in critical thinking, reading, writing, speaking and listening skills that they will need in their undergraduate studies as well as the development of essential research skills they will need during their undergraduate studies.

Participants

The participants of the study are 1st, 2nd, 3rd and 4th year trilingual students enrolled in the trilingual program, comprising a total of 165 students. No international students participated in this study. All students were sent a survey, and 83 students responded. Participation was voluntary, and all respondents were at least 18 years old. Table 1 below demonstrates the demographic information of the participants who completed the questionnaire.

Table 1

Demographic Data (N = 83)

Characteristics	<i>n</i>	%
Gender		
Female	59	71.1
Male	20	24.1
Prefer not to say	4	4.8
Type of High School		
Public	50	60.2
Private	33	39.8
Year of Study		
Freshman	43	51.8

Characteristics	<i>n</i>	%
Sophomore	18	21.7
Junior, Senior	22	26.5
Cumulative Grade Average Point		
3.00-4.00	39	47
2.00-3.00	11	13.3
Not Applicable	33	39.8
French Preparatory Program Participation		
Yes	81	97.6
No	2	2.4
English Preparatory Program Participation		
Yes	5	6
No	78	94
ENG101 Letter Grade		
A, A-	24	28.9
B+, B	19	22.9
B-, C+, C	10	12
Not Applicable	30	36.1
ENG102 Letter Grade		
A, A-	19	22.9
B, B+, B-	17	20.5
Not Applicable	47	56.6

According to Table 1, most of the participants were females, with only 4 students preferring not to disclose their gender. As the table demonstrates, more than half of the students attended a public high school. The majority of the participants were freshman students. Except for 2, almost all of them attended the French preparatory program but only 5 of the participants attended the English preparatory program. Regarding ENG101, a majority of the participants did not provide information about their letter grade. For ENG 102, those who did not provide information about their letter grades included the ones who had not taken the course yet.

Instrumentation

The questionnaire used in this current study consisted of two parts (Appendix 2). The first part of the questionnaire was about participants' demographic

information. The second part of the questionnaire was the Self-Regulating Capacity in Vocabulary Learning Scale (Tseng et al., 2006).

The questionnaire consists of 20 statements divided into 5 facets; *Commitment Control*, *Metacognitive Control*, *Satiation Control*, *Emotion Control*, *Environment Control*. The statements in the questionnaire were rated on a six-point Likert-type measurement scale ranges as follows: 1 (Strongly Disagree), 2 (Disagree), 3 (Slightly Disagree), 4 (Partly Agree), 5 (Agree), 6 (Strongly Agree). Since the participants were language learners who had either completed the English preparatory program or provided a certain document demonstrating their proficiency level, it was presumed that participants had a sufficient level of English proficiency, thus the statements were not translated. However, for statement 19, to improve the clarity, the researcher provided synonyms (energize, quicken, strengthen) for the word “invigorate”.

Regarding the reliability of the subscales of the instrument, Tseng et al., conducted an internal consistency reliability analysis (2006), with a mean scale coefficient of 0.85 for *Commitment control*, 0.79 for *Metacognitive control*, 0.75 for *Satiation control*, 0.78 for *Emotion control* and 0.66 for *Environmental control* and with a mean scale coefficient of 0.77 the ‘Self-Regulating Capacity in Vocabulary Learning Scale’ (SRCvoc) was considered to be a reliable instrument according to Tseng et al., “the instrument was well within the range of acceptability as suggested by DeVellis (1991)” (p. 90).

To further assess the reliability of the constructs Cronbach’s alpha values were calculated by the researcher (Table 3).

Table 2 below demonstrates the statement numbers of the *Self-Regulating Capacity in Vocabulary Learning Scale* (SRCvoc, Tseng et al., 2006).

Table 2*Statement Numbers of Self-Regulating Capacity in Vocabulary Learning Scale*

SRCvoc	Statement Numbers
Commitment Control	4,7,10,13
Metacognitive Control	5,9,11,16
Satiation Control	1,8,18,19
Emotion Control	2,6,12,15
Environmental Control	3,14,17,20

The Cronbach's Alpha Coefficients of the *Self-Regulating Capacity in Vocabulary Learning Scale* can be seen in Table 3.

Table 3*Cronbach's Alpha Coefficients of SRCvoc*

Facets	α
Commitment Control	.77
Metacognitive Control	.90
Satiation Control	.66
Emotion Control	.88
Environmental Control	.64
Total	.93

As Table 3 demonstrates, with an overall value of .93, Cronbach's alpha shows a high level of internal reliability. According to Larson-Hall (2015), a level of .70-.80 can be considered acceptable, while a level of .30-.60 can be interpreted as reliable.

In addition to reliability, Tseng, Dörnyei, and Schmitt (2006) conducted an Exploratory Factor Analysis to ensure that no other underlying traits would be revealed by the five facets of the instrument. Their analysis indicated that the instrument captured a single underlying trait, confirming that it is unidimensional (Figure 1).

Method of Data Collection

With the approval of the University's Ethics Committee and the necessary approval from a trilingual bachelor's program at a foundation university in Türkiye, the researcher visited the department concerned to introduce herself and the purpose of the study. The questionnaire and the informed consent form, prepared using Google Forms (Appendix 2), were shared with the chair of the department. Additionally, the researcher prepared a text introducing herself, and the research topic, provided information about voluntary participation and a QR code with a link to the questionnaire (Appendix 3), and distributed these sheets in the classrooms when she went to present her study. The department sent the questionnaire's link to the participants via e-mail, and prior to study, all the participants provided informed consent via the form included in the questionnaire. The study was conducted at the end of the Fall semester of 2023, and the beginning of the Spring 2024 semester.

Methods of Data Analysis

Quantitative data was analyzed by the IBM Statistical Package for Social Sciences program (version 29.0.2.0), employing both descriptive and inferential statistics. Descriptive statistics were used to address the first research question. Inferential statistics were employed to explore potential differences in trilingual learners' perceptions. Before conducting inferential analysis, assumptions for parametric tests- normality and homogeneity of variances- were checked both numerically and visually as proposed by Larson-Hall (2010).

The responses given for the constructs of the study: *Commitment Control*, *Metacognitive Control*, *Satiation Control*, and *Emotion Control* met the assumptions for parametric tests, but the responses for each statement did not. Therefore, non-parametric versions were employed. As for *Environmental Control*, the assumptions

for parametric tests were not met at the construct and statement level except for ENG102 letter grade. Based on the results, the following tests were conducted and presented in Table 4.

Table 4

Tests Used for Categorical and Dependent Variables in SRCvoc

Dependent variables	Categorical variables	Tests used
Commitment Control	Gender	Independent Samples T-test Mann-Whitney U test
	High-School Type	Independent Samples T-test Mann-Whitney U test
	Year of Study	ANOVA Kruskal-Wallis Rank Score Test
	CGPA	Independent Samples T-test Mann-Whitney U test
	ENG101 Letter Grade	Kruskal-Wallis Rank Score Test
	ENG102 Letter Grade	Independent Samples T-test Mann-Whitney U test
	English Prep Program	Mann-Whitney U test
Metacognitive Control	French Prep Program	-
	Gender	Independent Samples T-test Mann-Whitney U test
	High-School Type	Independent Samples T-test Mann-Whitney U test
	Year of Study	ANOVA Kruskal-Wallis Rank Score test
	CGPA	Independent Samples T-test Mann-Whitney U test
	French Prep Program	-
	English Prep Program	Independent Samples T-test Mann-Whitney U test

Dependent variables	Categorical variables	Tests used
Satiation Control	ENG101 Letter Grade	Kruskal-Wallis Rank Score test
	ENG102 Letter Grade	Independent Samples T-test Mann-Whitney U test
	Gender	Independent Samples T-test Mann-Whitney U test
	High-School Type	Mann-Whitney U test
	Year of Study	Kruskal-Wallis Rank Score test
	CGPA	Independent Samples T-test Mann-Whitney U test
	French Prep Program	-
	English Prep Program	Independent Samples T-test Mann-Whitney U test
	ENG101 Letter Grade	ANOVA Kruskal-Wallis Rank Score test
	ENG102 Letter Grade	ANOVA Kruskal-Wallis Rank Score test
Emotion Control	Gender	Independent Samples T-test Mann-Whitney U test
	High-School Type	Independent Samples T-test Mann-Whitney U test
	Year of Study	Kruskal-Wallis Rank Score test
	CGPA	Independent Samples T-test Mann-Whitney U test
	French Prep Program	-
	English Prep Program	Independent Samples T-test Mann-Whitney U test

Dependent variables	Categorical variables	Tests used
Emotion Control	ENG101 Letter Grade	ANOVA Kruskal-Wallis Rank Score test
	ENG102 Letter Grade	Independent Samples T-test Mann-Whitney U test
Environmental Control	Gender	Kruskal-Wallis Rank Score test Mann-Whitney U test
	High-School Type	Mann-Whitney U test
	Year of Study	Kruskal-Wallis Rank Score test
	CGPA	Mann-Whitney U test
	French Prep Program English Prep Program	- Mann-Whitney U test
	ENG101 Letter Grade ENG102 Letter Grade	Kruskal-Wallis Rank Score test Independent Samples T-test Mann-Whitney U test

According to Table 4, for categorical variables with two groups, both parametric and non-parametric tests were employed:

- The Independent Samples T-test: “a parametric test which can tell you whether the scores of two groups on one measure are statistically different from one another” (Larson-Hall, 2010, p.394)
- The Mann-Whitney U test, a nonparametric test “used when you have an independent variable with just two groups and one dependent variable” (Larson-Hall, 2010, p.395).

For categorical variable with three or more groups (Larson-Hall, 2010), ANOVA and the Kruskal-Wallis Rank Score test were utilized. The choice between these tests was guided by the result of the Shapiro-Wilk test for normality. When the Kruskal-Wallis Rank Score test indicated a significant difference, Dunn’s test was

conducted to pinpoint which groups differed significantly. As for the requirement for a post-hoc test after running one-way ANOVA, Tukey's post-hoc test was used. Also known as Tukey "Honestly significant difference" (HSD) test, according to Lee and Lee, "[t]his test uses pairwise post-hoc testing to determine whether there is a difference between the means of all possible pairs" (p. 355, 2018).

Ethical Considerations

Informed consent form (Appendix A) and the questionnaire (Appendix B) were submitted to the University's Ethics Committee for approval. Once the required approval was obtained, the researcher contacted the chair of the department and requested permission to distribute the questionnaire via e-mail. The questionnaire was sent solely to Turkish students that are enrolled in the program. Erasmus and exchange students did not participate in the study.

When introducing herself and the purpose of the study, the researcher informed the participants that their participation was voluntary and they had the right to withdraw from the study at any time for any reason. To participate, students were required to be at least 18 years of age. Participants were also informed that their information would remain confidential, would not be shared with any third parties, and that collected data would be stored on the researcher's password-protected personal computer. Participants' consent was obtained through the first section of the online questionnaire prior to the actual survey itself.

CHAPTER 4: RESULTS

Introduction

The chapter initially examines the overall use of self-regulating capacity in vocabulary learning of the participants. In addition, the chapter will examine Self-Regulating Capacity in Vocabulary Learning Scale (SRCvoc) according to five facets of *Commitment Control*, *Metacognitive Control*, *Satiation Control*, *Emotion Control* and *Environmental Control* (Tseng et al., 2006). The quantitative data provided by the trilingual learners are presented and discussed. The frequency of SRCvoc and the significant differences according to their gender, high-school type, year of study, achievement as measured by CGPA, achievement in ENG101 and achievement in ENG102, and English and French preparatory program participation are identified and reported within each facet.

Overall Use of Self-Regulating Capacity in Vocabulary Learning

In order to explore trilingual learners' strategic self-regulating capacity in vocabulary learning in higher education context SRCvoc (Tseng et al., 2006) Questionnaire was used to collect data. The first five facets: *Commitment Control*, *Metacognitive Control*, *Satiation Control*, *Emotion Control* and *Environmental Control* were analyzed descriptively. Table 5 displays the mean (*M*) and standard deviation (*SD*) scores for each facet along with the overall score rated on a 1 to 6 scale.

Table 5*Use of Self-Regulating Capacity in Vocabulary Learning (SRCvoc) (N = 83)*

Facets	Number of Statements	<i>M</i>	<i>SD</i>
Commitment Control	4	4.39	0.86
Metacognitive Control	4	3.76	1.15
Satiation Control	4	3.84	0.80
Emotion Control	4	3.88	1.13
Environmental Control	4	4.62	0.71
Total	20	4.10	0.71

The overall mean score of 4.10 (out of 6) with a standard deviation of 0.71 suggests that, on average, participants reported a general tendency towards partly agreeing that they use self-regulating capacity in vocabulary learning. The relatively small standard deviation indicated that most participants reported similar levels of self-regulation (Table 5).

The highest mean score of 4.62 ($SD = 0.71$) for *Environmental Control* demonstrates a strong agreement among participants that they could effectively manage their learning environments. In contrast, the lowest rating ($M = 3.76$, $SD = 1.15$) on the facet of *Metacognitive Control* indicated a relatively greater variability in participant's ability to plan, monitor and evaluate the self-regulatory strategies, suggesting a broader range of individual differences in the use of metacognitive regulation compared to other self-regulatory practices.

Differences in the Overall Use of Self-Regulating Capacity in Vocabulary Learning

A series of descriptive and inferential statistics were conducted with the aim of investigating whether trilingual learners' perceptions of the employment of these strategies differed according to several categorical variables; gender, type of high

school, year of study, achievement as measured by CGPA, French and English preparatory program participation, achievement as measured by ENG101 letter grade and ENG102 letter grade.

Gender

With the aim of investigating gender based differences regarding participants' overall use of Self-Regulatory Strategies, the participants in this study were grouped by female ($n=59$), male ($n=20$) and the researcher provided another option, 'prefer not to say' ($n=4$), for participants who did not want to indicate their gender which was further excluded from the analysis. Table 6 represents the mean scores and standard deviation for the overall use of Self-Regulatory Strategies by gender.

Table 6

Overall Use of Self-Regulatory Capacity in Vocabulary by Gender

Overall	Female ($n=59$)		Male ($n=20$)		Prefer not to say ($n=4$)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
SRCvoc	4.04	0.72	4.20	0.71	4.55	0.51

The table demonstrates that, with a slightly higher mean score, male students put strong emphasis on the use of Self-Regulatory Strategies ($M = 4.20$) with a little variance in their responses ($SD = 0.71$) compared to students who identified themselves as female ($M = 4.04$, $SD = 0.72$).

To investigate potential significant differences between female and male participants regarding their perceived use of self-regulatory strategies, an Independent Samples T-test was conducted as normality assumptions were met.

Table 7

Independent Samples T-test Results for the Overall Use of SRCvoc by Gender

Overall	Female (n=59)		Male (n=20)		t(77)	p
	M	SD	M	SD		
SRCvoc	4.04	0.72	4.20	0.71	-0.834	.407

The results of the Independent Samples T-test denoted no statistically difference between females and males in the overall use of self-regulatory strategies.

Type of High School

To understand if the trilingual learners' perceived use of Self-Regulatory Strategies differed by the type of high school attended, both descriptive and inferential statistics were used to calculate mean scores and standard deviation. The students were categorized as those who attended public high schools ($n= 50$) and those who attended private high schools ($n= 33$).

Table 8

Overall Use of Self-Regulatory Capacity in Vocabulary by Type of High School

Overall	Public (n=50)		Private (n=33)	
	M	SD	M	SD
SRCvoc	4.16	0.72	4.02	0.70

The results indicate that students who attended public high schools had a higher mean score ($M = 4.16$, $SD = 0.72$) compared to those who attended private high schools ($M = 4.02$, $SD = 0.70$), suggesting that public high school student may place slightly stronger emphasis on overall self-regulatory strategies.

To examine if there was any significant differences between the two groups, after confirming the fact that normality assumptions were met, an Independent Samples T-test was conducted (Table 9).

Table 9

Independent Samples T-test Results for the Overall Use of SRCvoc by Type of High School

Overall	Public (n=50)		Private (n=33)		t(81)	p
	M	SD	M	SD		
SRCvoc	4.16	0.72	4.02	0.70	0.862	.391

The t-test results indicate there was no statistically significant difference between students who attended public high schools and those who attended private high schools in their overall use of self-regulatory strategies.

Year of Study

This study investigated if the perceptions of trilingual learners regarding their personal vocabulary learning experiences differed by their year of study. Participants were grouped as Freshman (n= 43), Sophomore (n= 18) and finally, Junior/Senior (n= 22). Table 10 presents the overall use of these self-regulatory strategies among three groups.

Table 10

Overall Use of Self-Regulatory Capacity in Vocabulary by Year of Study

Overall	Group 1		Group 2		Group 3	
	Freshman		Sophomore		Junior, Senior	
	(n=43)		(n=18)		(n=22)	
	M	SD	M	SD	M	SD
SRCvoc	4.07	0.71	4.12	0.59	4.15	0.82

The results showed that with small differences in mean scores, Junior/Senior students placed the highest attachment to the practice of these self-regulatory strategies ($M = 4.15$, $SD = 0.82$) with a little variance in their responses. It is followed by Sophomore students with a mean score of 4.12 ($SD = 0.59$) and lastly, Freshman students who reported the lowest mean score of 4.07 ($SD = 0.71$).

The assumptions of normality were met. To further examine whether these mean differences were statistically significant, one-way ANOVA was conducted (Table 11).

Table 11

ANOVA Results for the Overall Use of SRCvoc by Year of Study

Overall	Freshman		Sophomore		Junior,Senior		$F(2, 80)$	η^2	p
	(n=43)		(n=18)		(n=22)				
	M	SD	M	SD	M	SD			
SRCvoc	4.07	0.71	4.12	0.59	4.15	0.82	0.114	.000	.892

One-way ANOVA test results demonstrated there were no statistically significant differences in the overall use of self-regulatory strategies among the three groups.

CGPA

The purpose of this study included if participants' overall implementation of these self-regulatory strategies differed based on their CGPA scores. Participants were divided into three groups, higher-performing students as '3.00- 4.00' ($n= 39$), lower-performing students as '2.00- 3.00' ($n= 11$) and students who did not indicate their CGPA scores as 'Not Applicable' ($n= 33$) which was further excluded from inferential analysis.

Table 12

Overall Use of Self-Regulatory Capacity in Vocabulary by CGPA

Overall	3.00-4.00		2.00-3.00		Not Applicable	
	(n=39)		(n=11)		(n=33)	
	M	SD	M	SD	M	SD
SRCvoc	4.19	0.70	3.93	0.80	4.06	0.70

According to Table 12, the data suggested that higher-performing students (3.00- 4.00: $M = 4.19$, $SD = 0.70$) give more weight on the utilization of these self-

regulatory strategies in vocabulary learning compared to lower- performing students with a mean score of 3.93 ($SD = 0.80$) indicating a slight variance in their responses.

To reveal if there was a significant difference among groups, Independent Samples T-test was conducted (Table 13).

Table 13

Independent Samples T-test Results for the Overall Use of Self-Regulatory Strategies by Cumulative Grade Average Point

Overall	3.00-4.00 ($n=39$)		2.00-3.00 ($n=11$)		$t(48)$	p
	M	SD	M	SD		
SRCvoc	4.19	0.70	3.93	0.80	1.030	.308

No statistically significant difference among higher performing students and lower performing students were observed in the overall use of self-regulatory strategies.

French Preparatory Program Participation

The participants of the study were categorized into two groups as students who attended French preparatory program ($n= 81$) and the ones who did not attend the program ($n= 2$). Table 14 displays the mean and standard deviation scores of the overall use of these self-regulatory strategies with respect to their French preparatory program participation.

Table 14

Overall Use of Self-Regulatory Capacity in Vocabulary by French Preparatory Program Participation

Overall	Group 1 Yes ($n=81$)		Group 2 No ($n=2$)	
	M	SD	M	SD
SRCvoc	4.12	0.71	3.40	0.63

The results indicated that while students who attended the French preparatory program ($M = 4.12$, $SD = 0.71$) put greater emphasis on the strategy use, students who did not attend the program ($M = 3.40$, $SD = 0.63$) attached weaker commitment to the usage of SRCvoc with a little variance in their responses.

English Preparatory Program Participation

Additionally, this study focused on whether the employment of SRCvoc varied based on participation in the English Preparatory Program offered by the trilingual bachelor's program prior to trilingual learners' studies.

Students were categorized as the ones attended English preparatory program 'Yes' ($n = 5$) and students who did not attend the English preparatory program 'No' ($n = 78$). Table 15 demonstrated the overall mean and standard deviation scores of the perceived use of Self-Regulatory Strategies by students' English preparatory program participation.

Table 15

Overall Use of Self-Regulatory Capacity in Vocabulary by English Preparatory Program Participation

	Overall		Group 1		Group 2	
			Yes ($n = 5$)		No ($n = 78$)	
			<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
SRCvoc			3.51	0.72	4.14	0.70

The data suggested that students who reported to not to attend English preparatory program ($M = 4.14$, $SD = 0.70$) emphasized the use of these self-regulatory strategies more than the students attended English preparatory program ($M = 3.51$, $SD = 0.72$) preceding to their undergraduate studies.

To investigate if there was any significant differences in the perceived use of Self-Regulatory Strategies between the two groups, researcher run Independent Samples T-test after confirming the fact that the data met the normality assumptions.

Table 16

Independent Samples T-test Results for the Overall Use of Self-Regulatory Strategies by English Preparatory Program Participation

Overall	Yes (n=5)		No (n=78)		t(81)	p
	M	SD	M	SD		
SRCvoc	3.51	0.72	4.14	0.70	-1.954	.054

The results indicated that although there is some indication of a difference between the two groups, with a *p* value of 0.054, it is not strong enough to state that there is a significant difference between the students attended the English preparatory program and students who did not.

ENG101 Letter Grade

Participants of the study were grouped into three: high-achieving students receiving A, A- (n= 24), mid-achieving students receiving B+, B (n= 19), low-achieving students receiving B-, C+ and C (n=10) and lastly students who did not indicate their ENG101 letter grades (n= 30) which was further excluded for inferential statistics.

Table 17

Overall Use of Self-Regulatory Capacity in Vocabulary by ENG101 Letter Grade

Overall	Group 1		Group 2		Group 3		Not	
	A,A- (n=24)		B+,B (n=19)		B-,C+C (n=10)		Applicable (n=30)	
	M	SD	M	SD	M	SD	M	SD
SRCvoc	4.40	0.56	3.65	0.73	4.47	0.59	4.03	0.70

As can be seen in table 18, lower-achieving students (B-, C+, C: $M = 4.47$, $SD = 0.59$) attached the most commitment to the utilization of SRCvoc among three groups. It was followed by the higher-achieving students receiving A or A- with a mean score of 4.40 ($SD = 0.56$). While as for the lowest mean score of 3.65 ($SD = 0.73$), students receiving B+ or B letter grades for ENG101 course, reported to put a slight emphasis on the use of these self-regulatory strategies.

In order to investigate if mean differences among the three groups differed significantly, one-way ANOVA was conducted since the assumptions of normality were met.

Table 18

ANOVA Results for the Overall Use of Self-Regulatory Strategies by ENG101 Letter Grade

	Group 1		Group 2		Group 3		$F(3,79)$	η^2	p
Overall	A,A- ($n=24$)		B+,B ($n=19$)		B-,C+,C ($n=10$)				
	M	SD	M	SD	M	SD			
SRCvoc	4.40	0.56	3.65	0.73	4.47	0.59	5.620	0.175	.002

As can be seen in Table 19, the ANOVA results suggest there is statistically significant difference in the overall use of self-regulatory strategies (SRCvoc) among the groups based on ENG101 letter grades ($F_{3,79} = 5.620$, $p = .002$). To further investigate the moderate effect size and the significant p-value, and the investigate the differences among the groups, a post-hoc test was conducted, as shown in Table 19.

Table 19*Tukey HSD Results for the Overall Use of Self-Regulatory Strategies by ENG101**Letter Grade*

Overall	ENG101 Letter Grade	ENG101 Letter Grade	Mean Difference	Standard Error	<i>p</i>
<i>SRCvoc</i>	A, A-	B+, B	-0.743	0.203	.003
		B-, C+, C	-0.067	0.249	.993
	B+, B	A, A-	-0.743	0.203	.003
		B-, C+, C	-0.811	0.258	.013
	B-,C+,C	A, A-	0.067	0.249	.993
		B+, B	0.811	0.258	.013

Tukey HSD test results demonstrated that, there is a significant difference between students receiving A,A- ($M = 4.40$, $SD = 0.56$) and students receiving B+ or B ($M = 3.65$, $SD = 0.73$) indicating that higher-achieving students tend to have more positive approach in terms of using SRCvoc in vocabulary learning than students receiving B+ or B letter grade for this course. Another significant difference was observed between the group of students receiving B-, C+ or C ($M = 4.47$, $SD = 0.59$) and the ones receiving B+ or B ($M = 3.65$, $SD = 0.73$) implying lower-achieving students implement these self-regulatory strategies in their vocabulary learning process more than mid-achieving students.

ENG102 Letter Grade

Finally, this study also investigated whether the ENG102 letter grades of the participants differed by their implementation of SRCvoc (Table 21). The researcher grouped participants according to their received letter grades A, A- ($n=19$), B+, B, B- ($n=17$) and Not Applicable ($n=47$) which was further excluded for the inferential analysis.

Table 20

Overall Use of Self-Regulatory Capacity in Vocabulary by English102 Letter Grade

	Overall		A,A- (n=19)		B+,B, B- (n=17)		Not Applicable (n=47)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
SRCvoc	4.27	0.70	3.95	0.74	4.09	0.70		

The table evidenced that higher-achieving students receiving A or A- hold a stronger commitment to the use of Self-Regulatory Strategies in vocabulary learning than the lower-achieving students who received B+, B or B- for this course.

After confirming the fact that normality assumptions were met, to further examine the differences between the two groups, the researcher run Independent samples t-test.

Table 21

Independent Samples T-test Results for the Overall Use of Self-Regulatory Strategies by ENG102 Letter Grade

Overall	Group 1		Group 2		<i>t</i> (34)	<i>p</i>
	A, A- (<i>n</i> =19)		B,B+,B- (<i>n</i> =17)			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
SRCvoc	4.27	0.70	3.95	0.74	1.359	.183

According to the results of the independent samples t-test, no statistically significant difference was observed between to two groups regarding their perceived use of self-regulatory strategies.

Commitment Control

For the purpose of understanding of the participants' ($N=83$) scores, the four statements under *Commitment Control* were further analyzed descriptively (Table 22).

Table 22

Commitment Control (N=83)

Statements	<i>M</i>	<i>SD</i>
4. When learning vocabulary, I have special techniques to achieve my learning goals.	4.51	1.25
7. When learning vocabulary, I believe I can achieve my goals more quickly than expected.	4.24	1.20
10. When learning vocabulary, I persist until I reach the goals that I make for myself.	4.33	1.32
13. I believe I can overcome all the difficulties related to achieving my vocabulary learning goals.	4.55	1.01

As shown in Table 22, the statements assessing *Commitment Control* in vocabulary learning revealed generally high mean scores, ranging from 4.24 to 4.55. This indicates participants' strong agreement with statements reflecting their ability to set and achieve goals, overcome challenges and persist in their efforts, with some variability in responses.

Participants generally agreed that they have special techniques to achieve their vocabulary learning goals ($M= 4.51$, $SD= 1.25$) and they could overcome difficulties related to achieving these goals ($M= 4.55$, $SD= 1.01$). They also reported they could achieve their goals more quickly than expected ($M= 4.24$, $SD= 1.20$) and persist until reaching their self-set goals ($M= 4.33$, $SD= 1.32$). However, high standard deviations indicated some discrepancy in their responses.

To determine whether their perceptions in relation to SRCvoc differed on the basis of gender, high school type, year of study, English preparatory program participation, French preparatory program participation, ENG101 letter grade and ENG102 letter grade, inferential analysis was conducted.

Commitment Control: Gender

The participants of the study were categorized by gender as female ($n=59$), male ($n=20$) and prefer not to say ($n=4$). The degree of agreement was analyzed descriptively first and reported below (Table 23).

Table 23

Use of Commitment Control by Gender

Statements	Female ($n=59$)		Male ($n=20$)		Prefer not to answer ($n=4$)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
4. When learning vocabulary, I have special techniques to achieve my learning goals.	4.43	1.27	4.60	1.27	5.25	0.50
7. When learning vocabulary, I believe I can achieve my goals quickly than expected.	4.14	1.18	4.50	1.27	4.50	0.57
10. When learning vocabulary, I persist until I reach the goals that I make for myself. Unsuitable, I try to sort the problem.	4.27	1.22	4.40	1.63	4.75	1.25
13. I believe I can overcome all the difficulties related to achieving my vocabulary learning goals.	4.41	0.98	4.85	1.08	5.25	0.50
Overall	4.34	0.80	4.58	0.84	4.93	0.59

As demonstrated in Table 24, both groups reported high average scores within the range of 4.14 to 4.85 on a six-point Likert scale for each statement. Female participants reported an overall mean score of 4.29 ($SD = 0.86$), while male participants reported a slightly higher mean score of 4.58 ($SD = 0.84$). Although both

groups demonstrated high levels of *Commitment Control*, male participants reported a slightly higher mean scores compared to female participants on all statements. Overall, these findings suggest that participants, regardless of gender, generally possess strong *Commitment Control* in vocabulary learning.

To further examine potential differences in the use of Self-Regulatory Strategies between the two groups, an independent t-test was conducted (Table 24).

Table 24

Independent Samples T-test Results for the Use of Commitment Control by Gender

Facet	Female (n=59)		Male (n=20)		t(77)	p
	M	SD	M	SD		
Commitment Control	4.29	0.86	4.58	0.84	-1.289	.201

As shown in Table 8, the results revealed no significant difference in *Commitment Control* between the two groups, $t(77) = -1.289$, $p = .201$.

To further investigate potential gender differences in each individual statement of *Commitment Control*, a Mann-Whitney U test was conducted (Table 25), as the data met the assumptions of normality required for a parametric test.

Table 25

The Mann-Whitney U Test Results for the Use of Commitment Control of Participants by Gender

Statement	Mean Rank		U	z	p
	Female (n=59)	Male (n=20)			
4. When learning vocabulary, I have special techniques to achieve my learning goals.	38.72	41.75	535.000	-0.535	.593
7. When learning vocabulary, I believe I can achieve my goals more quickly than expected.	38.43	44.63	497.500	-1.075	.282

Statement	Mean Rank		<i>U</i>	<i>z</i>	<i>p</i>
	Female (<i>n</i> =59)	Male (<i>n</i> =20)			
10. When learning vocabulary, I persist until I reach the goals that I make for myself.	38.56	44.25	505.00	-0.989	.323
13. I believe I can overcome all the difficulties related to achieving my vocabulary learning goals.	37.31	47.95	431.000	-1.864	.062

According to Table 25, the test results revealed no statistically significant differences between female and male participants in their self-reported *Commitment Control* in vocabulary learning for any individual statements.

Commitment Control: High School Type

The students were grouped into two categories, according to those who had attended whether public or private high school. To decide if the use of *Commitment Control* differed regarding the type of high school, the mean and standard deviation scores were calculated for each statement under *Commitment Control* (Table 26).

Table 26

Use of Commitment Control by High School

Statements	Public (<i>n</i> =50)		Private (<i>n</i> =33)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
4. When learning vocabulary, I have special techniques to achieve my learning goals.	4.71	1.17	4.21	1.31
7. When learning vocabulary, I believe I can achieve my goals more quickly than expected.	4.28	1.14	4.18	1.31
10. When learning vocabulary, I persist until I reach the goals that I make for myself.	4.34	1.42	4.30	1.18
13. I believe I can overcome all the difficulties related to achieving my vocabulary learning goals.	4.60	1.01	4.48	1.03
Overall	4.52	0.80	4.29	0.81

As demonstrated in Table 26, both groups of students reported high average ratings within the range of 4.18 to 4.71. Among the learning experiences under *Commitment Control*, participants who attended public high schools ($n=50$) put a great emphasis on the use of special techniques while learning vocabulary ($M = 4.71, SD = 1.17$), yet they ranked the lowest score for the statement “When learning vocabulary, I believe I can achieve my goals more quickly than expected” ($M = 4.28, SD = 1.14$).

The participants who attended private high schools ($n= 33$) made remarks on their beliefs to overcome challenges about achieving vocabulary learning goals ($M= 4.48, SD = 1.03$). However, they did not consider they could accomplish goals quickly as expected ($M = 4.18, SD = 1.31$), showing a wide range of variability in their responses.

To determine if there was a significant difference between the two groups, the researcher conducted an Independent Samples T-test regarding the use of Self-Regulatory Strategies by high school type and reported in Table 27.

Table 27

Independent Samples T-test Results for the Use of Commitment Control by High School

Facet	Public ($n=50$)		Private ($n=33$)		$t(81)$	P
	M	SD	M	SD		
Commitment Control	4.46	0.89	4.29	0.81	0.893	.686

As shown in Table 27, the Independent Samples T-test results demonstrate no statistically significant difference between public and private high school students regarding their use of Self-Regulatory Strategies within *Commitment Control*.

The Mann-Whitney U Test was conducted to compare the constituent components of the *Commitment Control* between students who attended public high schools and those who attended private high schools (Table 28).

Table 28

The Mann-Whitney U Test Results for the Use of Commitment Control by Type of High School

Statements	Mean Rank		<i>U</i>	<i>z</i>	<i>p</i>
	Public (<i>n</i> =50)	Private (<i>n</i> =33)			
4. When learning vocabulary, I have special techniques to achieve my learning goals.	45.24	35.94	625.000	-1.509	.070
7. When learning vocabulary, I believe I can achieve my goals more quickly than expected.	42.66	41.00	792.000	-0.316	.752
10. When learning vocabulary, I persist until I reach the goals that I make for myself.	42.91	40.62	779.500	-0.437	.662
13. I believe I can overcome all the difficulties related to achieving my vocabulary learning goals.	43.11	40.32	769.500	-0.538	.591

According to Table 28, the results indicated that there was no statistically significant difference between the two groups in terms of *Commitment Control*.

Commitment Control: Year of Study

This study investigated whether the perceptions of trilingual learners in relation to SRCvoc differed on the basis of their year of study. Trilingual learners were grouped by three categories; Freshman ($n=43$), Sophomore ($n=18$) and Junior, Senior ($n=22$). Table 29 demonstrates the mean scores and standard deviation of the use of *Commitment Control*.

Table 29

Use of Commitment Control by Year of Study

Statements	Freshman ($n=43$)		Sophomore ($n=18$)		Junior, Senior ($n=22$)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
4. When learning vocabulary, I have special techniques to achieve my learning goals.	4.60	1.25	4.44	1.24	4.41	1.29
7. When learning vocabulary, I believe I can achieve my goals more quickly than expected.	4.21	1.20	4.50	0.92	4.09	1.41
10. When learning vocabulary, I persist until I reach the goals that I make for myself.	4.30	1.20	4.11	1.45	4.55	1.47
13. I believe I can overcome all the difficulties related to achieving my vocabulary learning goals.	4.49	1.05	4.61	1.03	4.64	0.95
Overall	4.44	0.74	4.41	0.71	4.42	1.01

The overall results indicated that the use of *Commitment Control* was consistent across the different years of study (Table 29). However, they reported differing perceptions on their learning experiences. The variability is highly wide among sophomore and juniors/seniors. While freshman gave considerable weight to having special techniques to achieve learning goals ($M = 4.60$, $SD = 1.25$), Juniors,

Seniors and Sophomores emphasized overcoming difficulties related to achieving vocabulary learning goals heavily (Junior / Senior: $M = 4.64$, $SD = 0.95$; Sophomore: $M = 4.61$, $SD = 1.03$).

To investigate if there were any significant differences among the groups, for the overall *Commitment Control*, ANOVA was conducted and reported in Table 30.

Table 30

ANOVA Results for the Use of Commitment Control by Year of Study

Facet	Freshman ($n=42$)		Sophomore ($n=18$)		Junior, Senior ($n=22$)		$F(2, 80)$	η^2	p
	M	SD	M	SD	M	SD			
Commitment Control	4.38	0.85	4.41	0.71	4.42	1.01	0.019	0.000	.981

The ANOVA results indicate that there is no significant difference in the use of *Commitment Control* across different years of study. This suggests that students, regardless of whether they are Freshmen, Sophomore, or Juniors/Seniors, tend to report similar levels of commitment control in their self-regulatory behaviors, implying year of study does not play a significant role in influencing how student manage and sustain their motivation and effort to achieve their learning goals.

For each learning experience in *Commitment Control*, assumptions were not met for parametric test. Therefore, the Kruskal -Wallis Rank Score Test was applied to assess differences across years of study (Table 31).

Table 31

Kruskal-Wallis Rank Score Results for the Use of Commitment Control by Year of Study

Statement	Mean Rank			χ^2	df	p
	Freshman (n=43)	Sophomore (n=18)	Junior, Senior (n=22)			
4. When learning vocabulary, I have special techniques to achieve my learning goals.	43.32	39.08	40.00	0.563	2	.754
7. When learning vocabulary, I believe I can achieve my goals more quickly than expected.	41.43	46.08	39.77	0.774	2	.679
10. When learning vocabulary, I persist until I reach the goals that I make for myself.	40.84	38.56	47.09	1.542	2	.462
13. I believe I can overcome all the difficulties related to achieving my vocabulary learning goals.	40.92	43.14	43.18	0.195	2	.907

The Kruskal-Wallis Rank Score results (Table 31) demonstrated no significant difference in the perceived use of Self-Regulatory Strategies across years of study. This suggests the students' use of these self-regulatory strategies is consistent regardless of their years of study.

Commitment Control: CGPA

This study examined whether the perceptions of trilingual learners in relation to SRVOC differed on the basis of their CGPA. To this end, the participants were grouped by their Cumulative Grade Average Points (Table 16): trilingual learners

who had above 3.00 ($n=39$), 2.00 to 3.00 ($n=11$) and the ones that didn't provide any information as Not Applicable regarding their CGPA ($n=33$).

Table 32

Use of Commitment Control by CGPA

Statements	Group 1 3.00-4.00 ($n=43$)		Group 2 2.00-3.00 ($n=11$)		Group 3 Not Applicable ($n=33$)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
4. When learning vocabulary, I have special techniques to achieve my learning goals.	4.61	0.97	4.18	1.77	4.52	1.39
7. When learning vocabulary, I believe I can achieve my goals more quickly than expected.	4.15	0.97	4.18	1.77	4.52	1.39
10. When learning vocabulary, I persist until I reach the goals that I make for myself.	4.44	1.50	4.00	1.54	4.30	1.01
13. I believe I can overcome all the difficulties related to achieving my vocabulary learning goals.	4.59	1.01	4.64	1.02	4.48	1.03
Overall	4.50	0.80	4.25	1.08	4.41	0.73

As evidenced in Table 32, all the groups responded positively on their vocabulary learning experiences with respect to *Commitment Control*, however; their perceptions differed. Students with a CGPA between 3.00 and 4.00 attached a strong commitment to own special techniques to achieve learning goals ($M = 4.61$, $SD = 0.97$), closely followed by the experience of overcoming difficulties that address achieving learning goals ($M = 4.59$, $SD = 1.01$). They rated the learning experience of achieving learning goals more quickly than expected the lowest. Conversely, students with a CGPA between 2.00 and 3.00 reported the highest mean score for the learning experience "I believe I can overcome all the difficulties related to achieving my vocabulary learning goals." ($M = 4.64$, $SD = 1.02$). However, the

same group did not place strong emphasis on the learning experience of keep trying until they accomplish their own objective ($M = 4.00$, $SD = 1.54$) but indicating variation in their responses.

To determine if there was a significant difference among the groups, the researcher conducted an independent samples t-test (Table 34). For further inferential analysis, the researcher decided not to include the participants who did not have a CGPA score or did not specify their CGPA scores under the Not Applicable ($n=33$) group.

Table 33

Independent Samples T-test Results for the Use of Commitment Control by Cumulative Grade Average Point

Facet	3.00-4.00 ($n=39$)		2.00-3.00 ($n=11$)		$t(48)$	p
	M	SD	M	SD		
Commitment Control	4.42	0.91	4.25	1.08	0.545	.588

According to Table 34, the results indicated that there was no significant difference between groups.

To decide if the responses of the three groups significantly differed for each statement, the researcher utilized the Mann-Whitney U test (Table 34) as the data did not meet the normality assumptions.

Table 34

*The Mann-Whitney U Test Results for the Use of Commitment Control of
Participants by Cumulative Grade Average Point*

Statement	Mean Rank		U	z	p
	3.00- 4.00 (n=39)	2.00- 3.00 (n=11)			
4. When learning vocabulary, I have special techniques to achieve my learning goals.	25.46	23.41	191.500	-0.440	.660
7. When learning vocabulary, I believe I can achieve my goals more quickly than expected.	25.56	25.27	212.000	-0.060	.952
10. When learning vocabulary, I persist until I reach the goals that I make for myself.	26.45	22.14	177.500	-0.893	.372
13. I believe I can overcome all the difficulties related to achieving my vocabulary learning goals.	25.32	26.14	207.500	-0.171	.864

As shown in Table 35, the Mann-Whitney U Test results demonstrated no significant difference in the responses between trilingual Learners with a CGPA above 3.00 and with a CGPA between 2.00 and 3.00.

Commitment Control: French Preparatory Program Participation

This study also examined whether the use of Self-Regulatory Strategies varied based on participation in the French Preparatory Program offered by the trilingual bachelor's program (Table 35). The participants were grouped based on whether they attended the program or not.

Table 35*Use of Commitment Control by French Preparatory Program Participation*

Statements	Yes ($n=81$)		No ($n=2$)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
4. When learning vocabulary, I have special techniques to achieve my learning goals.	4.58	1.18	2.00	1.41
7. When learning vocabulary, I believe I can achieve my goals more quickly than expected.	4.27	1.19	3.00	1.41
10. When learning vocabulary, I persist until I reach the goals that I make for myself.	4.35	1.31	3.50	2.12
13. I believe I can overcome all the difficulties related to achieving my vocabulary learning goals.	4.57	1.01	4.00	1.41
Overall	4.46	0.78	3.12	0.88

According to Table 35, trilingual learners who attended the French Preparatory Program highly agreed on the use of special techniques when learning vocabulary ($M = 4.58$, $SD = 1.18$), which was closely followed by the statement regarding their confidence to overcome difficulties in relation to achieving learning goals ($M = 4.57$, $SD = 1.01$). Though indicating a slight mean difference, they put the least emphasis on their confidence to achieve goals more quickly than expected ($M = 4.27$, $SD = 1.19$). On the other hand, learners who did not attend the French Preparatory Program concurred with the belief in overcoming all challenges concerning achieving learning goals ($M = 4.00$, $SD = 1.41$). As for the lowest average ratings, learners reported relatively low use of special techniques when it comes to achieving their vocabulary learning goals ($M = 2.00$, $SD = 1.41$); however, the large standard deviations observed in each group suggest substantial variability in their responses.

Commitment Control: English Preparatory Program

In addition to French Preparatory program offered by the trilingual bachelor's program, this study also investigated whether the use of SRCvoc varied based on participation in the English Preparatory Program offered by the same program prior to their studies. The participants were grouped the same way they were grouped for the French Preparatory Program.

Table 36 shows that trilingual Learners who did not attend English preparatory program preceding their departmental studies rated higher mean scores than trilingual learners who attended the English preparatory program.

Table 36

Use of Commitment Control by English Preparatory Program Participation

Statements	Yes (n=5)		No (n=78)	
	M	SD	M	SD
4. When learning vocabulary, I have special techniques to achieve my learning goals.	3.60	1.14	4.57	1.24
7. When learning vocabulary, I believe I can achieve my goals more quickly than expected.	3.60	0.89	4.28	1.21
10. When learning vocabulary, I persist until I reach the goals that I make for myself.	4.00	0.00	4.35	1.36
13. I believe I can overcome all the difficulties related to achieving my vocabulary learning goals.	3.60	0.89	4.62	0.99
Overall	3.70	0.32	4.48	0.81

As demonstrated in Table 36, students who did not attend the English preparatory program reported higher mean scores than those who did, showing that they regarded the employment of on the facet of *Commitment Control* of the SRCvoc more positively compared to those who attended the English preparatory program.

For students who attended the program, the strongly emphasized learning experience was to persist until they accomplished the objectives, they set for themselves with a mean score of 4.00. A standard deviation of 0.00 illustrates that there was no variation in responses indicating all trilingual learners agreed on their responses. Interestingly, they reported the same mean score of 3.60 for the statements 4, 7 and 13, showing they equally use these practices. On the other hand, trilingual learners who did not attend the program reported the highest mean score for the learning experience of “I believe I can overcome all the difficulties related to achieving my vocabulary learning goals” ($M = 4.62$, $SD = 0.99$), while they scored the least for the situation of achieving their goals more quickly than expected ($M = 4.28$, $SD = 1.21$).

To examine whether there was any significant difference in the perceived use of Self-Regulatory Strategies between trilingual learners who had attended the English preparatory program and those who had not, the researcher utilized the Mann-Whitney U test and reported in Table 37.

Table 37

The Mann-Whitney U Test Results for the Use of Commitment Control by English Preparatory Program Participation

Statement	Mean Rank		U	z	p
	Yes ($n=5$)	No ($n=78$)			
Commitment Control	17.80	43.55	74.000	-2.328	.020

As can be seen in Table 38, there was a significant difference between the two groups of students for the use of Self-Regulatory Strategies. Students who did not attend the English preparatory program used the *Commitment Control* strategies more compared to the ones attending the English preparatory program.

Table 38

*The Mann-Whitney U Test Results for the Use of Commitment Control of
Participants by English Preparatory Program Participation*

Statement	Mean Rank		<i>U</i>	<i>z</i>	<i>p</i>
	Yes (<i>n</i> =5)	No (<i>n</i> =78)			
4. When learning vocabulary, I have special techniques to achieve my learning goals.	22.90	42.71	99.500	-1.879	.060
7. When learning vocabulary, I believe I can achieve my goals more quickly than expected.	28.50	42.87	127.500	-1.331	.183
10. When learning vocabulary, I persist until I reach the goals that I make for myself.	30.00	42.77	135.500	-1.185	.236
13. I believe I can overcome all the difficulties related to achieving my vocabulary learning goals.	20.70	43.37	88.500	-2.122	.034

As demonstrated in Table 38, there was a significant difference regarding the statement “I believe I can overcome all the difficulties related to achieving my vocabulary learning goals.” ($U = 88.500$, $p = .034$) between the two groups. Indicating learners who did not attend English Preparatory Program believed they could handle challenges in the process of achieving learning goals to a higher extent in comparison to those who attended English Preparatory Program.

Commitment Control: Letter Grade: ENG 101

This study further assessed if the participants' letter grade in ENG101 course differed according to their use of Self-Regulatory Strategies. The participants were grouped by the letter grades students received: A, A- ($n=24$); B+, B ($n=19$); B-, C+, C ($n=10$) and students who did not specify their letter grades.

The researcher compared the responses of each groups' answers for each learning experience. The mean scores and standard deviation for each learning experience are given below in Table 39.

Table 39

Use of Commitment Control Practices by English 101 Letter Grade

Statements	Group 1 A, A- ($n=24$)		Group 2 B+, B ($n=19$)		Group 3 B-, C+C ($n=10$)		Not Applicable ($n=30$)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
4. When learning vocabulary, I have special techniques to achieve my learning goals.	4.54	1.06	4.17	1.33	5.10	1.10	4.50	1.35
7. When learning vocabulary, I believe I can achieve my goals more quickly than expected.	4.54	1.21	3.53	1.38	4.60	0.69	4.33	1.06
10. When learning vocabulary, I persist until I reach the goals that I make for myself.	4.88	0.90	3.32	1.70	5.00	1.05	4.30	1.05
13. I believe I can overcome all the difficulties related to achieving my vocabulary learning goals.	4.79	0.83	4.21	1.13	5.00	0.94	4.43	1.04
Overall	4.68	0.63	3.88	0.92	4.92	0.64	4.39	0.75

Table 39 demonstrates that all three groups reported highly positive for the use of *Commitment Control* learning experience with higher mean scores. Trilingual Learners who received B-, C+ and C letter grades for the ENG101 course reported higher use of *Commitment Control* strategies compared to the other groups

($M = 4.92$, $SD = 0.64$). Students who had received B-, C+ and C ($n=10$) for the ENG101 course reported various responses. While they put a lot of emphasis on having special techniques when learning vocabulary ($M = 5.10$, $SD = 1.10$), they put the least importance on the process of achieving their goals more quickly than expected ($M = 4.60$, $SD = 0.69$), showing a moderately high degree of agreement in their responses.

As for Group 2, students who received B+ and B, they most favored the learning experience of overcoming the overwhelming challenges related to achieving their vocabulary learning goals ($M = 4.21$, $SD = 1.13$) however, they favored the practice of persisting until they reach the goals set for themselves the least ($M = 3.32$, $SD = 1.70$) with a wide range of variety in their responses.

As for Group 1, when learning vocabulary, students who had received A and A- for ENG101 course put highest weight on the practice of persisting until they reach the goals, they set for themselves ($M = 4.88$, $SD = 0.90$).

To understand if there was a significant difference among the groups, the researcher employed the Kruskal-Wallis Rank Score Test as the assumptions were not met for parametric tests. For further inferential analysis, the researcher decided not to include the participants who did not have an ENG101 letter grade or did not specify their letter grades under the Not Applicable ($n=30$) group.

Table 40

Kruskal-Wallis Rank Score the Use of Commitment Control by ENG 101 Letter Grade

Facet	Mean Rank			χ^2	df	p
	A, A- ($n=24$)	B+, B ($n=19$)	B-, C+, C ($n=10$)			
Commitment Control	31.88	16.55	35.15	14.035	2	.001

Table 41 shows that there was a significant difference ($\chi^2(2) = 14.035$, $p = .001$) between participants who had received A, A- ($n=24$), B+, B ($n=19$) and B-, C+ and C ($n=10$). To detect the differences among the groups, a pairwise comparison post hoc was conducted and reported in Table 41.

Table 41

Pairwise Comparisons for Commitment Control

Facet	ENG101 Letter Grade	Test Statistic	Standard Error	p
Commitment Control	B+,B vs. A,A-	25.264	7.363	.001
	B+,B vs. B-,C+,C	-31.468	9.367	.001
	A,A- vs. B-,C+,C	-6.204	9.024	.492

As for *Commitment Control*, students with grades B+, B reported significantly lower use of self-regulatory strategies regarding setting goals, overcoming challenges, and maintaining and achieving their aims compared to the students with A and A- grades. Conversely, students with grades B-, C+ and C reported higher use of self-regulatory strategies regarding maintaining stronger goals and achieving them.

Table 42

Kruskal-Wallis Rank Score Results for the Use of Commitment Control of Participants by ENG101 Letter Grade

Statements	Mean Rank			χ^2	df	p
	A, A- ($n=24$)	B+, B ($n=19$)	B-, C+, C ($n=10$)			
4. When learning vocabulary, I have special techniques to achieve my learning goals.	26.44	22.39	34.05	4.278	2	.118

Statements	Mean Rank			χ^2	df	p
	A, A- (n=24)	B+, B (n=19)	B-, C+, C (n=10)			
7. When learning vocabulary, I believe I can achieve my goals more quickly than expected.	31.02	19.82	31.00	6.784	2	.034
10. When learning vocabulary, I persist until I reach the goals that I make for myself.	31.60	17.74	33.55	11.443	2	.003
13. I believe I can overcome all the difficulties related to achieving my vocabulary learning goals.	29.48	21.24	32.00	4.706	2	.095

Table 42 shows that there were significant differences regarding how the three groups responded to the following statements: “When learning vocabulary, I believe I can achieve my goals more quickly than expected.” ($\chi^2(2) = 6.784, p = .034$), and “When learning vocabulary, I persist until I reach the goals that I make for myself.” ($\chi^2(2) = 11.443, p = .003$).

For the first statement, the significance suggests that both the A, A- group with a mean rank of 26.44 and the B-, C+, C group with a mean rank of 34.05 tend to believe they can achieve their goals more quickly than the B+, B group with a mean rank of 22.39. For the second statement, the A, A- and B-, C+, C groups again showed higher tendency to persist compared to the B+, B group.

To further analyze these differences, Pairwise Comparisons post hoc tests were utilized to identify which specific groups differed significantly (Table 43).

Table 43*Pairwise Comparisons for Statement 7 and 10 in Commitment Control*

Statement Description	ENG101 Letter Grade	Test Statistic	Standard Error	<i>p</i>
Commitment Control	B+, B vs A, A-	17.970	7.183	.012
Statement 7. When learning vocabulary, I believe I can achieve my goals more quickly than expected.	B+, B vs. B-, C+C	-18.508	9.138	.043
	A, A- vs. B-, C+,C	-0.538	8.804	.951
Commitment Control	B+, B vs. A,A-	24.555	7.174	.001
Statement 10. When learning vocabulary, I persist until I reach the goals that I make for myself.	B+, B vs. B-,C+,C	-26.763	9.127	.003
	A, A- vs. B-, C+,C	-2.208	8.793	.802

As shown in Table 43, students with A and A-, B-, C+, C grades, exhibited significantly higher level of confidence in their ability to achieve goals quickly, and they showed greater persistence in pursuing those goals compared to students with B+ or B grades.

Regarding statement 10, the B-, C+, C group had a similar level of persistence to the A, A- group but it is significantly different from that in the B+ and B group.

Commitment Control: Letter Grade: ENG 102

The researcher also examined if the ENG102 Letter grades of the participants differed by their utilization of SRCvoc (Table 44). The researcher grouped participants according to their received letter grades A, A- (*n*=19), B+, B, B- (*n*=17) and Not Applicable (*n*=47).

Table 44*Use of Commitment Control by English102 Letter Grade*

Statements	Group 1 A,A- (n=19)		Group 2 B,B+,B- (n=17)		Not Applicable (n=47)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
4. When learning vocabulary, I have special techniques to achieve my learning goals.	4.63	1.01	4.18	1.46	4.59	1.25
7. When learning vocabulary, I believe I can achieve my goals more quickly than expected.	4.21	1.31	4.12	1.11	4.30	1.21
10. When learning vocabulary, I persist until I reach the goals that I make for myself.	4.53	1.34	4.06	1.67	4.34	1.18
13. I believe I can overcome all the difficulties related to achieving my vocabulary learning goals.	4.68	0.82	4.47	1.12	4.53	1.06
Overall	4.51	0.80	4.20	0.96	4.48	0.75

As it can be seen in Table 44, students who had A, A- ($M = 4.6$, $SD = 0.82$) letter grades and B, B+ and B- ($M = 4.47$, $SD = 1.12$) ranked the highest mean score for the statement “I believe I can overcome all the difficulties related to achieving my vocabulary learning goals”. Students who had received A and A- attached the slightest commitment to achieving goals quickly than their expectations ($M = 4.21$, $SD = 1.31$), with variations in their responses. Students receiving B, B+ and B- ranked statement 13 the lowest ($M = 4.06$, $SD = 1.67$) showing inconsistency in their responses indicating when learning vocabulary, learners do not show persistency in achieving their own goals.

To determine if the differences were significant between the two groups, the Independent Sample t-Test was conducted and reported in Table 45.

Table 45

Independent Samples T-test Results for the Use of Commitment Control by ENG102

Letter Grade

Facet	Group 1 A, A- (n=19)		Group 2 B,B+,B- (n=17)		t(34)	p
	M	SD	M	SD		
Commitment Control	4.51	0.80	4.20	0.96	1.043	.304

As demonstrated in Table 46, there were no statistically significant differences between the groups, indicating that ENG102 letter grades did not influence the use of *Commitment Control*.

To further explore differences learning experiences from the SRCvoc related to *Commitment Control* in vocabulary learning, the Mann-Whitney U Test was used as the data did not meet the assumptions of normality.

Table 46

The Mann-Whitney U Test Results for the Use of Commitment Control of

Participants by ENG102 Letter Grade

Statements	Mean Rank		U	z	p
	A,A- (n=19)	B,B+,B- (n=17)			
4. When learning vocabulary, I have special techniques to achieve my learning goals.	19.92	16.91	134.500	-0.895	.371
7. When learning vocabulary, I believe I can achieve my goals more quickly than expected.	19.13	17.79	149.500	-0.392	.695
10. When learning vocabulary, I persist until I reach the goals that I make for myself.	19.79	17.06	137.000	-0.796	.426

Statements	Mean Rank		<i>U</i>	<i>z</i>	<i>p</i>
	A,A- (<i>n</i> =19)	B,B+,B- (<i>n</i> =17)			
13. I believe I can overcome all the difficulties related to achieving my vocabulary learning goals.	19.50	17.38	142.500	-0.629	.529

The Mann-Whitney *U* test results indicated no significant differences in the use of learning experiences under *Commitment Control* between the two groups based on ENG102 letter grades.

Metacognitive Control

The four statements under *Metacognitive Control* were analyzed descriptively to understand the participants' self-reported self-regulatory strategies related to *Metacognitive Control* (Table 47).

Table 47

Metacognitive Control (N=83)

Statements	<i>M</i>	<i>SD</i>
5. When learning vocabulary, I have special techniques to keep my concentration focused.	3.94	1.47
9. When learning vocabulary, I think my methods of controlling my concentration are effective.	4.08	1.35
11. When it comes to learning vocabulary, I have my special techniques to prevent procrastination.	3.36	1.47
16. When it comes to learning vocabulary, I think my methods of controlling procrastination are effective.	3.69	1.30

Statements within *Metacognitive Control* in vocabulary learning illustrated means scores ranged from 3.36 to 4.08. This indicates participants' slight agreement with the statements when it comes to set goals, evaluate, plan and monitor their self-regulatory strategies, with a great variability in their responses.

Participants partly agreed that they have effective techniques of controlling their concentration during the process of acquiring vocabulary ($M = 4.08$, $SD = 1.35$) They slightly agreed that to maintain their concentration they have unique techniques when learning vocabulary ($M = 3.94$, $SD = 1.47$) indicating a wide range of variety in their responses. On the other hand, participants ranked the lowest scores for the statement “When it comes to learning vocabulary, I have my special techniques to prevent procrastination.” ($M = 3.36$, $SD = 1.47$) and they attached lower commitment to their methods of managing procrastination being effective, during vocabulary acquisition ($M = 3.69$, $SD = 1.30$). Once again, high standard deviation scores show inconsistency in participants’ responses.

To ascertain if their perception regarding SRCvoc differed within the frame of Gender, High School Type, Academic Year, French Preparatory Program Participation, English Preparatory Program Participation, ENG101 Letter Grade and ENG102 Letter Grade inferential analysis was conducted.

Metacognitive Control: Gender

As for the other facets, for *Metacognitive Control*, the students were grouped the same and the level of agreement was first analyzed descriptively.

Table 48

Use of Metacognitive Control by Gender

Statements	Female ($n=59$)		Male ($n=20$)		Prefer not to answer ($n=4$)	
	M	SD	M	SD	M	SD
5. When learning vocabulary, I have special techniques to keep my concentration focused.	3.85	1.42	4.05	1.70	4.75	0.95
9. When learning vocabulary, I think my methods of controlling my concentration are effective.	4.12	1.28	3.95	1.63	4.25	0.95

Statements	Female (<i>n</i> =59)		Male (<i>n</i> =20)		Prefer not to answer (<i>n</i> =4)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
11. When it comes to learning vocabulary, I have my special techniques to prevent procrastination.	3.32	1.40	3.40	1.53	3.75	0.95
16. When it comes to learning vocabulary, I think my methods of controlling procrastination are effective.	3.64	1.21	4.95	0.82	5.50	0.57
Overall	3.73	1.12	3.76	1.33	4.31	0.62

In general, for every statement both groups reported slightly lower mean scores within the range of 3.32 to 4.95 on a six-point Likert scale. While female participants ranked an overall mean score of 3.73 (*SD* = 1.12), male participants reported a comparatively higher mean score of 3.76 (*SD*=1.33). Except for the Statement 9, compared to the female participants male participants reported a higher mean score on all statements, to some extent.

To determine possible differences in the utilization of SRCvoc between female and male, an independent t-test was conducted (Table 49).

Table 49

Independent Samples T-test Results for the Use of Metacognitive Control by Gender

Facet	Female (<i>n</i> =59)		Male (<i>n</i> =20)		<i>t</i> (77)	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Metacognitive Control	3.73	1.12	3.76	1.33	-0.096	.924

Table 49 indicates that the two group did not differ significantly, $t(77)=-0.096$, $p=.924$.

As the data did not meet the assumptions of normality, to further examine possible differences in each statement of *Metacognitive Control*, a Mann-Whitney U test was utilized.

Table 50

The Mann-Whitney U Test Results for the Use of Metacognitive Control of Participants by Gender

Statement	Mean Rank		<i>U</i>	<i>z</i>	<i>p</i>
	Female (<i>n</i> =59)	Male (<i>n</i> =20)			
5. When learning vocabulary, I have special techniques to keep my concentration focused.	39.04	42.83	533.500	-0.652	.515
9. When learning vocabulary, I think my methods of controlling my concentration are effective.	40.24	39.30	576.00	-0.163	.871
11. When it comes to learning vocabulary, I have my special techniques to prevent procrastination.	39.66	41.00	570.00	-0.230	.818
16. When it comes to learning vocabulary, I think my methods of controlling procrastination are effective.	39.69	40.93	571.500	-0.214	.831

The test results revealed that there were not statistically significant differences between male and female participants with respect to *Metacognitive Control* by gender.

Metacognitive Control: Type of High-School

To determine whether the participants responses to each statement within *Metacognitive Control* differed in mean scores (Table 54), the researcher divided participants under two categories public high school (*n*=50) or private high school (*n*=33) .

Table 51*Use of Metacognitive Control by High-School*

Statements	Public ($n=50$)		Private ($n=33$)	
	M	SD	M	SD
5. When learning vocabulary, I have special techniques to keep my concentration focused.	4.12	1.46	3.67	1.47
9. When learning vocabulary, I think my methods of controlling my concentration are effective.	4.14	1.40	4.00	1.29
11. When it comes to learning vocabulary, I have my special techniques to prevent procrastination.	3.54	1.55	3.09	1.30
16. When it comes to learning vocabulary, I think my methods of controlling procrastination are effective.	3.84	1.26	3.45	1.34
Overall	3.91	1.21	3.55	1.05

Overall, public school graduates generally reported moderately higher usage of *Metacognitive Control* techniques compared to private school graduates. These moderate differences are observed across all aspect's measures, indicating a consistent trend favoring public school graduates.

Table 51 shows that both groups reported moderate mean scores for all statements within the range of 3.09 to 4.14. Overall, both groups agreed mostly on the utilization of their methods regarding the control of their concentration are efficient in terms of learning vocabulary. As for the lowest rated learning experience in *Metacognitive Control*, both groups rated learning experience 11 ($M = 3.54$, $SD = 1.55$ and $M = 3.09$, $SD = 1.30$) indicating that there is diversity among the students. While students who attended public high schools ($M = 4.14$, $SD = 1.40$) and students attended private high schools ($M = 4.00$, $SD = 1.29$) mostly believed that their techniques of managing their concentration when learning vocabulary are efficient, public-school students possess slightly stronger *Metacognitive Control* in vocabulary learning.

To explore the possible differences in the utilization of *Metacognitive Control* between two groups, a parametric test, independent samples t-test was conducted (Table 52).

Table 52

Independent Samples T-test Results for the Use of Metacognitive Control by High School

Facet	Public (n=50)		Private (n=33)		<i>t</i> (81)	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Metacognitive Control	3.91	1.21	3.55	1.05	1.382	.423

Independent Samples t-test results showed that there were no statistically significant difference between the groups, $t(81)=1.382$, $p=.423$. Therefore, the researcher employed the Mann-Whitney U Test to find out about possible differences arising from the different types of high schools as normality tests did not meet the assumptions.

Table 53

The Mann-Whitney U Test Results for the Use of Metacognitive Control of Participants by Type of High School

Statement	Mean Rank		<i>U</i>	<i>z</i>	<i>p</i>
	Public (n=50)	Private (n=33)			
5. When learning vocabulary, I have special techniques to keep my concentration focused.	45.11	37.29	669.500	-1.481	.138
9. When learning vocabulary, I think my methods of controlling my concentration are effective.	43.10	40.33	770.000	-0.528	.597
11. When it comes to learning vocabulary, I have my special techniques to prevent procrastination.	44.98	37.48	676.000	-1.414	.157

Statement	Mean Rank		<i>U</i>	<i>z</i>	<i>p</i>
	Public (<i>n</i> =50)	Private (<i>n</i> =33)			
16. When it comes to learning vocabulary, I think my methods of controlling procrastination are effective.	45.06	37.36	672.00	-1.459	.145

For each statement, it can be observed that there were no significant difference between students who had attended public high school and those who had attended private high school regarding *Metacognitive Control*.

Metacognitive Control: Year of Study

The researcher grouped participants into three categories; Freshman (*n*=43), Sophomore (*n*=18) and Junior, Senior (*n*=22) to investigate if their perceptions regarding the use of SRCvoc differed. All three groups were compared in terms of their scores on the facet of *Metacognitive Control*, which consisted of four learning experiences like the other five facets. The following table 55 demonstrates the mean and standard deviation for *Metacognitive Control* and as for each learning experience the mean scores and standard deviation were calculated individually can be seen in Table 54.

Table 54

Use of Metacognitive Control by Year of Study

Statements	Freshman (<i>n</i> =43)		Sophomore (<i>n</i> =18)		Junior,Senior (<i>n</i> =22)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
5. When learning vocabulary, I have special techniques to keep my concentration focused.	4.02	1.42	3.83	1.15	3.86	1.83
9. When learning vocabulary, I think my methods of controlling my concentration are effective.	4.09	1.26	4.44	1.09	3.77	1.66
11. When it comes to learning vocabulary, I have my special techniques to prevent procrastination.	3.16	1.37	3.56	1.58	3.59	1.56

Statements	Freshman (<i>n</i> =43)		Sophomore (<i>n</i> =18)		Junior,Senior (<i>n</i> =22)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
16. When it comes to learning vocabulary, I think my methods of controlling procrastination are effective.	3.72	1.29	3.61	1.19	3.68	1.46
Overall	3.75	1.13	3.86	0.95	3.72	1.38

The results revealed that Sophomores generally reported higher use of *Metacognitive Control* techniques. It can be observed from the table that each group scored rather moderately average mean scores with the highest mean of 4.44 (*SD* = 1.09). The two groups Junior/Senior (*n*=22) and Sophomore (*n*=18) differed in their responses the most to statement 9. Among three groups, Sophomore (*n*=18) rated the highest mean score (*M* = 4.44, *SD* = 1.09) for the learning experience “When learning vocabulary, I think my methods of controlling my concentration are effective.”. As for the lowest average ratings, Freshman (*M* = 3.16, *SD* = 1.37) students rated relatively low score for the belief that they possess their own unique techniques to hinder procrastination during vocabulary learning process. The largest disparity among the groups happened to be for the learning experience “When learning vocabulary, I have special techniques to keep my concentration focused” with a standard deviation of 1.83.

Given that the data required the use of parametric test, ANOVA was conducted to investigate differences among groups in the use of *Metacognitive Control* techniques.

Table 55

ANOVA Results for the Use of Metacognitive Control by Year of Study

Facet	Freshman (<i>n</i> =42)		Sophomore (<i>n</i> =18)		Junior,Senior (<i>n</i> =22)		<i>F</i> (2, 80)	<i>η</i> ²	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Metacognitive Control	3.75	1.13	3.86	0.95	3.72	1.38	0.075	.001	.928

Table 55 indicated that there were no significant differences among the groups regarding the use of Self-Regulatory Strategies within *Metacognitive Control*.

Given that the data required the use of non-parametric test, the researcher conducted the Kruskal-Wallis Rank Score test for each learning experience in *Metacognitive Control*.

Table 56

Kruskal-Wallis Rank Score Results for the Use of Metacognitive Control by Year of Study

Statement	Mean Rank			χ^2	df	p
	Freshman (n=43)	Sophomore (n=18)	Junior,Senior (n=22)			
5. When learning vocabulary, I have special techniques to keep my concentration focused.	43.15	38.72	42.43	0.459	2	.795
9. When learning vocabulary, I think my methods of controlling my concentration are effective	41.94	46.78	38.20	1.336	2	.513
11. When it comes to learning vocabulary, I have my special techniques to prevent procrastination.	38.99	45.00	45.43	1.452	2	.484
16. When it comes to learning vocabulary, I think my methods of controlling procrastination are effective.	42.56	40.28	42.32	0.125	2	.940

In regards to each statement it can be observed that there were no significant difference across freshman, sophomore and junior, senior students in their perceived

utilization of *Metacognitive Control* strategies. This indicates that students use of *Metacognitive Control* strategies is consistent regardless of their year of study.

Metacognitive Control: CGPA

In addition to gender, type of high school and year of study, this study focused on the fact that whether the use of SRCvoc differed according to CGPA. The participants were once again grouped the same way it was grouped for *Commitment Control*. The mean scores for *Metacognitive Control* by CGPA and standard deviation are reported below.

Table 57

Use of Metacognitive Control by CGPA

Statements	Group 1 3.00-4.00 (n=43)		Group 2 2.00-3.00 (n=11)		Not Applicable (n=33)	
	M	SD	M	SD	M	SD
5. When learning vocabulary, I have special techniques to keep my concentration focused.	4.10	1.41	3.64	1.85	3.85	1.43
9. When learning vocabulary, I think my methods of controlling my concentration are effective.	4.10	1.37	3.91	1.75	4.12	1.21
11. When it comes to learning vocabulary, I have my special techniques to prevent procrastination.	3.49	1.53	3.64	1.69	3.12	1.31
13. When it comes to learning vocabulary, I think my methods of controlling procrastination are effective.	3.72	1.45	3.55	1.44	3.70	1.10
Overall	3.85	1.18	3.68	1.41	3.69	1.06

According to the results, on a six-point Likert scale, all students rated the statements within *Metacognitive Control* on a lower-level mean scores ranging from 3.49 to 4.10 indicating their perceptions differ. Overall, for the learning experiences under *Metacognitive Control*, students with a CGPA score ranging 3.00-4.00 reported higher mean score of 3.85 ($SD = 1.18$) while students with a CGPA of 2.00-

3.00 reported lower mean score of 3.68 ($SD = 1.41$). Both groups demonstrated an average level of *Metacognitive Control* however, students with a CGPA of 3.00-4.00 reported slightly higher mean scores for all statements among all learning experiences students with a CGPA of 3.00 and above placed strong emphasis on the learning experiences of having unique techniques to maintain their concentration when learning vocabulary ($M = 4.10$, $SD = 1.41$) and their methods of controlling concentration are efficient ($M = 4.10$, $SD = 1.37$). Group 1 and Group 2 respectively; students who had a CGPA of 3.00-4.00 ($M = 3.49$, $SD = 1.53$) and 2.00-3.00 ($M = 3.64$, $SD = 1.69$), rated the learning experience of having their own unique techniques to prevent procrastination with respect to vocabulary learning the lowest.

The normality of assumptions were met and the results led the researcher to run independent samples t-test to determine if there were any significant differences among students with different CGPAs. As the assumptions of normality were not met, the Mann Whitney-U test was utilized whether the differences demonstrated significance between two groups regarding the use of *Metacognitive Control* for each learning experience. For further inferential analysis, the researcher excluded the answers under the Not Applicable category.

Table 58

Independent Samples T-test Results for the Use of Metacognitive Control by Cumulative Grade Average Point

Facet	3.00-4.00 ($n=39$)		2.00-3.00 ($n=11$)		$t(48)$	p
	M	SD	M	SD		
Metacognitive Control	3.85	1.18	3.68	1.41	0.405	.687

As Table 59 demonstrates there were no significant difference between two groups $t(48) = 0.405$, $p = .687$ for *Metacognitive Control*.

Next, for each statement, to decide if the responses of two groups significantly differed, the Mann-Whitney U Test was conducted.

Table 59

The Mann-Whitney U Test Results for the Use of Metacognitive Control of Participants by Cumulative Grade Average Point

Statement	Mean Rank		<i>U</i>	<i>z</i>	<i>p</i>
	3.00-4.00 (<i>n</i> =39)	2.00-3.00 (<i>n</i> =11)			
5. When learning vocabulary, I have special techniques to keep my concentration focused.	26.29	22.68	183.500	-0.742	.458
9. When learning vocabulary, I think my methods of controlling my concentration are effective.	25.67	24.91	208.000	-0.156	.876
11. When it comes to learning vocabulary, I have my special techniques to prevent procrastination.	25.27	26.32	205.500	-0.215	.830
16. When it comes to learning vocabulary, I think my methods of controlling procrastination are effective.	25.87	24.18	200.000	-0.346	.729

For every learning experience under *Metacognitive Control*, it can be observed that there was no statistically significant difference between students with a CGPA above 3.00 and those with a CGPA between 2.00 and 3.00.

Metacognitive Control: French Preparatory Program Participation

In this study, the researcher examined whether trilingual learners use of Self-Regulatory Strategies under *Metacognitive Control* differed regarding their participation of the French Preparatory Program. Participants were grouped into whose who attended to the French Preparatory Program (*n*=81) and whose who did not (*n*=2).

Table 60*Use of Metacognitive Control by French Preparatory Program Participation*

Statements	Yes ($n=81$)		No ($n=2$)	
	M	SD	M	SD
5. When learning vocabulary, I have special techniques to keep my concentration focused.	3.94	1.46	4.00	2.82
9. When learning vocabulary, I think my methods of controlling my concentration are effective.	4.09	1.36	4.00	1.41
11. When it comes to learning vocabulary, I have my special techniques to prevent procrastination.	3.40	1.46	2.00	1.41
16. When it comes to learning vocabulary, I think my methods of controlling procrastination are effective.	3.73	1.29	2.00	0.00
Overall	3.78	1.15	3.00	1.41

Both groups reported relatively various but low average scores within the range of 2.00 to 4.00 for every statement within *Metacognitive Control*. Students who had attended French preparatory program agreed on the fact they have effective methods when it comes to managing their concentration during vocabulary acquisition process ($M = 4.09$, $SD = 1.36$) yet indicating substantial variation in their responses. On the other hand, with a slight mean difference, they put the least emphasis on having unique techniques that helps them avoid putting off studying vocabulary ($M = 3.40$, $SD = 1.46$). Meanwhile, students who did not attend the French preparatory program partly agreed on having unique methods to maintain their concentration focused ($M = 4.00$, $SD = 2.82$) indicating the largest disparity in their responses. As for the lowest ranked learning experience participants who did not attend French preparatory program all agreed that their methods of controlling procrastination in vocabulary learning are less effective ($M = 2.00$, $SD = 0.00$) showing consistency in their responses indicating all learners agreed on their responses. Students who attended the French Preparatory program reported an

overall mean score of 3.78 ($SD = 1.15$), while students who did not reported slightly lower score with a mean of 3.00 ($SD = 1.41$). These findings suggest that participants do not possess strong *Metacognitive Commitment* in vocabulary learning.

Metacognitive Control: English Preparatory Program

The participants were grouped as they were grouped for the French Preparatory Program, the ones who attended English Preparatory Program ($n=5$) and the ones who did not ($n=78$). The mean score and standard deviation were calculated for *Metacognitive Control* and for each learning experience within. The average *Metacognitive Control* score is given below.

Table 61

Use of Metacognitive Control by English Preparatory Program Participation

Statements	Yes ($n=5$)		No ($n=78$)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
5. When learning vocabulary, I have special techniques to keep my concentration focused.	3.20	1.30	3.99	1.48
9. When learning vocabulary, I think my methods of controlling my concentration are effective.	3.00	1.41	4.15	1.33
11. When it comes to learning vocabulary, I have my special techniques to prevent procrastination.	2.60	1.34	3.41	1.47
13. When it comes to learning vocabulary, I think my methods of controlling procrastination are effective.	3.20	1.30	3.72	1.30
Overall	3.00	0.93	3.81	1.15

Overall, students who did not attend English preparatory program reported higher mean scores than students who did, indicating they responded positively for the use of *Metacognitive Control* of the SRCvoc compared to those who attended the program. Both groups, their responses ranged from 2.60 to 4.15 on a six-point Likert scale. The groups differed in their responses for the learning experiences given

within *Metacognitive Control* with a variance in their responses. For students who attended the program put a little emphasis on the learning experience of having special techniques to maintain their concentration level when learning vocabulary ($M = 3.20$, $SD = 1.30$) showing wide range of variety. Interestingly for statement 13, they reported the same mean score of 3.20 ($SD = 1.30$) indicating the equal utilization of these learning experiences. On the other hand, students who did not attend English preparatory program agreed on their methods of managing their concentration were efficient during vocabulary learning process ($M = 4.15$, $SD = 1.33$) demonstrating some divergence in their responses, while they place the lowest attachment to the learning experience of “When it comes to learning vocabulary, I have my special techniques to prevent procrastination” ($M = 3.41$, $SD = 1.47$).

To investigate the possible significant differences among two groups, the researcher conducted a parametric test, independent samples T-test (Table 62).

Table 62

Independent Samples T-test Results for the Use of Metacognitive Control by English Preparatory Program Participation

Facet	Yes ($n=5$)		No ($n=78$)		$t(81)$	p
	M	SD	M	SD		
Metacognitive Control	3.00	0.93	3.81	1.15	-1.543	.441

The results revealed that two groups did not show any significant difference regarding their use of SRCvoc by their English Preparatory Program Participation, $t(81) = -1.543$, $p = .441$. With a slight mean difference, students who did not attend

English preparatory program employed the self-regulatory strategies slightly more than the ones attending the program.

The researcher, then, ran the Mann-Whitney U test to figure out if the students who attended English preparatory program and the ones who did not differed significantly.

Table 63

The Mann-Whitney U Test Results for the Use of Metacognitive Control of Participants by English Preparatory Program Participation

Statement	Mean Rank		U	z	p
	Yes (n=78)	No (n=5)			
5. When learning vocabulary, I have special techniques to keep my concentration focused.	29.50	42.80	132.500	-1.225	.221
9. When learning vocabulary, I think my methods of controlling my concentration are effective.	23.80	43.17	104.000	-1.798	.072
11. When it comes to learning vocabulary, I have my special techniques to prevent procrastination.	30.30	42.75	136.500	-1.142	.253
16. When it comes to learning vocabulary, I think my methods of controlling procrastination are effective.	32.90	42.58	149.500	-0.892	.372

No significant difference was found between two groups for each learning experience in their self-reported *Metacognitive Control* in vocabulary learning.

Metacognitive Control: Letter Grade: ENG 101

Table 64

Use of Metacognitive Control Practices by English101 Letter Grade

Statements	Group 1 A,A- (n=24)		Group 2 B+,B (n=19)		Group 3 B-,C+C (n=10)		Not Applicable (n=30)	
	M	SD	M	SD	M	SD	M	SD
5. When learning vocabulary, I have special techniques to keep my concentration focused.	4.46	1.31	3.11	1.62	4.60	0.84	3.83	1.44
9. When learning vocabulary, I think my methods of controlling my concentration are effective.	4.54	0.77	3.05	1.58	4.90	1.19	4.10	1.26
11. When it comes to learning vocabulary, I have my special techniques to prevent procrastination.	3.83	1.34	2.68	1.49	4.60	1.17	3.00	1.31
16. When it comes to learning vocabulary, I think my methods of controlling procrastination are effective.	4.00	1.31	3.05	1.47	4.40	1.26	3.60	1.03
Overall	4.20	0.75	2.97	1.30	4.62	0.84	3.63	1.09

As it can be observed from the table, all three groups mostly responded positively for each learning experience within the range from 2.68 to 4.90. Overall, students with grades B-, C+ and C ($M = 4.62$, $SD = 0.84$) reported the highest use of *Metacognitive Control* practices. Among each learning experience, students who received B-, C, C+ ($n=10$) strongly believed their methods of keeping themselves focused were efficient with a mean score of 4.90 ($SD = 1.19$) with a variability in their responses. With minor mean score differences, they emphasize having unique methods to maintain concentration when learning vocabulary heavily with a mean score of 4.60 ($SD = 0.84$) notably, same group of students ranked the same mean score of 4.60 ($SD = 1.17$) showing some divergence in their responses, for statement 11 indicating the same amount of employment of these practices. For Group 1, the

most favored learning experience appeared to be the belief of having efficacious techniques of managing their concentration ($M = 4.54$, $SD = 0.77$). On the other hand, the least favored one was statement 11 ($M = 3.83$, $SD = 1.34$) indicating substantial variation in their responses. Group 2, students who received B+ and B reported different perceptions regarding the use of unique techniques to maintain their concentration level with a mean score of 3.11 ($SD = 1.62$). As for the lowest, the same group of students mostly agreed on their responses on to avoid procrastination, they did not possess unique strategies when learning vocabulary ($M = 2.68$, $SD = 1.49$).

To determine whether these groups vary in their responses for the use of *Metacognitive Control* by ENG101 Letter grade, a non-parametric test, Kruskal-Wallis Rank Score was run by the researcher.

Table 65

Kruskal-Wallis Rank Score the Use of Metacognitive Control by ENG101 Letter Grade

Facet	Mean Rank			χ^2	df	p
	A,A- ($n=24$)	B+,B ($n=19$)	B- ,C+,C ($n=10$)			
Metacognitive Control	31.27	15.89	37.85	16.695	2	.001

The test result indicates significant differences in the use of *Metacognitive Control* techniques among students of different letters grades ($\chi^2(2) = 16.695$, $P = .001$).

When the learning experiences are analyzed, additional significant differences were identified (Table 66).

Table 66

*Kruskal-Wallis Rank Score Results for the Use of Metacognitive Control of
Participants by ENG101 Letter Grade*

Statements	Mean Rank			χ^2	df	p
	A,A+ (n=24)	B+,B (n=19)	B-,C+,C (n=10)			
5. When learning vocabulary, I have special techniques to keep my concentration focused.	31.58	18.84	31.50	8.667	2	.013
9. When learning vocabulary, I think my methods of controlling my concentration are effective	31.17	16.97	36.05	14.133	2	.001
11. When it comes to learning vocabulary, I have my special techniques to prevent procrastination.	29.58	18.21	37.50	11.914	2	.003
16. When it comes to learning vocabulary, I think my methods of controlling procrastination are effective.	29.60	20.08	33.90	6.760	2	.034

The results revealed significant differences for each statement. To identify the specific differences between each pair, a post hoc pairwise comparison test was conducted.

Table 67

Pairwise Comparisons for Statement 5,9,11 and 16 in Metacognitive Control

Statement Description	ENG101 Letter Grade	Test Statistic	Standard Error	p
Metacognitive Control Statement	B+,B vs. A,A-	20.515	7.229	.005
5. When learning vocabulary, I have special techniques to keep my concentration focused.	B+,B vs. B-,C+,C	-20.674	9.198	.025
	A,A- vs. B-,C+,C	-0.158	8.861	.986
Metacognitive Control Statement	B+,B vs. A,A-	23.220	7.169	.001
9 . When learning vocabulary, I think my methods of controlling my concentration are effective.	B+,B vs. B-,C+,C	-30.658	9.121	.001
	A,A- vs. B-,C+,C	-7.438	8.787	.397

Statement Description	ENG101 Letter Grade	Test Statistic	Standard Error	<i>p</i>
Metacognitive Control Statement 11 When it comes to learning vocabulary, I have my special techniques to prevent procrastination.	B+,B vs. A,A-	18.589	7.257	.010
	B+,B vs. B-,C+,C	-30.826	9.233	.063
	A,A- vs. B-,C+,C	-12.238	8.895	.169
Metacognitive Control Statement 16 When it comes to learning vocabulary, I think my methods of controlling procrastination are effective.	B+,B vs. A,A-	16.018	7.225	.027
	B+,B vs. B-,C+,C	-23.284	9.192	.011
	A,A- vs. B-,C+,C	-7.267	8.855	.412

Students with grades B+ and B differed significantly from the other two groups in terms of *metacognitive control* strategies. For Statement 5, they differed significantly, in their techniques to maintain concentration from that of students with grades A and A- as well as those with grades B-, C+ and C. Similarly, as regards Statement 9, they also differed significantly from the other groups in their methods of controlling their concentration. Regarding Statement 11, students with grades B+ and B reported significantly different techniques to avoid procrastination compared to those with A and A- letter grades. Finally, concerning Statement 16, significant difference as to perceptions of the ineffectiveness of procrastination control methods was identified, in relation to students with B+ and B letter grades.

Metacognitive Control: Letter Grade: ENG 102

The researcher grouped participants according to their received letter grades A,A- (*n*=19), B+,B (*n*=17) and Not Applicable (*n*=47).

Table 68

Use of Metacognitive Control by English102 Letter Grade

Statements	Group 1 A,A- (<i>n</i> =19)		Group 2 B,B+,B- (<i>n</i> =17)		Not Applicable (<i>n</i> =47)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
5. When learning vocabulary, I have special techniques to keep my concentration focused.	4.16	1.64	3.35	1.32	4.06	1.43

Statements	Group 1 A,A- (n=19)		Group 2 B,B+,B- (n=17)		Not Applicable (n=47)	
	M	SD	M	SD	M	SD
9. When learning vocabulary, I think my methods of controlling my concentration are effective.	4.26	1.36	3.65	1.49	4.17	1.29
11. When it comes to learning vocabulary, I have my special techniques to prevent procrastination.	3.58	1.53	3.35	1.61	3.28	1.41
16. When it comes to learning vocabulary, I think my methods of controlling procrastination are effective.	3.63	1.53	3.47	1.28	3.79	1.23
Overall	3.90	1.28	3.45	1.11	3.82	1.12

Table 68 indicated that participants who received A, A- (n=19) ranked all statements within *Metacognitive Control* higher mean scores while participants with ENG102 letter grades of B,B+,B- (n=17) ranked lower mean scores.

As the table demonstrates, the two groups reported various perceptions regarding the use of *Metacognitive Control* learning experiences. Students who received A, A- ($M = 4.26$, $SD = 1.36$) and B, B+ and B- ($M = 3.65$, $SD = 1.49$) had the highest mean score for the statement “When learning vocabulary, I think my methods of controlling my concentration are effective”. Students in Group 1 attached the least commitment to the practice of preventing procrastination by using their own unique techniques ($M = 3.58$, $SD = 1.53$) indicating wide range of variety in their responses. Notably, students in the second group receiving B, B+ and B- ($M = 3.35$, $SD = 1.61$) attached the least commitment to the same statement as the first group, additionally with the same mean score of 3.35 ($SD = 1.32$), Group 2 least favored the practice of employing unique methods to maintain their concentration.

The researcher utilized Independent Samples T-Test, a parametric test, to establish whether there was any significant mean differences between Group 1 and Group 2.

Table 69

Independent Samples T-test Results for the Use of Metacognitive Control by ENG102

Letter Grade

Facet	Group 1 A, A- (n=19)		Group 2 B,B+,B- (n=17)		t(34)	p
	M	SD	M	SD		
Metacognitive Control	3.90	1.28	3.45	1.11	1.121	.270

No statistically significant difference was found between Group 1 and Group

2. To determine whether the responses of the groups differed and as the assumptions of normality were not met, Mann-Whitney U test was conducted.

Table 70

The Mann-Whitney U Test Results for the Use of Metacognitive Control of

Participants by ENG102 Letter Grade

Statement	Mean Rank		U	z	p
	A,A- (n=19)	B,B+,B- (n=17)			
5. When learning vocabulary, I have special techniques to keep my concentration focused.	21.37	15.29	107.000	-1.759	.079
9. When learning vocabulary, I think my methods of controlling my concentration are effective.	20.66	16.09	120.500	-1.330	.183
11. When it comes to learning vocabulary, I have my special techniques to prevent procrastination.	18.95	18.00	153.000	-0.276	.782
16. When it comes to learning vocabulary, I think my methods of controlling procrastination are effective.	18.89	18.06	154.000	-0.243	.808

The Mann-Whitney U test results revealed that trilingual learners' responses did not lead to statistically significant differences between two groups regarding their use of *Metacognitive Control* strategies.

Satiation Control

The mean and standard deviation scores of the learning experiences that are related to SRCvoc *Satiation Control* can be found in Table below. For this part of the study, Statement 1 was reversely coded for further analyses.

Table 71

Satiation Control (N=83)

Statements	<i>M</i>	<i>SD</i>
1. Once the novelty of learning vocabulary is gone, I easily become impatient with it.	3.48	1.40
8. During the process of learning, I feel satisfied with the ways I eliminate boredom.	4.08	1.35
18. During the process of learning vocabulary, I am confident that I can overcome any sense of boredom.	3.82	1.28
19. When feeling bored with learning vocabulary, I know how to regulate my mood in order to invigorate the learning process.	4.01	1.22

With a range from 3.48 to 4.08, trilingual learners revealed average mean scores indicating participants slightly agreed on the statements about keeping the learning process interesting and dealing with boredom with variability in their responses.

Trilingual learners mostly agreed that in the course of learning they are happy with the way they avoid boredom ($M = 4.08$, $SD = 1.35$) and they can regulate their mood to quicken their learning process if they're feeling bored during vocabulary learning process ($M=4.01$, $SD=1.22$). Table 71 demonstrates that the participants barely agreed on the idea that they become impatient with the vocabulary learning process when the excitement wears off.

To adjudge whether the reasons behind the differences in their perceptions of *Satiation Control* differed on the basis of gender, high school type, year of study, ENG101 letter grade and ENG102 letter grade inferential analysis was conducted.

Satiation Control: Gender

Participants of the study divided into three by female ($n=59$), male ($n=20$) and prefer not to say ($n=4$). The researcher descriptively analyzed the degree of agreement first.

Table 72

Use of Satiation Control by Gender

Statements	Female ($n=59$)		Male ($n=20$)		Prefer not to answer ($n=4$)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
1. Once the novelty of learning vocabulary is gone, I easily become impatient with it.	3.42	1.26	3.35	1.72	5.0	0.81
8. During the process of learning vocabulary, I feel satisfied with the ways I eliminate boredom.	4.08	1.23	3.90	1.71	5.00	0.00
18. During the process of learning vocabulary, I am confident that I can overcome any sense of boredom.	3.92	1.29	3.75	1.16	2.75	1.50
19. When feeling bored with learning vocabulary, I know how to regulate my mood in order to invigorate the learning process.	3.98	1.25	3.95	1.19	4.75	0.95
Overall	3.85	0.81	3.73	0.82	4.37	0.52

The table indicates for every statement, both groups reported relatively lower mean scores on a six-point Likert scale ranging from 3.42 to 4.08. For every statement, female participants reported higher mean scores for *Satiation Control* compared to the male participants who reported slightly lower mean scores for their learning experience within the same facet. For this facet, female participants ranked an overall mean score of 3.85 ($SD = 0.81$) and male participants rated a mean score

of 3.73, ($SD = 0.82$). However, regardless of gender, these findings suggest that participants do not have a strong *Satiation Control* in vocabulary learning.

Next, an independent samples t-test was conducted to determine if there was a significant difference between two groups.

Table 73

Independent Samples T-test Results for the Use of Satiation Control by Gender

Facet	Female (n=59)		Male (n=20)		t(77)	p
	M	SD	M	SD		
Satiation Control	3.85	0.81	3.73	0.82	0.541	.590

The t-test results indicate there is no statistically significant difference in the use of *Satiation Control* between females and males.

To further analyze each learning experience that contributes to *Satiation Control*, the Mann-Whitney U test was conducted as the assumptions of normality were not met.

Table 74

The Mann-Whitney U Test Results for the Use of Satiation Control of Participants by Gender

Statements		Mean Rank		U	z	p
		Female (n=59)	Male (n=20)			
1.	Once the novelty of learning vocabulary is gone, I easily become impatient with it.	40.01	39.98	589.500	-0.006	.995
8.	During the process of learning, I feel satisfied with the ways I eliminate boredom.	40.21	39.38	577.500	-0.145	.885
18.	During the process of learning vocabulary, I am confident that I can overcome any sense of boredom.	40.77	37.73	544.500	-0.529	.597

Statements	Mean Rank		<i>U</i>	<i>z</i>	<i>p</i>
	Female (<i>n</i> =59)	Male (<i>n</i> =20)			
19. When feeling bored with learning vocabulary, I know how to regulate my mood in order to invigorate the learning process.	40.08	39.78	585.500	-0.053	.958

No statistically significant difference was observed among both genders regarding the use of *Satiation Control* strategies in vocabulary learning.

Satiation Control: High School Type

According to the type of high school trilingual learners attended, to compare their responses for their use of *Satiation Control* under SRCvoc, two groups were created; the ones attended public high schools (*n*=50) and the ones attended private high schools(*n*=33). The total use of the SRCvoc under *Satiation Control* construct and the mean and standard deviation scores of the construct were given in Table 75.

Table 75

Use of Satiation Control by High School

Statements	Public (<i>n</i> =50)		Private (<i>n</i> =33)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
1. Once the novelty of learning vocabulary is gone, I easily become impatient with it.	3.56	1.38	3.36	1.43
8. During the process of learning vocabulary, I feel satisfied with the ways I eliminate boredom.	4.14	1.34	4.00	1.36
18. During the process of learning vocabulary, I am confident that I can overcome any sense of boredom.	3.72	1.27	3.97	1.28
19. When feeling bored with learning vocabulary, I know how to regulate my mood in order to invigorate the learning process.	3.98	1.16	4.06	1.32
Overall	3.85	0.75	3.84	0.89

It can be observed that trilingual learners with different high school backgrounds agree on the utilization of *Satiation Control* on a moderate level with

mean scores ranging from 3.36 to 4.14. Students attended public high schools tend to agree the most on the practice of the way of overcoming boredom makes them feel satisfied during the vocabulary acquisition ($M = 4.14$, $SD = 1.34$) but they ranked the lowest for the statement “Once the novelty of learning vocabulary is gone, I easily become impatient with it” ($M = 3.56$, $SD = 1.38$). Interestingly with a mean score of 3.36 students who attended private high schools consider themselves impatient with vocabulary learning when the excitement of learning fades ($SD = 1.43$) indicating some divergence in the responses. On the other hand, they placed rather strong emphasis on the practice of controlling their emotions with the aim of keeping the vocabulary learning process quick even when they feel bored ($M = 4.06$, $SD = 1.32$). Overall, both groups ranked almost the same mean scores of (Public: $M = 3.85$, $SD = 0.75$ and Private: $M = 3.84$, $SD = 0.89$) with relatively less variances in their responses.

To assess if there was a significant difference between the students who had attended public high school and the ones who had attended private high schools, a non-parametric test was conducted as the assumptions of normality were not met.

Table 76

The Mann-Whitney U Test Results for the Use of Satiation Control by High School

Statement	Mean Rank		U	z	p
	Public ($n=50$)	Private ($n=33$)			
Satiation Control	41.35	42.98	792.500	-0.304	.761

The test results indicate no statistically significant difference among the groups on the use of Self-Regulatory Strategies by high school.

To further analyze each learning experience that contributes to *Satiation Control*, the Mann-Whitney U test was conducted.

Table 77

The Mann-Whitney U Test Results for the Use of Satiation Control of Participants by Type of High School

Statement	Mean Rank		<i>U</i>	<i>z</i>	<i>p</i>
	Public (<i>n</i> =50)	Private (<i>n</i> =33)			
1. Once the novelty of learning vocabulary is gone, I easily become impatient with it.	43.12	40.30	769.000	-0.538	.591
8. During the process of learning, I feel satisfied with the ways I eliminate boredom.	42.75	40.86	787.500	-0.359	.720
18. During the process of learning vocabulary, I am confident that I can overcome any sense of boredom.	40.05	44.95	727.500	-0.936	.349
19. When feeling bored with learning vocabulary, I know how to regulate my mood in order to invigorate the learning process.	41.43	42.86	796.500	-0.275	.783

As can be seen from the data given in Table 77, there was no significant difference between two groups for each statement.

Satiation Control: Year of Study

Participants were divided into three groups according to their undergraduate levels such as Freshman (*n*=43), Sophomore (*n*=18) and Junior, Senior (*n*=22).

Table 78*Use of Satiation by Year of Study*

Statements	Group 1 Freshman (<i>n</i> =43)		Group 2 Sophomore (<i>n</i> =18)		Group 3 Junior, Senior (<i>n</i> =22)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
1. Once the novelty of learning vocabulary is gone, I easily become impatient with it.	3.69	1.28	3.16	1.65	3.31	1.39
8. During the process of learning vocabulary, I feel satisfied with the ways I eliminate boredom.	4.02	1.35	4.17	1.20	4.14	1.49
18. During the process of learning vocabulary, I am confident that I can overcome any sense of boredom.	3.77	1.30	4.11	1.32	3.68	1.21
19. When feeling bored with learning vocabulary, I know how to regulate my mood in order to invigorate the learning process.	4.00	1.32	4.28	0.95	3.82	1.22
Overall	3.87	0.81	3.93	0.70	3.73	0.89

Among all statements the most rated strategy was the statement 19, with a mean of 4.28 ($SD = 0.95$) from Sophomore students, with a mean of 4.00 ($SD = 1.32$) from Freshman students and with a mean of 3.82 ($SD = 1.22$) from Junior, Senior students indicating participants are partly aware of how to control their emotions to reenergize themselves for the vocabulary learning process during the time of boredom. In addition, for the statement 8 “During the process of learning vocabulary, I am confident that I can overcome any sense of boredom.” Sophomore ($M = 4.17$, $SD = 1.32$) and Freshman ($M = 4.02$, $SD = 1.35$) students reported relatively higher mean scores. In general, for the statement 18 “During the process of learning vocabulary, I am confident that I can overcome any sense of boredom” there were large mean differences between groups with a mean of 3.77 ($SD = 1.30$) from Freshman, with a mean score of 4.11 ($SD = 1.32$) from Sophomore and with a mean of 3.68 ($SD = 1.21$) from Junior, Senior. Among three groups, Sophomore students, overall ranked all statements within *Satiation Control* the highest with a mean score

of 3.93 ($SD = 0.70$), it is followed by Freshman students with a mean score of 3.87 ($SD = 0.81$) and Junior, Senior students with the lowest mean score of 3.73 ($SD = 0.89$). The findings suggest that all three groups do not possess strong but an average use of *Satiation Control* in vocabulary learning.

To determine whether these three groups Freshman ($n=43$), Sophomore ($n=18$) and Junior, Senior ($n=22$) differed in their responses regarding their utilization of *Satiation Control*, a non-parametric test Kruskal-Wallis Rank Score was run.

Table 79

Kruskal-Wallis Rank Score the Use of Satiation Control by Year of Study

Facet	Mean Rank			χ^2	df	p
	Freshman ($n=43$)	Sophomore ($n=18$)	Junior, Senior ($n=22$)			
Satiation Control	43.37	42.78	38.68	0.581	2	.748

Table indicated that in their utilization of *Satiation Control* by their Year of Study there were no significant differences.

To further analyze each learning experience that contributes to *Satiation Control*, the Mann-Whitney U test was conducted.

Table 80

Kruskal-Wallis Rank Score Results for the Use of Satiation Control of Participants by Year of Study

Statements	Mean Rank			χ^2	df	p
	Fresh man ($n=43$)	Sophomore ($n=18$)	Junior, Senior ($n=22$)			
1. Once the novelty of learning vocabulary is gone, I easily become impatient with it.	45.84	36.31	39.16	2.554	2	.279

Statements	Mean Rank			χ^2	df	p
	Fresh man (n=43)	Sophomore (n=18)	Junior, Senior (n=22)			
8. During the process of learning, I feel satisfied with the ways I eliminate boredom.	41.17	42.00	43.61	0.158	2	.924
18. During the process of learning vocabulary, I am confident that I can overcome any sense of boredom.	41.27	47.03	39.32	1.166	2	.558
19. When feeling bored with learning vocabulary, I know how to regulate my mood in order to invigorate the learning process.	42.62	45.97	37.55	1.365	2	.505

For each statement the p-value surpassed .05, suggesting that the differences in responses might be explained by random chance. This, therefore, implies that participants' responses did not differ in *Satiation Control* regarding their Year of Study.

Satiation Control: CGPA

The researcher divided participants into three groups ranging from the ones received 3.00-2.00 ($n=39$), 2.00-3.00 ($n=11$) and the third group Not Applicable ($n=33$) for students who did not indicate their CGPA or the ones who had not received it yet; however, for further inferential analysis the researcher excluded the answers of the third group.

Table 81*Use of Satiation Control by CGPA*

Statements	Group 1 3.00-4.00 (n=43)		Group 2 2.00-3.00 (n=11)		Not Applicable (n=33)	
	M	SD	M	SD	M	SD
1. Once the novelty of learning vocabulary is gone, I easily become impatient with it.	3.53	1.44	3.00	1.54	3.57	1.29
8. During the process of learning vocabulary, I feel satisfied with the ways I eliminate boredom.	4.26	1.29	3.73	1.67	4.00	1.29
18. During the process of learning vocabulary, I am confident that I can overcome any sense of boredom.	3.79	1.43	3.91	1.13	3.82	1.15
19. When feeling bored with learning vocabulary, I know how to regulate my mood in order to invigorate the learning process.	4.05	1.19	3.82	1.16	4.03	1.31
Overall	3.91	0.83	3.61	0.64	3.85	0.82

All participants gave considerable weight to almost all statements with respect to *Satiation Control*. Students with a CGPA of 3.00 and above reported among all statements that they mostly feel satisfied with the ways they alleviate boredom when learning vocabulary with a mean score of 4.26, ($SD = 1.29$) demonstrating divergence in their responses. The same group of students with a CGPA of 3.00 and above they did not consider themselves impatient with the vocabulary learning when the excitement wears off with a mean score of 3.53 ($SD = 1.44$) yet indicating substantial variation in their responses notably, students with a CGPA ranging from 2.00 to 3.00 ($M = 3.00$, $SD = 1.54$) ranked the same learning experience as for the lowest. While for the highest ranked learning experience, they partly agree on overcoming any kind of boredom when learning vocabulary ($M = 3.91$, $SD = 1.13$) showing variation in their responses. Between two groups, expect for the statement 18, participants with a CGPA 3.00 and above

ranked higher mean scores than the participants of the second group. The same first group, overall ranked the highest mean score of 3.91 ($SD = 0.83$) while students with a CGPA of 2.00 to 3.00 ranked lower mean score of 3.61 ($SD = 0.64$)

Regarding the use of *Satiation Control* by their Cumulative Grade Average Point, an independent samples t-test was conducted to find out if there were any differences between groups.

Table 82

Independent Samples T-test Results for the Use of Satiation Control by Cumulative Grade Average Point

Facet	3.00-4.00 (n=39)		2.00-3.00 (n=11)		t(48)	p
	M	SD	M	SD		
Satiation Control	3.91	0.83	3.61	0.64	0.207	.282

There was no statistically significant difference between students with a CGPA ranging from 3.00 to 4.00 and the ones with a CGPA ranging from 2.00 to 3.00.

To determine the differences in their responses regarding the utilization of *Satiation Control* by their CGPA, a non-parametric test, Mann-Whitney U Test was conducted for each statement.

Table 83

The Mann-Whitney U Test Results for the Use of Satiation Control of Participants by Cumulative Grade Average Point

Statement	Mean Rank		U	z	p
	3.00-4.00 (n=39)	2.00-3.00 (n=11)			
1. Once the novelty of learning vocabulary is gone, I easily become impatient with it.	26.67	21.36	169.000	-1.102	.272

Statement	Mean Rank		<i>U</i>	<i>z</i>	<i>p</i>
	3.00-4.00 (<i>n</i> =39)	2.00-3.00 (<i>n</i> =11)			
8. During the process of learning, I feel satisfied with the ways I eliminate boredom.	26.53	21.86	174.500	-0.959	.338
18. During the process of learning vocabulary, I am confident that I can overcome any sense of boredom.	25.49	25.55	214.000	-0.012	.990
19. When feeling bored with learning vocabulary, I know how to regulate my mood in order to invigorate the learning process.	26.19	23.05	187.500	-0.659	.510

Given test results indicated that students who had a CGPA of 3.00 to 4.00 and the ones who received CGPA ranging from 2.00 to 3.00 did not differ in their responses for each statement.

Satiation Control: French Preparatory Program Participation

The researcher grouped the participants and examined their utilization of the self-regulatory strategies under *Satiation Control* by their French Preparatory Program participation.

Table 84

Use of Satiation Control by French Preparatory Program Participation

Statements	Yes (<i>n</i> =81)		No (<i>n</i> =2)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
1. Once the novelty of learning vocabulary is gone, I easily become impatient with it.	3.49	1.37	3.00	2.82
8. During the process of learning vocabulary, I feel satisfied with the ways I eliminate boredom.	4.10	1.35	3.50	0.70
18. During the process of learning vocabulary, I am confident that I can overcome any sense of boredom.	3.83	1.27	3.50	2.12
19. When feeling bored with learning vocabulary, I know how to regulate my mood in order to invigorate the learning process.	4.00	1.23	4.50	0.70
Overall	3.85	0.79	3.62	1.59

The table demonstrates that trilingual learners who attended French preparatory program prior to their undergraduate studies tend to respond a little more positively with respect to the use of the strategies under *Satiation Control* construct with a mean score of 3.85 ($SD = 0.79$) compared to the ones who did not attend ($M = 3.62$, $SD = 1.59$) indicating there is a large diversity among the responses of the participants who did not attend to French preparatory program. Students who did not participate French Preparatory Program ($n=2$) agreed the most on the strategy that they can manage their mood to quicken the learning process when they bored during the vocabulary learning acquisition process ($M = 4.50$, $SD = 0.70$). On the other hand, the same group of students agreed the least on the statement 1 with a mean score of 3.00 ($SD = 2.82$) showing a high level of inconsistency in their responses. Students who attended French Preparatory Program ($n=81$) attached strong emphasis on how they feel satisfied with their strategy to reduce their boredom during the process of vocabulary acquisition ($M = 4.10$, $SD = 1.35$).

Satiation Control: English Preparatory Program Participation

This study also examined whether the use of SRCvoc varied based on participation in English Preparatory Program. The participants were categorized by the ones who attended the program (Yes: $n=5$) and the ones who did not attend the program (No: $n=78$) prior to their studies.

Table 85

Use of Satiation Control by English Preparatory Program Participation

Statements	Yes ($n=5$)		No ($n=78$)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
1. Once the novelty of learning vocabulary is gone, I easily become impatient with it.	2.80	1.30	3.52	1.40
8. During the process of learning vocabulary, I feel satisfied with the ways I eliminate boredom.	4.20	1.30	4.08	1.35

Statements	Yes ($n=5$)		No ($n=78$)	
	M	SD	M	SD
18. During the process of learning vocabulary, I am confident that I can overcome any sense of boredom.	3.60	1.14	3.83	1.29
19. When feeling bored with learning vocabulary, I know how to regulate my mood in order to invigorate the learning process.	3.40	1.34	4.05	1.21
Overall	3.50	1.15	3.87	0.78

As the table demonstrates both groups reported slightly lower mean scores for every statement ranging from 2.80 to 4.20. Overall, with a minor mean score difference, students who did not attend English preparatory program reported slightly higher mean scores than those who did, indicating they regarded the employment of *Satiation Control* facet of the SRCvoc more positively compared to those who attended English preparatory program. Students who had attended English preparatory program attached strong commitment to the kinds of methods they eliminate boredom is satisfactory ($M = 4.20$, $SD = 1.30$) showing substantial variance in their responses whilst they did not consider themselves impatient with vocabulary learning when the excitement wears off ($M = 2.80$, $SD = 1.30$) yet indicating some divergence in their responses. As for the students who did not attend English preparatory program reported the highest mean score for the learning experience “During the process of learning vocabulary, I feel satisfied with the ways I eliminate boredom” ($M = 4.08$, $SD = 1.35$) with a wide range of variety in their responses, whilst they scored the least for becoming impatient with vocabulary acquisition process when they lose their excitement ($M = 3.52$, $SD = 1.40$) showing inconsistency.

To investigate potential differences in the use of Self-Regulatory Strategies between these two groups, a parametric test, independent sample t-test was conducted (Table 86).

Table 86

Independent Samples T-test Results for the Use of Satiation Control by English Preparatory Program Participation

Facet	Yes (n=5)		No (n=78)		t(81)	p
	M	SD	M	SD		
Satiation Control	3.50	1.15	3.87	0.78	-0.999	.219

The table revealed no significant difference in *Satiation Control* between two groups, $t(81) = -0.999$, $p = .219$. With a minor mean difference, it can be interpreted that students who did not attend English preparatory program employed *Satiation Control* strategies more than the ones attended English preparatory program.

To further examine potential English Preparatory Program participation differences in each individual statement of this facet, the Mann-Whitney U test was conducted as the assumptions of normality were not met (Table 87).

Table 87

The Mann-Whitney U Test Results for the Use of Satiation Control of Participants by English Preparatory Program Participation

Statement	Mean Rank		U	z	p
	Yes (n=78)	No (n=5)			
1. Once the novelty of learning vocabulary is gone, I easily become impatient with it.	28.50	42.87	127.500	-1.333	.183
8. During the process of learning, I feel satisfied with the ways I eliminate boredom.	44.90	41.81	180.500	-0.285	.775

Statement	Mean Rank		<i>U</i>	<i>z</i>	<i>p</i>
	Yes (<i>n</i> =78)	No (<i>n</i> =5)			
18. During the process of learning vocabulary, I am confident that I can overcome any sense of boredom.	37.40	42.29	172.000	-0.454	.650
19. When feeling bored with learning vocabulary, I know how to regulate my mood in order to invigorate the learning process.	31.30	42.69	141.500	-1.062	.288

The test results showed no statistically significant differences between students that attended English Preparatory Program and student who did not attend English Preparatory Program in their self-reported *Satiation Control* in vocabulary learning for any individual statements.

Satiation Control: Letter Grade: ENG 101

In this study researcher further assessed whether students' letter grade in ENG101 course differed regarding their use of SRCVOC within *Satiation Control*. The students were grouped by the students received A,A- (*n*=24), B+,B (*n*=19), B-, C+,C (*n*=10) and students who did not specify their letter grades, Not Applicable (*n*=30).

Table 88

Use of Satiation Control Practices by English101 Letter Grade

Statements	Group 1 A,A- (<i>n</i> =24)		Group 2 B+,B (<i>n</i> =19)		Group 3 B-,C+C (<i>n</i> =10)		Not Applicable (<i>n</i> =30)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
1. Once the novelty of learning vocabulary is gone, I easily become impatient with it.	3.70	1.48	3.00	1.41	3.50	1.58	3.60	1.24
8. During the process of learning vocabulary, I feel satisfied with the ways I eliminate boredom.	4.46	0.83	3.58	1.52	4.90	1.28	4.00	1.36

Statements	Group 1		Group 2		Group 3		Not	
	A,A- (n=24)		B+,B (n=19)		B-,C+C (n=10)		Applicable (n=30)	
	M	SD	M	SD	M	SD	M	SD
18. During the process of learning vocabulary, I am confident that I can overcome any sense of boredom.	3.75	1.35	4.16	1.30	3.90	1.44	3.63	1.15
19. When feeling bored with learning vocabulary, I know how to regulate my mood in order to invigorate the learning process.	4.04	1.16	4.21	1.13	4.10	1.19	3.83	1.36
Overall	3.98	0.80	3.67	0.74	4.10	0.86	3.76	0.82

Overall, on a six-point Likert scale, all three groups responded average mean scores for the use of *Satiation Control*. students who received B-,C+,C reported the highest mean score of 4.90 ($SD = 1.28$) for statement indicating they can cope with boredom successfully and as for the lowest, students who received B+,B for ENG101 course, did not fully consider themselves impatient when the excitement of vocabulary learning fades away with a mean score of 3.00 ($SD = 1.41$). The second group put strong emphasis on the importance of controlling their emotions to quicken the learning process ($M = 4.21$, $SD = 1.13$) showing inconsistency in their responses. On the other hand just like the third group, students receiving A and A- attach commitment to their boredom elimination strategies ($M = 4.46$, $SD = 0.83$). Although these findings suggest that students have slightly average *Satiation Control* in vocabulary learning the second group reported a slightly lower mean score of 3.67 ($SD = 0.74$), the first group students who received A,A-, reported a mean score of 3.98 ($SD = 0.80$) and the third group reported the highest mean score of 4.10 ($SD = 0.86$) for *Satiation Control*.

To investigate further potential differences, a parametric test, ANOVA, was conducted (Table 89).

Table 89

ANOVA Results for the Use of Satiation Control by ENG101 Letter Grade

Facet	A,A- (n=24)		B+,B (n=19)		B-,C+,C (n=10)		$F(3,79)$	η^2	p
	M	SD	M	SD	M	SD			
Satiation Control	3.98	0.80	3.67	0.74	4.10	0.86	0.977	.035	.408

Regarding students' ways of preventing boredom, keeping their motivation and maintaining their learning process interesting within *satiation control*, test results revealed no statistically significant difference between three groups.

For each learning experience, a non-parametric test was required as the normality test results did not meet the normality assumptions.

Table 90

Kruskal-Wallis Rank Score Results for the Use of Satiation Control of Participants by ENG101 Letter Grade

Statements	Mean Rank			χ^2	df	p
	A,A- (n=24)	B+,B (n=19)	B-,C+,C (n=10)			
1. Once the novelty of learning vocabulary is gone, I easily become impatient with it.	30.46	22.18	27.85	3.267	2	.195
8. During the process of learning, I feel satisfied with the ways I eliminate boredom.	29.88	18.55	36.15	10.567	2	.005
18. During the process of learning vocabulary, I am confident that I can overcome any sense of boredom.	25.46	28.50	25.95	0.836	2	.658

Statements	Mean Rank			χ^2	df	p
	A,A- (n=24)	B+,B (n=19)	B-,C+,C (n=10)			
19. When feeling bored with learning vocabulary, I know how to regulate my mood in order to invigorate the learning process.	26.71	27.53	26.70	0.037	2	.981

According to the Kruskal-Wallis Rank Score test results there is a significant difference between three groups for statement 8, ($\chi^2(2)= 10.567, p=.005$), suggesting that students' satisfaction with their self-regulatory strategies for managing boredom varies depending on their grades.

To further analyze this, a pairwise comparisons post hoc was used within the aim of detecting the differences (Table 91).

Table 91

Pairwise Comparisons for Statement 8 in Satiation Control

Statement Description	ENG101 Letter Grade	Test Statistic	Standard Error	p
Satiation Control Statement 8	B+,B–A,A-	17.944	7.196	.013
During the process of learning,	B+,B –B-,C+,C	-27.882	9.155	.002
I feel satisfied with the ways I eliminate boredom.	A,A- –B-,C+,C	-9.938	8.820	.260

Students with B+ and B grades reported significantly lower satisfaction with their boredom elimination strategies compared to those with A and A- grades.

Students with B-, C+ or C grades report significantly higher satisfaction with their methods for dealing with boredom during the learning process compared to those with B+ or B grades.

Satiation Control: Letter Grade: ENG 102

The participants were grouped according to their received letter grades A,A- ($n=19$), B+,B ($n=17$) and the ones who did not specify their letter grades as Not Applicable ($n=47$).

Table 92

Use of Satiation Control by English102 Letter Grade

Statements	Group 1 A,A- ($n=19$)		Group 2 B,B+,B- ($n=17$)		Not Applicable ($n=47$)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
1. Once the novelty of learning vocabulary is gone, I easily become impatient with it.	3.36	1.38	3.17	1.55	3.63	1.35
8. During the process of learning vocabulary, I feel satisfied with the ways I eliminate boredom.	4.37	1.21	3.71	1.49	4.11	1.33
18. During the process of learning vocabulary, I am confident that I can overcome any sense of boredom.	3.74	1.48	4.18	1.01	3.72	1.28
19. When feeling bored with learning vocabulary, I know how to regulate my mood in order to invigorate the learning process.	3.89	1.24	4.18	1.07	4.00	1.28
Overall	3.84	0.94	3.80	0.64	3.86	0.81

It can be observed from the results that while students who received A,A- letter grades for ENG102 mostly feel satisfied with the methods how they alleviate boredom when they are learning vocabulary with a mean score of 4.37 ($SD = 1.21$) students who received B,B+,B- mostly agree they strongly believe the idea that can surmount the feeling of any type of boredom with a mean score of 4.18 ($SD = 1.01$). Overall, the first group reported higher mean score of 3.84 ($SD = 0.94$) while the second group reported slightly lower mean score of 3.80 ($SD = 0.64$)

To investigate differences among two groups a parametric Independent Samples T-Test was conducted.

Table 93

Independent Samples T-test Results for the Use of Satiation Control by ENG102

Letter Grade

Facet	Group 1 A, A- (n=19)		Group 2 B,B+,B- (n=17)		<i>t</i> (34)	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Satiation Control	3.84	0.94	3.80	0.64	0.122	.904

The test results show no statistically difference between three groups. To further investigate potential ENG102 letter grade disparities in each individual statement of this facet, as the normality assumptions were not met, a Mann-Whitney U test was performed (Table 94).

Table 94

The Mann-Whitney U Test Results for the Use of Satiation Control of Participants by ENG102 Letter Grade

Statements	Mean Rank		<i>U</i>	<i>z</i>	<i>p</i>
	A,A- (n=19)	B,B+,B- (n=17)			
1. Once the novelty of learning vocabulary is gone, I easily become impatient with it.	19.42	17.47	144.000	-0.575	.565
8. During the process of learning, I feel satisfied with the ways I eliminate boredom.	20.61	16.15	121.500	-1.300	.194
18. During the process of learning vocabulary, I am confident that I can overcome any sense of boredom.	17.24	19.91	137.500	-0.786	.432

Statements	Mean Rank		<i>U</i>	<i>z</i>	<i>p</i>
	A,A- (<i>n</i> =19)	B,B+,B- (<i>n</i> =17)			
19. When feeling bored with learning vocabulary, I know how to regulate my mood in order to invigorate the learning process.	17.24	19.91	137.500	-0.816	.414

The Mann-Whitney U Test results demonstrate that there is no significant difference between the groups.

Emotion Control

To understand the participants (*n*=83) score the mean and standard deviation scores of the four statements are related to SRCVOC *Emotion Control* were analyzed descriptively. For analyses, Statement 12 was reversely coded. The results can be found in Table 95.

Table 95

Emotion Control (N=83)

Statements	<i>M</i>	<i>SD</i>
2. When I feel stressed about vocabulary learning, I know how to reduce this stress.	4.01	1.51
6. I feel satisfied with the methods I use to reduce the stress of vocabulary learning.	4.06	1.35
12. When I feel stressed about vocabulary, I simply want to give up.	3.66	1.56
15. When I feel stressed about vocabulary learning, I cope with this problem immediately.	3.80	1.21

On a six-point Likert scale, participants highlighted the importance of the use of *emotion control* in vocabulary learning on a moderate level with mean scores ranging from 3.66 to 4.06. This indicates trilingual learners mostly agreed that they feel satisfied with their ways of eliminating stress of vocabulary acquisition

($M = 4.06$, $SD=1.35$). The results revealed that there were some variances in participants' responses. Participants relatively agreed that they are aware of the ways how they can reduce the level of their stress when learning vocabulary ($M = 4.01$, $SD = 1.51$). However, compared to statement 2 and 6, participants were less likely to agree on the idea to cope with the problem of stress when learning vocabulary ($M = 3.80$, $SD = 1.21$). In addition, participants were less likely to give up whenever they are feeling about the vocabulary acquisition process ($M = 3.66$, $SD = 1.56$).

To decide if the perception of the trilingual learners differed on the basis of gender, high-school type, year of study, achievement as measured by CGPA, achievement in ENG101, achievement in ENG102, and English and French preparatory program participation, inferential analysis was conducted.

Emotion Control: Gender

The students were grouped by gender as female ($n=59$), male ($n=20$) and prefer not to say ($n=4$). The degree of agreement was analyzed descriptively first (Table 96).

Table 96

Use of Emotion Control by Gender

Statements	Female ($n=59$)		Male ($n=20$)		Prefer not to answer ($n=4$)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
2. When I feel stressed about vocabulary learning, I know how to reduce stress.	3.83	1.47	4.30	1.59	5.25	0.95
5. I feel satisfied with the methods I use to reduce the stress of vocabulary learning.	3.93	1.36	4.35	1.42	4.50	0.57
10. When I feel stressed about vocabulary learning, I simply want to give up.	3.57	1.53	3.90	1.71	3.75	1.50
15. When I feel stressed about my vocabulary learning, I cope with this problem immediately.	3.73	1.08	4.10	1.37	3.25	2.21

Statements	Female (n=59)		Male (n=20)		Prefer not to answer (n=4)	
	M	SD	M	SD	M	SD
Overall	3.76	1.15	4.16	1.08	4.18	0.96

For each statement both groups reported slightly positive regarding the use of *Emotion Control*. Male participants reported an overall mean score of 4.16 ($SD = 1.08$) while female participants reported slightly lower mean score of 3.76 ($SD = 1.15$). Although both groups reported similar mean scores, male participants reported a slightly higher mean score for each statement. Findings suggest that, students generally have *Satiation Control* in vocabulary learning. Male students attach a strong commitment to their elimination strategies regarding the stress of vocabulary learning ($M = 4.35$, $SD = 1.42$) indicating discrepancy in their responses, by ranking the lowest mean score of 3.90 male participants less likely to give up when feeling stressed regarding vocabulary acquisition with a standard deviation of 1.71 indicating the largest disparity among the participants. On the other hand, female participants consider themselves partly satisfied with their elimination strategies concerning the stress occurring in vocabulary learning ($M = 3.93$, $SD = 1.36$) yet they ranked the lowest score for the statement 5 ($M = 3.57$, $SD = 1.53$) showing great variety in their responses.

To examine possible differences in the utilization of SRCVOC between two groups, the normality assumptions were met, an independent t-test was conducted (Table 97).

Table 97

Independent Samples T-test Results for the Use of Emotion Control by Gender

Facet	Female (n=59)		Male (n=20)		$t(77)$	p
	M	SD	M	SD		
Emotion Control	3.76	1.15	4.16	1.08	-1.342	.183

The results revealed no significant difference in *Emotion Control* between the two groups, $t(77) = -1.342, p = .183$.

To further investigate potential gender differences in each individual statement of *Emotion Control*, a Mann-Whitney U test was utilized, as the data did not meet the assumptions of normality test.

Table 98

The Mann-Whitney U Test Results for the Use of Emotion Control of Participants by Gender

Statement	Mean Rank		U	z	p
	Female (n=59)	Male (n=20)			
2. When I feel stressed about vocabulary learning, I know how to reduce this stress.	38.05	45.75	475.000	-1.328	.184
6. I feel satisfied with the methods I use to reduce the stress of vocabulary learning.	38.26	45.13	487.500	-1.188	.235
12. When I feel stressed about vocabulary, I simply want to give up.	38.68	43.90	512.000	-0.898	.369
15. When I feel stressed about vocabulary learning, I cope with this problem immediately.	37.92	46.13	467.500	-1.431	.152

The test results revealed that there were no statistically significant differences between female and male participants in their self-reported *Emotion Control* in vocabulary learning for any individual statements.

Emotion Control: High School Type

The participants of the study were grouped into two categories based on their attendance at either public ($n=50$) or private ($n=33$) high schools.

Table 99*Use of Emotion Control by High School*

Statements	Public ($n=50$)		Private ($n=33$)	
	M	SD	M	SD
2. When I feel stressed about vocabulary learning, I know how to reduce this stress.	3.98	1.45	4.06	1.61
6. I feel satisfied with the methods I use to reduce the stress of vocabulary.	4.00	1.40	4.15	1.30
12. When I feel stressed about vocabulary learning, I simply want to give up.	3.76	1.57	3.51	1.56
15. When I feel stressed about my vocabulary learning, I cope with this problem immediately.	3.78	1.18	3.45	1.28
Overall	3.88	1.18	3.88	1.06

Although both groups differed in their perception for each statement, overall, both groups ranked the same mean score of 3.88 with different standard variation for public ($SD = 1.18$) and private ($SD = 1.06$) high schools. Among the learning experiences under *Emotion Control*, students who attended public high schools placed a strong emphasis on the use of their coping mechanism with vocabulary stress with a mean score of 4.00 ($SD = 1.40$) however, they did not consider they could simply quit learning vocabulary whenever they feel stressed ($M = 3.76$, $SD = 1.57$) reporting inconsistency in their responses. Interestingly, as for the highest ranked statement, students who attended private high schools ($M = 4.15$, $SD = 1.30$) also put strong emphasis on the same statement ranked by students attended public high school yet they did not consider they could deal with the stress they are experiencing during the vocabulary learning process ($M = 3.45$, $SD = 1.28$)

To determine if there is a significant difference between the groups the researcher conducted Independent Samples T-test regarding the use of Self-Regulatory Strategies by the type of high school of the participants.

Table 100

Independent Samples T-test Results for the Use of Emotion Control by High School

Facet	Public (n=50)		Private (n=33)		t(81)	p
	M	SD	M	SD		
Emotion Control	3.88	1.118	3.88	1.06	-0.025	.648

It can be seen that there is no significant difference between students who attended public high schools and the ones who attended private high schools.

As the assumptions of normality were not met, the researcher conducted Mann-Whitney U test to identify differences between the two groups.

Table 101

The Mann-Whitney U Test Results for the Use of Emotion Control of Participants by Type of High School

Statement	Mean Rank		U	z	p
	Public (n=50)	Private (n=33)			
2. When I feel stressed about vocabulary learning, I know how to reduce this stress.	41.28	43.09	789.000	-0.343	.732
6. I feel satisfied with the methods I use to reduce the stress of vocabulary learning.	41.40	42.91	795.000	-0.288	.774
12. When I feel stressed about vocabulary, I simply want to give up.	43.46	39.79	752.000	-0.694	.488
15. When I feel stressed about vocabulary learning, I cope with this problem immediately.	41.64	42.55	807.000	-0.173	.863

Given test results reveal that no significant difference was found between the constituent components of *Emotion Control* between the student attended public high schools and those who attended private high schools.

Emotion Control: Year of Study

Trilingual learners who participated in this study were grouped by three categories; Freshman ($n=43$), Sophomore ($n=18$) and Junior, Senior ($n=22$).

Table 102

Use of Emotion Control by Year of Study

Statements	Freshman ($n=43$)		Sophomore ($n=18$)		Junior, Senior ($n=22$)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
1. When I feel stressed about vocabulary learning, I know how to reduce this stress.	4.02	1.55	3.56	1.82	4.36	1.04
6. I feel satisfied with the methods I use to reduce the stress of vocabulary.	4.00	1.39	4.33	1.28	3.95	1.36
12. When I feel stressed about vocabulary learning, I simply want to give up.	3.55	1.51	3.38	1.64	4.09	1.57
15. When I feel stressed about my vocabulary learning, I cope with this problem immediately.	3.49	1.24	4.22	1.06	4.05	1.17
Overall	3.76	1.20	3.87	1.00	4.11	1.10

Table 102 demonstrates that each group reported slightly average scores with the lowest 3.49 to 4.36. While Junior, Senior students mostly agreed they are capable of reducing stress whenever they are stressed with a mean score of 4.36 ($SD = 1.04$), it is followed by Freshman students with a mean score of 4.02 ($SD = 1.55$) indicating a substantial variation in differences, sophomore students generally agree with the learning experience that suggests they are satisfied with the ways they utilize to minimize stress of vocabulary with a mean score of 4.33 ($SD = 1.28$). Overall, for *Emotion Control* freshman ranked a mean score of 3.76 ($SD = 1.20$), while sophomore students reported a mean of 3.87 ($SD = 1.00$) and among three groups Junior, Senior students reported the highest mean score of 4.11 ($SD = 1.10$)

indicating the third group put more emphasis on the utilization of *Emotion Control* strategies when learning vocabulary.

For *Emotion Control* and for each learning experience, normality test results required the use of Kruskal -Wallis Rank Score Test (Table 103).

Table 103

Kruskal-Wallis Rank Score the Use of Emotion Control by Year of Study

Facet	Mean Rank			χ^2	df	p
	Freshman (n=43)	Sophomore (n=18)	Junior,Senior (n=22)			
Emotion Control	40.53	41.00	45.68	0.707	2	.702

The Kruskal-Wallis Rank Score results demonstrated that there is no significant difference in the perceived use of *Emotion Control* under the SRCvoc among the participants regarding their year of study ($\chi^2(2)= 0.707, p=.702$).

Table 104

Kruskal-Wallis Rank Score Results for the Use of Emotion Control of Participants by Year of Study

Statements	Mean Rank			χ^2	df	p
	Freshman (n=43)	Sophomore (n=18)	Junior,Senior (n=22)			
2. When I feel stressed about vocabulary learning, I know how to reduce this stress.	42.59	36.22	45.57	1.618	2	.445
6. I feel satisfied with the methods I use to reduce the stress of vocabulary learning.	41.74	45.75	39.43	0.732	2	.693
12. When I feel stressed about vocabulary, I simply want to give up.	40.23	37.92	48.80	2.607	2	.272

Statements	Mean Rank			χ^2	df	p
	Freshman ($n=43$)	Sophomore ($n=18$)	Junior, Senior ($n=22$)			
15. When I feel stressed about vocabulary learning, I cope with this problem immediately.	36.69	50.19	45.68	4.992	2	.082

The Kruskal-Wallis Rank Score results demonstrated that there is no significant difference in the perceived use of *Emotion Control* among the participants according to their year of study.

Emotion Control: CGPA

Trilingual learners who participated in this study were divided by their CGPA, students who had above 3.00 ($n=39$), 2.00 to 3.00 ($n=11$) and students who did not provide any information regarding their CGPA or the ones who did not have a CGPA as Not Applicable ($n=33$).

Table 105

Use of Emotion Control by CGPA

Statements	Group 1 3.00-4.00 ($n=43$)		Group 2 2.00-3.00 ($n=11$)		Not Applicable ($n=33$)	
	M	SD	M	SD	M	SD
2. When I feel stressed about vocabulary learning, I know how to reduce this stress.	4.03	1.51	3.73	1.67	4.09	1.48
6. I feel satisfied with the methods I use to reduce the stress of vocabulary.	4.08	1.34	4.18	1.25	4.00	1.43
12. When I feel stressed about vocabulary learning, I simply want to give up.	4.05	1.57	2.90	1.70	3.45	1.41
15. When I feel stressed about my vocabulary learning, I cope with this problem immediately.	4.08	1.03	3.45	1.50	3.58	1.27
Overall	4.05	1.01	3.56	1.35	3.78	1.18

On a six-point Likert scale, the first group responded positively for each learning experience however, students with a CGPA between 2.00 and 3.00 reported

the highest mean score for the learning experience “I feel satisfied with the methods I use to reduce the stress of vocabulary” ($M = 4.18$, $SD = 1.25$) interestingly the first group of students ranked the same statement the highest with a mean score of 4.08 ($SD = 1.34$). On the other hand, the second group ranked learning experience “When I feel stressed about vocabulary learning, I simply want to give up.” the lowest with a mean of 2.90 and a standard deviation of 1.70 indicating a high level of divergence in their responses. This also suggests that students with a CGPA of 2.00 and 3.00 are less likely to quit when confronting stress in vocabulary learning.

In the two groups’ responses to further investigate potential differences, Independent Sample T-test was utilized.

Table 106

Independent Samples T-test Results for the Use of Emotion Control by Cumulative Grade Average Point

Facet	3.00-4.00 ($n=39$)		2.00-3.00 ($n=11$)		$t(48)$	p
	M	SD	M	SD		
Emotion Control	4.05	1.01	3.56	1.35	1.308	.197

There is no statistically significant difference between students who had 3.00 and above CGPA and the ones who had 2.00 to 3.00.

To see whether the responses significantly differed for each statement, Mann-Whitney U Test was conducted.

Table 107

The Mann-Whitney U Test Results for the Use of Emotion Control of Participants by Cumulative Grade Average Point

Statement	Mean Rank		<i>U</i>	<i>z</i>	<i>p</i>
	3.00-4.00 (<i>n</i> =39)	2.00-3.00 (<i>n</i> =11)			
2. When I feel stressed about vocabulary learning, I know how to reduce this stress.	36.09	23.41	191.500	-0.550	.582
6. I feel satisfied with the methods I use to reduce the stress of vocabulary learning.	25.46	25.64	213.000	-0.036	.971
12. When I feel stressed about vocabulary, I simply want to give up.	27.60	18.05	132.500	-1.965	.049
15. When I feel stressed about vocabulary learning, I cope with this problem immediately.	27.08	19.91	153.000	-1.493	.136

There is a significant difference between students who had 3.00 and above CGPA scores and the ones who had 2.00 to 3.00. Given results indicate that learners with a CGPA range of 2.00 and 3.00 are less likely to quit when stressed about vocabulary learning than students with higher CGPAs.

Emotion Control: French Preparatory Program Participation

This study also examined if the use of *Emotion Control* in SRCVOC varied regarding the participation in French Preparatory Program thus the participants were grouped whether they attended the program (*n*=81) or did not attend the program (*n*=2).

Table 108*Use of Emotion Control by French Preparatory Program Participation*

Statements	Yes ($n=81$)		No ($n=2$)	
	M	SD	M	SD
2. When I feel stressed about vocabulary learning, I know how to reduce this stress.	4.04	1.51	3.00	1.41
6. I feel satisfied with the methods I use to reduce the stress of vocabulary.	4.10	1.32	2.50	2.12
12. When I feel stressed about vocabulary learning, I simply want to give up.	3.66	1.56	3.50	2.12
15. When I feel stressed about my vocabulary learning, I cope with this problem immediately.	3.84	1.18	2.00	1.41
Overall	3.96	1.11	2.75	1.76

Both groups ranked slightly lower mean scores on a six-point Likert scale rating 2.00 to 4.04. Students attended French preparatory program mostly agreed that they are happy with the techniques they utilize to alleviate stress related to vocabulary ($M = 4.10$, $SD = 1.51$) while rated the statement “When I feel stressed about vocabulary learning, I simply want to give up” the lowest with a mean score of 3.66 and a standard deviation of 1.56 indicating the largest disparity among the two groups. Students who did not attend the French preparatory program partly disagreed on quitting learning vocabulary whenever they feel stressed ($M = 3.50$, $SD = 2.12$) showing a great amount of inconsistency in their responses and as for the lowest rated learning experience, students who did not attend French preparatory program prior to their studies did not quite agree on coping with a problem immediately in the time of stress ($M = 2.00$, $SD = 1.41$). Overall, for each statement, the first group ranked higher average scores of 3.96 ($SD = 1.11$) while the second group reported slightly lower mean score of 2.75 ($SD = 1.76$). It can be observed that both group of students do not possess strong *Emotion Control* in vocabulary learning.

Emotion Control: English Preparatory Program

Participants of this study were grouped by students who attended English Preparatory Program prior to their studies ($n=5$) and students who did not ($n=78$).

Table 109

Use of Emotion Control by English Preparatory Program Participation

Statements	Yes ($n=5$)		No ($n=78$)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
2. When I feel stressed about vocabulary learning, I know how to reduce this stress.	3.00	1.58	4.08	1.49
6. I feel satisfied with the methods I use to reduce the stress of vocabulary.	2.80	1.48	4.14	1.31
12. When I feel stressed about vocabulary learning, I simply want to give up.	3.40	1.51	3.67	1.57
15. When I feel stressed about my vocabulary learning, I cope with this problem immediately.	3.80	1.09	3.79	1.23
Overall	3.25	1.33	3.92	1.11

Two groups reported slightly average scores for every statement ranging from 2.80 to 4.14. While students who attended English Preparatory Program did not feel satisfied with the techniques, they utilized to eliminate the vocabulary stress with the lowest mean score of 2.80, ($SD = 1.48$) with a wide range of variation in their responses, the students who attended the program rated the highest mean score of 4.14 ($SD = 1.31$) for the same statement indicating they consider themselves satisfied with their elimination strategies.

To locate where the different lies between groups Independent Samples T-test was conducted after confirming that the assumptions of normality were met.

Table 110

Independent Samples T-test Results for the Use of Emotion Control by English Preparatory Program Participation

Facet	Yes (n=5)		No (n=78)		<i>t</i> (81)	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Emotion Control	3.25	1.33	3.92	1.11	-1.292	.635

The table demonstrates no statistically difference between the two groups, $t(81)$, $p = .635$. For further potential differences between groups for each statement, Mann-Whitney U-Test was conducted.

Table 111

The Mann-Whitney U Test Results for the Use of Emotion Control of Participants by English Preparatory Program Participation

Statement	Mean Rank		<i>U</i>	<i>z</i>	<i>p</i>
	Yes (n=5)	No (n=78)			
2. When I feel stressed about vocabulary learning, I know how to reduce this stress.	26.50	42.99	117.500	-1.519	.129
6. I feel satisfied with the methods I use to reduce the stress of vocabulary learning.	21.90	43.29	94.500	-1.981	.048
12. When I feel stressed about vocabulary, I simply want to give up.	37.30	42.30	171.500	-0.460	.646
15. When I feel stressed about vocabulary learning, I cope with this problem immediately.	42.20	41.19	194.000	-0.020	.984

For Statement 6 there is a significant difference between students who attended English Preparatory program and students who did not attend English Preparatory Program $p = .048$. Students who did not attend English preparatory program placed higher attachment to the practice of their techniques of eliminating

stress in vocabulary learning compared to those who had attended English preparatory program.

Emotion Control: Letter Grade: ENG 101

This study assessed whether participants' letter grade in ENG101 course differed regarding their employment of *Emotion Control* within SRCVOC, They were grouped as follows: Students received A,A- ($n=24$), B+,B($n=19$), B-,C+,C ($n=10$) and students who did not specify their letter grades as Not Applicable ($n=30$). For descriptive and for further inferential analysis Statement 12 was reversely coded.

Table 112

Use of Emotion Control: Practices by English101 Letter Grade

Statements	Group 1 A,A- ($n=24$)		Group 2 B+,B ($n=19$)		Group 3 B-,C+,C ($n=10$)		Not Applicable ($n=30$)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
2. When I feel stressed about vocabulary learning, I know how to reduce this stress.	4.13	1.62	3.63	1.49	3.80	1.47	4.23	1.45
6. I feel satisfied with the methods I use to reduce the stress of vocabulary.	4.29	1.16	3.58	1.42	4.80	1.22	3.93	1.41
12. When I feel stressed about vocabulary learning, I simply want to give up.	4.08	1.44	2.89	1.69	4.40	1.42	3.56	1.45
15. When I feel stressed about my vocabulary learning, I cope with this problem immediately.	4.13	1.15	3.53	1.12	4.10	1.19	3.60	1.30
Overall	4.15	1.01	3.40	1.19	4.25	0.99	3.83	1.16

Overall, most participants responded positively for almost all statements ranging from 2.89 to 4.80. However, among three groups students with the letter grade B-,C+,C, put a strong emphasis on their stress elimination strategies ($M = 4.80$, $SD = 1.22$) and it was closely followed by the first group of students with A,A- letter grades ($M = 4.29$, $SD = 1.16$). On the other hand, students who received B+,B

reported different perceptions and ranked statement 6 the lowest with a mean score of 2.89 ($SD = 1.69$).

To investigate the differences between groups and as the assumptions of normality were met, One-Way ANOVA was run.

Table 113

ANOVA Results for the Use of Emotion Control by ENG101 Letter Grade

Facet	A,A- (n=24)		B+,B (n=19)		B-,C+,C (n=10)		$F(3,79)$	η^2	p
	M	SD	M	SD	M	SD			
Emotion Control	4.15	1.01	3.40	1.19	4.27	0.99	2.073	.072	.111

As the table demonstrates there is no significant difference between groups $p=.111$.

For further inferential analysis, to understand if there is a significant difference between each statement, Kruskal-Wallis Rank Score non-parametric test was conducted (Table 114).

Table 114

Kruskal-Wallis Rank Score Results for the Use of Emotion Control of Participants by ENG101 Letter Grade

Statements	Mean Rank			χ^2	df	p
	A,A- (n=24)	B+,B, (n=19)	B-,C+,C (n=10)			
2. When I feel stressed about vocabulary learning, I know how to reduce this stress.	29.75	24.13	25.85	1.539	2	.463
6. I feel satisfied with the methods I use to reduce the stress of vocabulary learning.	28.58	20.71	35.15	6.588	2	.037

Statements	Mean Rank			χ^2	df	p
	A,A- (n=24)	B+,B, (n=19)	B-,C+,C (n=10)			
12. When I feel stressed about vocabulary, I simply want to give up.	30.17	19.71	33.25	7.209	2	.027
15. When I feel stressed about vocabulary learning, I cope with this problem immediately.	30.35	21.55	29.30	3.977	2	.137

The Kruskal-Wallis test revealed significant differences among the groups for the following learning experiences: Statement 6 ($\chi^2(2) = 6.588, p = .037$) and 12 ($\chi^2(2) = 7.209, p = .027$). The findings indicate that while students' satisfaction with stress reduction methods and their tendency to give up when stressed vary significantly based on letter grade groups, their general ability to reduce stress (Statement 2) and cope with it immediately (Statement 15).

To detect the differences, a pairwise comparisons post hoc analysis was conducted regarding Statements 6 and 12. (Table 115).

Table 115

Pairwise Comparisons for Statement 6 and 12 in Emotion Control

Statement Description	ENG101 Letter Grade	Test Statistic	Standard Error	p
Emotion Control Statement 6. I feel satisfied with the methods I use to reduce the stress of vocabulary learning.	B+,B vs. A,A-	12.555	6.861	.081
	B+,B vs. B-,C+,C	-22.613	9.142	.013
	A,A- vs. B-,C+,C	-10.058	8.808	.253
Emotion Control Statement 12. When I feel stressed about vocabulary, I simply want to give up.	B+,B vs. A,A-	17.264	7.242	.017
	B+,B vs. B-,C+,C	-21.768	9.214	.018
	A,A- vs. B-,C+,C	-4.504	8.877	.612

For statement 6, the students in the B-, C+, C group reported significantly higher satisfaction with their stress-reduction methods compared to those in the slightly higher-grade group (B+, B).

As regards statement 12, the results indicate that B+, B group is significantly more likely to want to give up when stressed compared to both the higher-performing A, A- group, and the lower-performing B-, C+, C group.

Emotion Control: Letter Grade: ENG 102

The researcher investigated whether the ENG102 letter grades of the participants differed by their possession of *Emotion Control* as a part of the study.

Table 116

Use of Emotion Control by English102 Letter Grade

Statements	Group 1 A,A- (n=19)		Group 2 B,B+,B- (n=17)		Not Applicable (n=47)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
2. When I feel stressed about vocabulary learning, I know how to reduce this stress.	4.32	1.20	3.65	1.53	4.02	1.60
6. I feel satisfied with the methods I use to reduce the stress of vocabulary.	4.26	1.28	4.00	1.18	4.00	1.47
12. When I feel stressed about vocabulary learning, I simply want to give up.	4.15	1.34	3.35	1.86	3.57	1.51
13. When I feel stressed about my vocabulary learning, I cope with this problem immediately.	4.11	0.87	3.88	1.26	3.64	1.30
Overall	4.21	0.93	3.72	1.10	3.80	1.20

On a six-point Likert scale, all groups responded slightly positive to each statement ranging from 3.57 to 4.32. Although, two groups reported relatively high mean scores, overall students who received A, A- for this course ranked higher mean score of 4.21 (*SD* = 0.93) while the second group of participants who received B, B+B- reported marginally lower mean score of 3.72 (*SD* = 1.10) indicating students

in the first group put more emphasis on the utilization of *Emotion Control* strategies in vocabulary learning. Students who received B,B+ and B- attached the most commitment to their stress reduction methods ($M = 4.00$, $SD = 1.18$) While students receiving A,A- in ENG102, consider they could eliminate stress ($M = 4.35$, $SD = 1.20$) and closely followed with a slight mean difference that they consider their stress reduction methods are satisfactory ($M = 4.26$, $SD = 1.28$) demonstrating some divergence in their responses.

To identify the significance of the differences between groups, the utilization of Independent Samples T-test was needed.

Table 117

Independent Samples T-test Results for the Use of Emotion Control by ENG102

Letter Grade

Facet	Group 1 A, A- (n=19)		Group 2 B,B+,B- (n=17)		$t(34)$	p
	M	SD	M	SD		
Emotion Control	4.21	0.93	3.72	1.10	1.438	.159

No statistically significant difference was found between groups. As normality test results did not meet the assumptions Mann-Whitney U Test was conducted to examine the differences between groups (Table 117).

Table 118

The Mann-Whitney U Test Results for the Use of Emotion Control of Participants by

ENG102 Letter Grade

Statement	Mean Rank		U	z	p
	A,A- (n=19)	No (n=17)			
2. When I feel stressed about vocabulary learning, I know how to reduce this stress.	20.68	16.06	120.000	-1.349	.177

Statement	Mean Rank		<i>U</i>	<i>z</i>	<i>p</i>
	A,A- (<i>n</i> =19)	No (<i>n</i> =17)			
6. I feel satisfied with the methods I use to reduce the stress of vocabulary learning.	19.82	17.03	136.500	-0.82	.410
12. When I feel stressed about vocabulary, I simply want to give up.	20.66	16.09	120.500	-1.333	.183
15. When I feel stressed about vocabulary learning, I cope with this problem immediately.	19.18	17.74	148.500	-0.428	.669

The Mann-Whitney U Test results showed no significant difference between students with ENG102 letter grade A, A- and the ones received B,B+,B-.

Environmental Control

With the aim of understanding the scores of the four statements in *Environmental Control* were further analyzed descriptively.

Table 119

Environmental Control (N=83)

Statements	<i>M</i>	<i>SD</i>
16. When I am studying vocabulary and the learning environment becomes unsuitable, I try to sort out the problem.	4.60	1.04
14. When learning vocabulary, I know how to arrange the environment to make learning more efficient.	4.46	1.08
17. When learning vocabulary, I am aware that the learning environment matters.	4.86	1.30
20. When I study vocabulary, I look for a good environment.	4.60	1.25

Overall, the statements assessing *Environmental Control* in vocabulary learning revealed high mean scores, scores are ranging from 4.46 to 4.86. Table demonstrates that participants strongly agree on the statements reflecting their adjustment to their surroundings and how they manage their learning environments.

Participants mostly agreed that they are conscious about the importance of their learning environment ($M = 4.86$, $SD = 1.30$) as well as they search for a good one when they are studying vocabulary ($M = 4.60$, $SD = 1.25$). They also know how to solve a problem when encountered an unsuitable environment ($M = 4.60$, $SD = 1.08$) and they are aware of how to redesign their studying environment to increase their learning efficiency ($M = 4.46$, $SD = 1.08$).

In relation to SRCvoc, to determine if their perceptions change within the frame of Gender, High School Type, Year of Study, French Preparatory Program Participation, English Preparatory Program Participation, ENG101 Letter Grade and ENG102 Letter Grade, the researcher conducted inferential analysis.

Environmental Control: Gender

Trilingual learners were grouped by gender under three categories; female ($n=59$), male ($n=20$) and prefer not to say ($n=4$). The mean and standard deviation were calculated first.

Table 120

Use of Environmental Control by Gender

Statements	Female ($n=59$)		Male ($n=20$)		Prefer not to answer ($n=4$)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
3. When I am studying vocabulary, I have special techniques to achieve my goals.	4.56	1.10	4.75	0.91	4.50	1.0
13. When learning vocabulary, I know how to arrange the environment to make learning more efficient.	4.36	1.12	4.60	0.95	5.25	0.50
16. When learning vocabulary, I am aware that the learning environment matters.	4.78	1.46	4.95	0.82	5.50	0.57
20. When I study vocabulary, I look for a good environment.	4.58	1.31	4.70	1.12	4.50	1.29
Overall	4.56	0.78	4.75	0.42	4.93	0.71

On a six-point Likert scale, both groups reported high average scores within the range of 4.36 to 4.95. Even though table demonstrates higher levels of *Environmental Control*, male participants reported higher mean scores than female participants for each statement and male participants reported an overall mean score of 4.75 ($SD = 0.42$) while female participants reported slightly lower mean score of 4.56 with a little variation in responses ($SD = 0.78$). It can be observed that regardless of the gender, trilingual learners have strong *Environmental Control* in vocabulary learning.

To investigate potential gender differences for *Environmental Control*, a non-parametric test Kruskal-Wallis Rank Score was run by the researcher.

Table 121

Kruskal-Wallis Rank Score Test for the Use of Environmental Control of the Participants by Gender

Facet	Mean Rank		χ^2	df	p
	Female ($n=59$)	Male ($n=20$)			
Environmental Control	39.36	41.88	0.182	1	.670

The Kruskal-Wallis Rank Score Test results did not demonstrate any significant difference between two groups in the use of Self-Regulatory Strategies within *Environmental Control*.

To examine the differences between learning experiences , Mann-Whitney U Test was employed.

Table 122

The Mann-Whitney U Test Results for the Use of Environmental Control of Participants by Gender

Statement	Mean Rank		<i>U</i>	<i>z</i>	<i>p</i>
	Female (<i>n</i> =59)	Male (<i>n</i> =20)			
3. When I am studying vocabulary and the learning environment becomes unsuitable, I try to sort out the problem.	39.03	42.70	536.000	-0.641	.522
14. When learning vocabulary, I know how to arrange the environment to make learning more efficient.	39.17	42.45	541.000	-0.586	.558
17. When learning vocabulary, I am aware that the learning environment matters.	40.53	38.45	559.000	-0.367	.714
20. When I study vocabulary, I look for a good environment.	39.75	40.75	575.000	-0.175	.861

Regarding *Environmental Control*, no statistically significant difference was found between female and male.

Environmental Control: High School

Participants of the study were divided into two groups, regarding their attendance at either public (*n*=50) high schools or private (*n*=33) high schools.

Table 123

Use of Environmental Control by High School

Statements	Public (<i>n</i> =50)		Private (<i>n</i> =33)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
3. When I am studying vocabulary and the learning environment becomes unsuitable, I try to sort the problem.	4.70	1.07	4.45	1.00

Statements	Public (n=50)		Private (n=33)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
14. When learning vocabulary, I know how to arrange the environment.	4.44	1.07	4.48	1.12
17. When learning vocabulary, I am aware that the learning environment matters.	4.96	1.32	4.70	1.28
20. When I study vocabulary, I look for a good environment.	4.68	1.20	4.48	1.349
Overall	4.69	0.65	4.53	0.78

The statements assessing *Environmental Control* in vocabulary learning revealed above-average high mean scores ranging from 4.44 to 4.96 indicating participants regardless of the type of high school, possess a strong *Environmental Control* in vocabulary learning. Participants of both groups mostly agreed with the highest mean scores (Public: $M = 4.96$, $SD = 1.31$, Private: $M = 4.70$, $SD = 1.28$) that they are conscious of the importance of the learning environment when acquiring vocabulary. Although both groups reported high levels of *Environmental Control*, students who attended public high schools reported a slightly higher overall mean score of 4.69 ($SD = 0.65$), while students who attended private high schools reported an overall mean score of 4.53, ($SD = 0.78$).

In the use of *Environmental Control* within SRCVOC, to explore potential differences between the two groups, and for each statement in the same facet, a Mann-Whitney U test was conducted (Table 124).

Table 124

The Mann-Whitney U Test Results for the Use of Environmental Control by High School

Statement	Mean Rank		<i>U</i>	<i>z</i>	<i>p</i>
	Public (n=50)	Private (n=33)			
Environmental Control	43.19	40.20	765.500	-0.559	.576

The results showed that between two groups there were no significant difference, $p=.576$.

As normality test did not meet the assumptions, for each statement a Mann-Whitney U test was utilized (Table 125).

Table 125

The Mann-Whitney U Test Results for the Use of Environmental Control of Participants by Type of High School

	Statement	Mean Rank		<i>U</i>	<i>z</i>	<i>p</i>
		Public (<i>n</i> =50)	Private (<i>n</i> =33)			
3.	When I am studying vocabulary and the learning environment becomes unsuitable, I try to sort out the problem.	44.55	38.14	697.500	-1.252	.211
14.	When learning vocabulary, I know how to arrange the environment to make learning more efficient.	41.48	42.79	799.000	-0.258	.797
17.	When learning vocabulary, I am aware that the learning environment matters.	44.36	38.42	707.000	-1.155	.248
20.	When I study vocabulary, I look for a good environment.	43.16	40.24	767.000	-0.559	.576

According to test results, no statistically significant differences between students who attended public high schools and students who attended private high schools in their self-declared *Environmental Control* in vocabulary learning for any statement was found.

Environmental Control: Year of Study

This study further explores whether students' adjustment to the environment or the way they manage their learning environments according to their year of study

within *Environmental Control* differed, participants were grouped by three categories; Freshman ($n=43$), Sophomore ($n=18$) and Junior, Senior ($n=22$).

Table 126

Use of Environmental Control by Year of Study

Statements	Freshman ($n=43$)		Sophomore ($n=18$)		Junior,Senior ($n=22$)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
3. When I am studying vocabulary and the learning environment becomes unsuitable, I try to sort the problem.	4.42	1.00	4.78	1.26	4.82	0.90
14. When learning vocabulary, I know how to arrange the environment.	4.33	1.19	4.72	0.82	4.50	1.05
17. When learning vocabulary, I am aware that the learning environment matters.	4.84	1.43	4.44	1.38	5.23	0.86
20. When I study vocabulary, I look for a good environment.	4.74	1.15	4.22	1.35	4.64	1.36
Overall	4.58	0.77	4.54	0.72	4.79	0.55

The overall results show that the use of *Environmental Control* is consistent across different years of study yet they reported differing perceptions on their learning experiences. In total, all groups responded positively for each statement ranging from 4.22 to 5.23. Among the learning experiences Junior, Senior students ranked the highest mean score of 5.23 ($SD = 0.86$) with a little diversity in participants for statement 17 indicating they put a great amount of emphasis on the importance of learning environment. Freshman also consider it is essential to recognize the impact of learning environment ($M = 4.33$, $SD = 1.19$). Sophomore on the other hand, gave considerable weight to improve the conditions of learning environment when gets unsuitable ($M = 4.78$, $SD = 1.26$).

To investigate if the normality assumptions and homogeneity of variances met, the researcher used Kruskal-Wallis Rank Score. Table 127 demonstrates the results.

Table 127

Kruskal-Wallis Rank Score the Use of Environmental Control by Year of Study

Facet	Mean Rank			χ^2	df	p
	Freshman (n=43)	Sophomore (n=18)	Junior,Senior (n=22)			
Environmental Control	40.88	39.44	46.27	1.004	2	.605

For each learning experience for three independent group in this facet, as the normality test did not meet the assumptions, again Kruskal-Wallis Rank Score was utilized.

Table 128

Kruskal-Wallis Rank Score Results for the Use of Environmental Control of Participants by Year of Study

Statement	Mean Rank			χ^2	df	p
	Freshman (n=43)	Sophomore (n=18)	Junior,Senior (n=22)			
3. When I am studying vocabulary and the learning environment becomes unsuitable, I try to sort out the problem.	37.48	47.19	46.59	3.507	2	.173
14. When learning vocabulary, I know how to arrange the environment to make learning more efficient.	39.90	47.06	41.98	1.271	2	.530
17. When learning vocabulary, I am aware that the learning environment matters.	42.78	33.94	47.07	3.353	2	.187

Statement	Mean Rank			χ^2	<i>df</i>	<i>p</i>
	Freshman (<i>n</i> =43)	Sophomore (<i>n</i> =18)	Junior, Senior (<i>n</i> =22)			
20. When I study vocabulary, I look for a good environment.	44.22	35.08	43.32	2.054	2	.358

The Kruskal-Wallis Rank Score results revealed that in the perceived use of SRCVOC among the participants regarding their year of study, there is no significant difference.

Environmental Control: CGPA

Table 129

Use of Environmental Control by CGPA

Statements	Group 1 3.00-4.00 (<i>n</i> =43)		Group 2 2.00-3.00 (<i>n</i> =11)		Not Applicable (<i>n</i> =33)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
3. When I am studying vocabulary and the learning environment becomes unsuitable, I try to sort the problem.	4.87	1.00	4.27	1.00	4.39	1.05
14. When learning vocabulary, I know how to arrange the environment.	4.59	1.01	4.18	0.98	4.39	1.19
17. When learning vocabulary, I am aware that the learning environment matters.	4.87	1.28	5.27	0.90	4.70	1.44
20. When I study vocabulary, I look for a good environment.	4.49	1.25	4.55	1.36	4.76	1.25
Overall	4.70	0.68	4.56	0.61	4.56	0.78

Table 114 demonstrates all participants ranked relatively higher mean scores ranging from 4.39 to 5.27 indicating they regarded the employment of *Environmental Control* facet of the SRCvoc positively. Students with a CGPA between 2.00-3.00 strongly agreed the fact that they are conscious about the importance of their learning environment with the highest mean score of 5.27 (*SD* =

0.90). The same group did not show a strong agreement on the idea of knowing how to align the environment in the process of learning vocabulary with a mean score of 4.18 ($SD = 0.98$). Students with a CGPA of 3.00 and above, interestingly reported the same mean score of 4.87 for the statement 3 and 17, showing equal utilization of these practices. Students with a CGPA of 3.00 and above overall reported a higher mean score of 4.70 ($SD = 0.68$) while the other group overall, reported slightly lower mean score of 4.56 ($SD = 0.61$). Regardless of the CGPA, students from all groups possess a strong *Environmental Control* in vocabulary learning.

For *Environmental Control*, to determine whether the groups differed significantly, the researcher used Mann-Whitney U test (Table 130).

Table 130

The Mann-Whitney U Test Results for the Use of Environmental Control by Cumulative Grade Average Point

Facet	Mean Rank		U	z	p
	3.00- 4.00 ($n=39$)	2.00- 3.00 ($n=11$)			
Environmental Control	26.49	22.00	176.000	-0.911	.363

Test results indicate no statistically difference between two groups, $p = .363$. To ascertain if the groups differed for each statement within the same facet, and the assumptions of normality were failed to meet, again, Mann-Whitney U Test was conducted.

Table 131

The Mann-Whitney U Test Results for the Use of Environmental Control of Participants by Cumulative Grade Average Point

Statement	Mean Rank		U	z	p
	3.00-4.00 (n=39)	2.00-3.00 (n=11)			
3. When I am studying vocabulary and the learning environment becomes unsuitable, I try to sort out the problem.	27.37	18.86	141.500	-1.799	.072
14. When learning vocabulary, I know how to arrange the environment to make learning more efficient.	27.05	20.00	154.000	-1.540	.124
17. When learning vocabulary, I am aware that the learning environment matters.	24.62	28.64	180.000	-0.858	.391
20. When I study vocabulary, I look for a good environment.	25.26	26.36	205.000	-0.230	.818

The Mann-Whitney U Test results show that there is no significant difference between trilingual learners with a CGPA above 3.00 and with a CGPA between 2.00 and 3.00.

Environmental Control: French Preparatory Program Participation

The participants of the study were categorized as Yes ($n=81$) with the implication of students who attended French preparatory program and the ones who did not attend as No ($n=2$).

Table 132*Use of Environmental Control by French Preparatory Program Participation*

Statements	Yes (<i>n</i> =81)		No (<i>n</i> =2)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
3. When I am studying vocabulary and the learning environment becomes unsuitable, I try to sort the problem.	4.63	1.01	3.50	2.12
14. When learning vocabulary, I know how to arrange the environment.	4.51	1.05	2.50	0.70
17. When learning vocabulary, I am aware that the learning environment matters.	4.83	1.31	6.00	0.00
20. When I study vocabulary, I look for a good environment.	4.57	1.25	6.00	0.00
Overall	4.63	0.71	4.50	0.70

For Statement 17 and Statement 20, students who did not attend the French Preparatory Program ranked the highest mean score of 6.00 (*SD* = 0.00) on a six-point Likert scale with perfect homogeneity indicating no variances in responses. On the other hand, they ranked Statement 14 as the lowest with a mean score of 2.50 (*SD* = 0.70). Although second group ranked the highest mean scores for Statement 17 and Statement 20, the first group of students who attended French Preparatory program overall ranked slightly higher mean score of 4.63 (*SD* = 0.71) while the second group overall ranked with a mean of 4.50 (*SD* = 0.70). Students who attended French preparatory made remarks on the recognition of the impact of the learning environment (*M* = 4.83, *SD* = 1.31) yet indicating a substantial variation in their responses.

Environmental Control: English Preparatory Program

Participants of the study were divided into two groups just like it was grouped for the French Preparatory Program; Yes (*n*=5) with the implication students who attended English Preparatory Program, No (*n*=78) with the implication of the ones who did not attend.

Table 133*Use of Environmental Control by English Preparatory Program Participation*

Statements	Yes (<i>n</i> =5)		No (<i>n</i> =78)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
3. When I am studying vocabulary and the learning environment becomes unsuitable, I try to sort the problem.	4.40	1.14	4.62	1.04
14. When learning vocabulary, I know how to arrange the environment.	3.60	1.14	4.51	1.06
17. When learning vocabulary, I am aware that the learning environment matters.	3.40	2.40	4.95	1.17
20. When I study vocabulary, I look for a good environment.	5.00	1.22	4.58	1.26
Overall	4.10	1.00	4.66	0.68

Two groups reported slightly high mean scores ranging from 3.40 to 5.00.

The first group mostly agree that they are seeking for an optimal setting if they want to study vocabulary with the highest mean score of 5.00 (*SD* = 1.22) showing some divergence in their responses. On the other hand, students who did not attend English preparatory program, responded positively about recognizing the impact of the learning environments with a mean score of 4.95 (*SD* =1.17). Students who attended English preparatory program overall ranked relatively lower mean score of 4.10 (*SD* =1.00) while students who did not attend the program rated with a mean score of 4.66 (*SD* = 0.68) in the perceived use of SRCVOC.

To explore in greater depth into potential differences in each individual statement of *Environmental Control* and the facet itself, a Mann-Whitney U test was conducted.

Table 134

The Mann-Whitney U Test Results for the Use of Environmental Control by English Preparatory Program Participation

Facet	Mean Rank		<i>U</i>	<i>z</i>	<i>p</i>
	Yes (<i>n</i> =5)	No (<i>n</i> =78)			
Environmental Control	26.50	42.99	117.500	-1.496	0.135

The result of the test for *Environmental Control* ($p=.135$) indicated no significant difference between two groups. To identify the possible differences among groups, with the confirmation of assumptions of normality were not met, a non-parametric test, Mann-Whitney U Test was run by the researcher.

Table 135

The Mann-Whitney U Test Results for the Use of Environmental Control of Participants by English Preparatory Program Participation

Statement	Mean Rank		<i>U</i>	<i>z</i>	<i>p</i>
	Yes (<i>n</i> =78)	No (<i>n</i> =5)			
3. When I am studying vocabulary and the learning environment becomes unsuitable, I try to sort out the problem.	36.00	42.38	165.000	-0.606	.544
14. When learning vocabulary, I know how to arrange the environment to make learning more efficient.	23.60	43.18	103.000	-1.876	.061
17. When learning vocabulary, I am aware that the learning environment matters.	29.10	42.83	130.500	-1.299	.194
20. When I study vocabulary, I look for a good environment.	49.10	41.49	155.500	-0.783	.433

In none of the statements there is a significance between groups as the Mann-Whitney U test revealed.

Environmental Control: Letter Grade: ENG 101

Trilingual learners were grouped by their English letter grades, students received A,A- ($n=24$), B+,B ($n=19$), B-,C+,C ($n=10$) and students who did not specify their letter grades as Not Applicable ($n=30$).

Table 136

Use of Environmental Control Practices by English101 Letter Grade

Statements	Group 1 A,A- ($n=24$)		Group 2 B+,B ($n=19$)		Group 3 B-,C+,C ($n=10$)		Not Applicable ($n=30$)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
3. When I am studying vocabulary and the learning environment becomes unsuitable, I try to sort the problem.	4.79	0.83	4.58	1.12	4.60	1.50	4.47	1.00
14. When learning vocabulary, I know how to arrange the environment.	4.75	0.89	4.21	1.18	4.50	0.85	4.37	1.21
17. When learning vocabulary, I am aware that the learning environment matters.	5.29	0.95	4.84	1.30	4.30	1.33	4.70	1.48
20. When I study vocabulary, I look for a good environment.	5.04	0.85	4.21	1.47	4.30	1.16	4.60	1.35
Overall	4.96	0.53	4.46	0.67	4.42	0.66	4.53	0.79

The overall results demonstrate that the utilization of *Environmental Control* is consistent among students with different letter grades for ENG101 course yet they reported various perceptions regarding their learning experiences. All groups, on a six-point Likert scale reported relatively high mean scores for learning experiences ranging from 4.21 to 5.29. Students received A, A- ranked the highest mean score of 5.29 ($SD = 0.95$) indicating they strongly agree that the learning setting in vocabulary learning is important. While as for the lowest rated statement, students received B+B for their ENG101 course reported that they are also looking for a better setting when studying vocabulary however, not necessarily. Overall, among

three groups the first group ranked the highest mean score of 4.96 ($SD = 0.53$) it is followed by the second group with a slightly lower mean score of 4.46 ($SD = 0.67$) and third group rated marginally lower mean score of 4.42 ($SD = 0.66$).

To determine whether there is a significant difference, confirming that the normality assumptions were not met, non-parametric test, Kruskal Wallis Rank Score Test was conducted for the facet and for the statements within.

Table 137

Kruskal-Wallis Rank Score the Use of Environmental Control by ENG101 Letter Grade

Facet	Mean Rank			χ^2	df	p
	A,A- (n=24)	B+,B (n=19)	B- ,C+,C (n=10)			
Environmental Control	33.77	22.18	19.90	8.760	2	.013

Kruskal Wallis Rank Score test results demonstrated that there is a significant difference between groups ($\chi^2(2) = 8.760$, $p = .013$). This shows that learners who received A, A- for ENG101 course used the *Environmental Control* strategies more compared to other two groups.

To understand the differences among three groups within *Environmental Control*, the researcher run a pairwise comparison post hoc (Table 138).

Table 138

Pairwise Comparisons for Environmental Control

Facet	ENG101 Letter Grade	Test Statistic	Standard Error	p
Environmental Control	B+,B vs. A,A-	17.531	7.336	.017
	B+,B vs. B-,C+,C	3.553	9.334	.703
	A,A- vs. B-,C+,C	21.083	8.992	.019

Overall, Dunn's Test showed that students with grades A, A- differed significantly from other two groups in terms of *Environmental Control* strategies. Concerning *Environmental Control*, students with grades B+,B reported significantly lower strategies than those with A and A- grades. Students with grades B-, C+ and C reported lower utilization of environmental strategies when learning vocabulary.

Considering the assumptions of normality were not met, Kruskal-Wallis Rank Score Test was run to examine potential differences among groups.

Table 139

Kruskal-Wallis Rank Score Results for the Use of Environmental Control of Participants by ENG101 Letter Grade

Statement	Mean Rank			χ^2	df	p
	A,A- (n=24)	B+,B (n=19)	B-,C+,C (n=10)			
3. When I am studying vocabulary and the learning environment becomes unsuitable, I try to sort out the problem.	27.81	25.58	27.75	0.277	2	.871
14. When learning vocabulary, I know how to arrange the environment to make learning more efficient.	30.38	23.47	25.60	2.563	2	.278
17. When learning vocabulary, I am aware that the learning environment matters.	31.29	25.79	19.00	5.198	2	.074
20. When I study vocabulary, I look for a good environment.	31.85	23.16	22.65	4.658	2	.097

Kruskal Wallis Rank Score Test indicates there is no statistically significant difference among the students with ENG101 letter grades A, A- (n=24), B+, B (n=19) and B-, C+ and C (n=10).

Environmental Control: Letter Grade: ENG 102

Finally, the researcher grouped participants of the study by their English 102 letter grades as students who received A, A- ($n=19$) (Group 1), B,B+,B- ($n=17$) (Group 2), and lastly for students who did not specify their letter grades as Not Applicable ($n=47$).

Table 140

Use of Environmental Control by English102 Letter Grade

Statements	Group 1 A,A- ($n=19$)		Group 2 B,B+,B- ($n=17$)		Not Applicable ($n=47$)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
3. When I am studying vocabulary and the learning environment becomes unsuitable, I try to sort the problem.	4.89	0.99	4.76	1.20	4.43	0.99
14. When learning vocabulary, I know how to arrange the environment.	4.84	0.89	4.35	0.93	4.34	1.18
17. When learning vocabulary, I am aware that the learning environment matters.	5.32	0.74	4.82	1.28	4.68	1.46
20. When I study vocabulary, I look for a good environment.	4.63	1.38	4.29	1.31	4.70	1.19
Overall	4.92	0.53	4.55	0.65	4.53	0.76

On a six-point Likert scale each group reported relatively high mean scores for learning experiences ranging from 4.35 to 5.32. Students received A, A- ranked the highest mean score of 5.32 ($SD = 0.74$) for Statement 17. Students receiving B+, B and B- have the awareness of the importance of the learning environment ($M = 4.82$, $SD = 1.28$) indicating substantial variance in their responses. While as for the lowest rated statement, students received B+B, B- for their ENG101 course reported that they are also looking for a better setting when studying vocabulary however, not necessarily. ($M = 4.29$, $SD = 1.31$).

To identify if the mean differences were significant, an Independent Samples t-test was run for *Environmental Control* confirming that the normality assumptions were met.

Table 141

Independent Samples T-test Results for the Use of Environmental Control by ENG102 Letter Grade

Facet	Group 1 A, A- (n=19)		Group 2 B,B+,B- (n=17)		t(34)	p
	M	SD	M	SD		
Environmental Control	4.92	0.53	4.55	0.65	1.821	.077

The result of the test showed no significant difference between the two groups. Given that the assumptions of normality were not met, the researcher conducted Mann-Whitney U test for each statement within *Environmental Control*.

Table 142

The Mann-Whitney U Test Results for the Use of Environmental Control of Participants by ENG102 Letter Grade

Statement	Mean Rank		U	z	p
	A,A- (n=19)	B,B+,B- (n=17)			
3. When I am studying vocabulary and the learning environment becomes unsuitable, I try to sort out the problem.	18.76	18.21	156.500	-0.166	.868
14. When learning vocabulary, I know how to arrange the environment to make learning more efficient.	20.95	15.76	115.000	-1.588	.112
17. When learning vocabulary, I am aware that the learning environment matters.	20.13	16.68	130.500	-1.049	.294
20. When I study vocabulary, I look for a good environment.	19.87	16.97	135.500	-0.847	.397

The results of Mann-Whitney U tests indicated no statistically significant differences among the two groups.



CHAPTER 5: DISCUSSION

Introduction

This chapter begins with the overview of the study and it presents the major findings regarding the perceptions of trilingual learners enrolled in a translation and interpretation program in an EMI context, regarding their strategic self-regulating capacity in vocabulary learning. The findings are followed by implications for practice, implications for further research and limitation.

Overview of the Study

This study investigated the strategic self-regulating capacity of trilingual translation and interpretation students at an EMI university in Türkiye. This study aimed to determine to what degree trilingual learners self-regulate their capacity in vocabulary learning and to examine whether their perceptions differed regarding their gender, high-school type, year of study, their CGPA, ENG101 letter grade, ENG102 letter grade and whether their participation in English and French preparatory program.

The current study sought to answer the following research questions:

1. To what extent do the trilingual learners enrolled in a three-language bachelor's program at a foundation university in Türkiye self-regulate their capacity in vocabulary learning?
2. Does the self-regulating capacity in vocabulary learning differ among trilingual learners based on gender, type of high school, years of undergraduate education, achievement as measured by CGPA,

achievement in core language classes, and participation in English and French Preparatory programs?

In order to collect data to answer research questions, Tseng et al.'s (2006) 'Self-Regulating Capacity in Vocabulary Learning Scale' (SRCvoc) was used. IBM Statistical Package for Social Sciences program (version 29.0.2.0) was utilized with the purpose of employing both descriptive and inferential statistics for the quantitative data analysis

Discussion of Major Findings

Commitment Control

Commitment control strategies keep learners focused on their vocabulary learning goals by emphasizing positive outcomes or potential downsides of not succeeding (Tseng et al., 2006).

The overall analysis, focusing on the combined results of the related learning experiences, suggests that learners generally exhibit a strong inclination towards self-regulated behaviors related to commitment in their vocabulary learning.

Learning experience-based analysis indicates that a high level of self-efficacy and resilience among learners. It also suggests that learners are proactive in employing strategies to support their goals. They also tend to persist until they reach their goals in short period of time.

As for gender, the data suggest a strong sense of *commitment control* in vocabulary learning across both males and females. While males had a slightly higher mean score overall, suggesting a potential trend towards greater use of *commitment control* strategies, this difference was not statistically significant. Similarly, no significant gender difference was found when analyzing specific

learning experiences. However, further research with a larger sample sized is needed to confirm or refute this trend.

Regarding type of high school, the data exhibit, once again, a strong sense of *commitment control* in vocabulary learning across students attended public high schools and the ones who attended private high schools. Students attended public high schools report higher frequency of use of *commitment control* strategies in vocabulary learning than students who attended private high schools, the results suggest that this difference is not statistically significant. As for the learning experiences, the analysis indicates that there is no statistically significant difference among two groups.

In terms of year of study, the results of the current study reflect that learners tend to attach a strong commitment to *commitment control* strategies in vocabulary learning regardless of their year of study. Overall, although the use of *commitment control* strategies is consistent across years of study, freshman put great emphasis on the employment of these strategies and it is followed by Junior/Senior students with a little mean difference and with the lowest mean score Sophomores with no significant differences. Correspondingly, regardless of their year of study, the use of these learning strategies is consistent.

As for CGPA, the data exhibit that higher-achieving learners and lower-achieving learners both possess strong *commitment control* approach in vocabulary learning. Higher-achieving students with a CGPA of 3.00 and above, overall had higher mean score, an indication of a tentative trend for greater use of *commitment control* strategies compared to lower achieving students with a CGPA ranging from 2.00 to 3.00 with no statistically significant difference. Considering the learning

experiences, the analysis demonstrated no significant difference in the perceived use of these strategies between higher achieving students and lower achieving students.

Concerning the French preparatory program participation, out of 83 participants, only two participants did not attend but the rest of the 81 students attended the French preparatory program, the data showed that overall, there is a mean difference between the two groups indicating, the ones who attended this program report high frequency of use of *commitment control* strategies while students who did not attend French preparatory program report less commitment to using these strategies in vocabulary learning. However, due to the unequal number of participants in responses, the second group of students who did not attend the French preparatory program might be disproportionately represented, for inferential analysis and for the sake of reliability and generalizability of the results, further research might be needed.

As for the English preparatory program, the overall results suggest that students display moderate to strong use of *commitment control* strategies in vocabulary learning. While trilingual learners who did not attend English preparatory program preceding their departmental studies demonstrating a potential trend towards a greater use of these strategies, between the two groups, a significant difference was observed. The findings exhibit that students who did not attend English preparatory program tend to persist more in achieving their vocabulary learning goals than students who attend English preparatory program. However, due to uneven number of participants in responses, to represent both groups proportionately, further research might be necessary.

Regarding ENG101 letter grade, the data indicate a strong sense of *commitment control* strategies in vocabulary learning among students who received

A, A-; B+, B and students who received B-, C+, C for their ENG101 course. Among three groups, lower achieving students place high utilization to *commitment control* strategies, it is followed by higher-achieving students receiving A, A- with a slight mean difference while students who received B+, B for this course show moderate level of frequency of the use of these strategies with significant differences among groups. Students receiving B+, B, compared to higher-achieving students (A, A-) and interestingly lower achieving students (B-, C+, C) tend to be less confident in achieving their goals and less persistent in pursuing those goals in vocabulary learning. While higher-achieving students and lower achieving students both hold a similar level of persistence to reach their goals, students receiving B+, B hold lower level of persistence compared to other groups. Further research with larger member size is needed to confirm or refute this trend.

In terms of ENG102 letter grade differences in the employment of SRCvoc, all students put strong emphasis on *commitment control* strategies in vocabulary learning with minor mean differences. With respect to the implementation of these strategies, aligning with the studies in the literature, higher-achieving students attach higher degree of weight to these strategies compared to lower-achieving students who received B, B+ and B- yet no significant difference was observed among participants. Similarly, no significant difference with regards to the letter grade obtained for ENG102 course was found when analyzing the learning experiences within this facet. However, more than half of the participants reported not to have either completed the course or have not taken it yet, they do not have a letter grade to represent their achievement in this course, thus, to represent each group properly further longitudinal research may be needed.

Overall, the results suggest these trilingual learners engage behavior and maintain a strong sense of purpose in their vocabulary learning processes. The observed high levels of self-efficacy and resilience indicate that these learners feel equipped to handle any likely challenges and setbacks. While some demographic variables, such as gender, year of study, and CGPA did not yield statically significant differences in *commitment control* strategy use, the descriptive trends observed warrant further exploration. For instance, the potential gender difference, with males exhibiting slightly higher *commitment control* scores, raises questions about the potential role of social and cultural factors shaping learners' motivational orientations.

Metacognitive Control

These strategies address the cognitive awareness of learners' control and monitoring of their concentration and the prevention of procrastination (Tseng et al., 2006).

The results of the overall related learning experiences' analysis indicate that participants' show weak awareness of the challenges occurring in self-regulated behaviors concerning *metacognitive control* strategies in students' vocabulary acquisition.

The analysis of the learning experiences suggests that among learners there is a fair level of confidence in their ability and use of techniques to stay focused and maintaining their concentration. However, regarding avoiding distraction and staying on the task they have slightly lower tendency to use these strategies.

Considering gender, the results indicate that females and males do not possess a strong sense of *metacognitive control* strategies in vocabulary learning. With a slight mean difference, the data suggest males show a more frequent employment of

these strategies than females, with no statistically significant difference. Regardless of their gender, participants do not put a great emphasis on these strategies when analyzing these learning experiences yet to support or refute this outcome, further researcher might be beneficial.

In terms of the type of high-school, there is a moderate usage of metacognitive strategies among students attended public high schools and the ones attended private high schools. Overall, students graduated from public high-schools put greater weight on these strategies than students graduated from private high-schools yet no significant difference was found among two groups. Similarly, independent of the type of high-school, when analyzing specific learning experiences, there is no significant difference among two groups.

Regarding year of study, the data suggest fair sense of *metacognitive control* strategies in vocabulary learning across Freshman, Sophomore and Junior/Senior students. Among all three groups, Sophomores had slightly the highest mean score suggesting greater inclination towards the use of these strategies, the frequency of the use of same strategies are sequentially followed by Freshman and Junior/Senior at last yet the difference between groups was not significant. Given that, similarly there were no significant difference across three groups indicating consistent use of *metacognitive control* regardless of their year of study.

As for CGPA, higher-achieving students with a CGPA of 3.00-4.00 and students with a CGPA of 2.00-3.00 consider, but not prioritize the use of *metacognitive control* strategies in vocabulary learning. Higher-achieving students acknowledge the importance of using these strategies on a moderate level with the highest mean score compared to lower-achieving students, nevertheless not indicating a significant difference. Significant differences regarding learning

experiences are not observed. In spite of that, many students did not specify their CGPA scores, it might lead to a misrepresentation of the groups. Therefore, a further study could be conducted with students having a specific CGPA scores.

In terms of French preparatory program participation, overall, students do not prioritize *metacognitive control* strategies in vocabulary learning. Students who attended French preparatory program tend to regard as secondary in terms of using these strategies, while students who did not attend French preparatory program put weak emphasis with a lower mean score on the learning strategies. Due to the uneven distribution in responses, a further study with a larger sample size might be insightful in terms of reliability and validity.

Regarding English preparatory program participation, similarly to the results of French preparatory program participation, students attach weak commitment to the employment of *metacognitive control* strategies. Students who did not attend this program compared to the ones who attended, demonstrate slightly positive approach to the use of these strategies, yet indicating no significant difference. Similarly, no significant difference was observed between two groups for each learning experience. However, the same issue with the unequal number of participants in the responses can be found in this trend as well. Thus, for the sake of generalizability of the results and to prevent potential underrepresentation of certain groups, further research could be conducted.

Concerning ENG101 letter grade, the findings suggest that participants possess low to moderate degree of utilization of *metacognitive control* strategies. Converse to the studies in the literature, students with lower grades (B-, C+ and C), put these strategies at the forefront among the group, while high-achieving students (A,A-) follow with slightly lower mean score and students receiving B+, B with the

lowest mean score. This difference is statistically significant and as for each statement the difference was observed in the use of *metacognitive control* strategies among students of different letter grades. Regarding maintaining their concentration students receiving B+, B from that of students with grades A and A- as well as those with grades B-, C+ and C, differed significantly. Correspondingly, they also differed from other groups with respect to their methods of regulating their focus. Compared to students with A and A- letter grades, students with grades B+ and B report different techniques to stay on the task. Finally, significant difference as to perceptions of the ineffectiveness of procrastination control methods was identified with regards to students with B+ and B letter grades.

As for ENG102 letter grade, all participants acknowledge the use of *metacognitive control* strategies minimally. However, students who had received A or A- reporting higher usage of these strategies compared to lower-achieving students with no statistically significant difference. Similarly, the analysis of the specific learning experiences reveals no significant difference among groups.

Overall, the findings suggest trilingual students are not fully aware of their own monitoring techniques to prevent procrastination or keep themselves focused. Although no statistically significant differences were found across most demographic variables, except for the received letter grade in the core English class (ENG101) in the employment of these strategies, students with higher CGPA scores tend to use self-regulatory strategies related to *metacognitive control* more frequently than those with lower CGPA scores. This raises the intriguing possibility that higher grades in general could positively affect students' consistent use of metacognitive strategies, highlighting the need for further investigation.

Satiation Control

Satiation control strategies help learners to find methods and ways to keep the task interesting as well as decreasing the level of boredom (Tseng et.al, 2006).

The findings suggest a moderate frequency of utilization of these strategies among learners with respect to the learning experiences under *satiation control* facet.

Among four learning experiences in relation to combating with boredom, maintaining their interest in learning vocabulary, the analysis report that students are mostly happy with how they fight against boredom and they possess a moderate to level of engagement to the task by developing skills to regulate their emotional state. It also suggests that they are slightly confident overcoming boredom and keeping their initial excitement when the novelty wears off.

Concerning gender, the data indicate a fair sense of *satiation control* in vocabulary learning across both females and males. The findings of the current study report similar results as females had slightly higher mean score overall, implying a potential trend towards greater implication of *satiation control* strategies, nonetheless, this difference was not statistically significant. In the same way, the analysis of the learning experiences revealed no significant gender difference. A further study with a larger sample size could validate or disprove this trend.

As for the type of high-school, trilingual learners acknowledge the importance of *satiation control* strategies in vocabulary learning on a moderate level. Overall, the use of these strategies is almost consistent among learners who attended public high-schools and those who attended private high-school. They do not inform any statistical difference. The result of the learning experience analyses indicates that regardless of the type of high-school, learners place slight emphasis on the utilization

of *satiation control* strategies in vocabulary learning, yet no significant difference was observed among two groups.

In terms of year of study, the data implies an average sense of *satiation control* in vocabulary learning across different years of study. While Sophomore had the highest mean score overall, with an indication of a possible trend to increased use of *satiation control* strategies, Freshman and Junior/Senior follows this trend with slight mean differences respectively. This difference was not statistically significant. In the same way, learning experiences-based analysis reveals no difference among different year of study.

Regarding CGPA, it appears based on the results, the use of *satiation control* strategies in vocabulary learning did not differ among participants. Overall, there is a moderate usage of these strategies and mean differences occur between higher-achieving students and lower-achieving students with the line of existing research indicating students with a CGPA of 3.00 and above attach strong commitment to the use of these strategies than those with a CGPA ranging from 2.00 to 3.00. This difference was not significant and additionally, in regards to their CGPA, students did not appear to differ in learning experiences.

As for French preparatory program participation, the results suggest, *satiation control* strategies in vocabulary learning did not differ among participants in terms of their participation in the French prep program. Students who attended the program tend to incline towards the employment of these strategies compared to those who did not attend French prep program, yet indicating no significant difference. Once again, although no statistically significant difference was observed among the participants, further research with equally sampled groups might be conducted to reflect overall population rather than the imbalanced one.

Pertaining to English preparatory program participation, the findings propose a slight sense of *satiation control* in vocabulary learning across students who attended English preparatory program and the ones who did not attend the program. While, students who did not attend English preparatory program had higher mean score overall, implying greater implementation of these strategies, this difference did not differ among participants. The analysis of the learning experiences did not indicate significant differences across the students. Once again, considering the participants uneven distribution in numbers regarding their responses, a further researcher needed to be conducted to either confirm or refute this trend.

In regard to ENG101 letter grade, overall, all participants consider the use of these strategies in vocabulary learning however, they do not prioritize the implication of it. While the lower-achieving students receiving B-, C+ and C generally report higher frequency of the employment of *satiation control* strategies in vocabulary learning compared to higher-achieving students (A and A-) and mid-achieving students (B+, B) respectively, no significant difference was observed. Significantly this study found the use of *satiation control* strategies differed according to ENG101 letter grade. The only significant difference is observed concerning learners' ability to manage boredom during vocabulary acquisition and the positive attitude towards engagement to the task. The findings suggest that mid-achieving learners tend to be less content with the way they manage their boredom compared to higher-achieving and lower-achieving students.

Considering ENG102 letter grade, the data demonstrate the implementation of these strategies in the field of vocabulary learning is on a moderate level and overall, students who received higher grades for this course have a tendency to use

more of these strategies compared to students receiving B, B+ and B-, yet indicating no significant difference overall and as for the specific learning experiences.

Overall, trilingual students put a moderate emphasis on keeping tasks interesting and overcoming boredom. While no statistically significant differences were found across most demographic variables, there is a potential trend where females exhibit a slightly higher frequency of using self-regulatory strategies related to *satiating control*. This may be because of one's background or amount of exposure to external factors. Additionally, Sophomore students exhibit slightly higher inclination towards *satiating control*, which may be influenced by their academic experience, curriculum and the intensity of their courses. Further research could investigate these potential underlying factors to offer more profound insights.

Emotion Control

Emotion Control strategies focus on students' ability to use techniques managing their emotional states that can be barriers to their learning as well as the ones they employ to facilitate their emotional states in the acquisition process (Tseng, et al.2006).

This current study's learning experience based overall findings reveal that learners mostly demonstrate a moderate inclination towards self-regulated behaviors regarding *emotion control* in vocabulary learning.

The analysis of these learning experiences exhibit that learners display positive and confident attitude when using strategies to alleviate stress by being proactive tend to postpone. They tend to postpone taking immediate action when stress arises and they persist rather than abandoning vocabulary learning during the moments of vulnerability.

In terms of gender, interestingly, with the moderate usage of *emotion control* strategies, overall, unlike the studies in the literature, males indicate more positive inclination towards the implementation of these strategies with no significant difference. Similarly, no significant gender difference was found when analyzing these learning experiences but further research with a larger sample size might be necessary to prove or refute this trend.

Concerning type of high school, the findings propose a slight sense of *emotion control* in vocabulary learning across students who had graduated from public high-schools and the ones who graduated from private high schools. Overall, both groups reporting the same mean scores for the implementation of these strategies, all students demonstrate a positive inclination towards the utilization of these strategies in vocabulary learning. No specific high-school type difference was observed among the learners.

Regarding year of study, the findings propose students emphasize the use of these strategies, though less strongly in vocabulary learning. junior/senior students generally report higher frequency of use of these strategies compared to sophomores which closely follows junior/senior students regarding the implementation of these strategies and finally, with a slight mean difference freshman student put a little emphasis compared to sophomores yet no statistically significant difference was observed. The observed mean differences among students with different year of study might have occurred due to the fact that curriculum of the sophomore students are demanding and include higher-credit subject-specific courses compared to other students. Similarly, there is no significant difference in the perceived use of *Emotion control* strategies among the participants according to their year of study.

With respect to CGPA, overall, students report fair to moderate sense of *emotion control* strategies in vocabulary learning. Students with higher CGPA scores (3.00- 4.00) attach stronger commitment to these strategies than students with a CGPA ranging from 2.00 to 3.00. The findings imply that students did not significantly differ regarding *emotion control* strategies or in terms of any learning experiences.

As for French preparatory program participation, students who attended the program have a greater self-awareness in terms of using *emotion control* strategies in vocabulary learning than students who did not attend French prep program, however, this difference was not statistically significant. As there were only two students overall, indicating they did not attend French preparatory program, further research with a larger sample size is needed.

In terms of English preparatory program participation, the findings propose, both groups place slight emphasis on *emotion control* strategies. With a slight difference in their perceived use of these strategies, students who did not attend English prep program preceding their undergraduate studies demonstrate a greater use, though indicating no statistically significant difference. However, a significant difference touching on the techniques of eliminating stress in vocabulary learning was observed and students who did not attend the prep program placed higher attachment to this practice compared to those who had attended English preparatory program.

Given that ENG101 letter grade, there is an average tendency towards the implementation of *emotion control* strategies in vocabulary learning. Overall, students who are considered to be lower-performers tend to possess strongest attachment to these strategies among the three groups, while higher-performing

students receiving letter grades A or A-, put strong emphasis with a little mean difference, lastly, students receiving B+ and B tend to acknowledge but not prioritize these strategies in vocabulary learning with the lowest mean score among three groups. This difference was not statistically significant. However, the analysis of the specific learning experiences indicates significant differences in their self-directed use of these strategies. The lower-performing students tend to have higher satisfaction with their stress-reduction methods than those in the slightly higher-grade group (B+, B). As for their tendency to give up when stressed, vary significantly based on their letter grade. Students receiving B+, B are significantly more likely to give up under stress compared to both the higher-performing group and the lower-performing B-, C+, C group.

Considering ENG102 letter grade, the data exhibit a moderate sense of *emotion control* in vocabulary learning across students with different letter grades. While higher-performing students had higher mean score overall, indicating positive inclination toward the utilization of these strategies, this difference was not observed to be statistically significant. Moreover, no significant letter grade difference was found among learners in terms of any facet. For both ENG101 and ENG102 letter grade, due to the uneven distribution in the number of participants, further research could be conducted.

Overall, trilingual learners tend to attach slight emphasis on their ways of coping with stress in time of vocabulary learning. Although no statistically significant differences were observed concerning the employment of *Emotion Control* strategies across variables such as, gender, type of high school, English and French preparatory program participation, potential mean differences might be influenced by their background, and the ways they learned to cope with stress in their

upbringing. Further research could explore these underlying factors to provide deeper insights.

Environmental Control

Environmental Control strategies keep learners focused on their vocabulary learning goals by highlighting the importance of environmental influences (Tseng et.al, 2006).

The current study, which focuses on the combined results of mixed learning experiences, indicates that the learners in general show significant tendency towards self-regulated behaviors with respect to engagement in their vocabulary learning.

The analysis of the learning experiences exhibits learners' strong awareness of the recognition of the learning space. As they search for a study space with good conditions, in case of any inconvenience they tend to become proactive in ameliorating the space of learning.

As for gender, the findings of the current study propose both females and males share similar perceptions indicating a strong sense of *environmental control* in vocabulary learning, although males with a slight mean difference, tend to place more emphasis on these strategies, across both groups, no significant difference was observed overall and in regards to specific learning experiences.

In relation to type of high school, participants prioritize the employment of environmental strategies heavily. Participants attended public high-schools tend to use strategies more in vocabulary learning than those who attended private high-schools. With no significant difference found, regardless of their high-school type, participants possess a strong *environmental control* in vocabulary.

With reference to the year of study, the use of strategies is consistent across all students with no significant difference. Overall, Junior/Senior students attach a

strong commitment to employing these strategies in their vocabulary learning. Followed by Freshman, they share similar perceptions while Sophomores with a slight mean difference report that their self-awareness on utilizing these strategies is relatively lower than the rest of the group, yet, this difference does not indicate any significant difference. When analyzing specific learning experiences of these strategies, no significant difference was observed.

Regarding CGPA, once again. The data imply a strong sense of using strategies for both higher-performing students and for lower-performing students. In line with other findings of this current study, higher- performing students with a CGPA of 3.00 and above, put the use of these strategies at the forefront, the differences in participants' self-directed use of Self-regulatory strategies are not statistically significant. Moreover, the findings indicate students did not differ regarding *environmental control* in regard to learning experiences.

For French preparatory program participation, participants overall, stress the importance of using *environmental control* strategies on a strong level. Participants who attended French prep program show greater tendency to employ these strategies than those who did not attend the same prep program but participants did not differ significantly regarding the learning experiences and as for their perceived use of *environmental control* strategies.

Concerning English preparatory program participation, two groups regard these strategies as essential with a little mean difference indicating students who did not attend English prep program tend to attach more commitment to the implication of these strategies yet, no statistically significant difference was found. Similarly for learning experiences results of the recent study suggest that participants did not differ significantly in regards to specific learning experiences within this facet.

In terms of ENG101 letter grade, unlike the results of other facets, higher-performing students with letter grades A or A- show more tendency to the use of these strategies respectively, compared to students receiving B+ or B, and lastly with the lowest mean score students receiving B-, C+ or C, though indicating significant difference between groups. Higher-performing students used these strategies more compared to other groups and as for the learning experiences the significant difference was not found across the groups.

In relation to ENG102 letter grade, the analysis infers a strong sense of *environmental control* in vocabulary learning across various letter grades. Once again, like the previous results of this current study, for this construct, higher-performing students suggest a potential approach to a greater use of these strategies, though the frequency of the use of strategies did not differ among the groups. Similarly, no significant difference with respect to ENG102 letter grade was observed when analyzing these learning strategies.

Overall, trilingual students tend to be strongly aware of the influences of their surroundings, regardless of their gender, type of high school, the letter grade received in ENG102 course or their CGPA. They are proactive when facing an issue arising from their surroundings. While this awareness is consistent across these demographic variables, Junior / Senior students exhibit the highest use of *Environmental Control* strategies, raising questions regarding the potential role of the experience in vocabulary learning.

Final remarks

Overall, the findings of the study indicate that there is a general tendency towards the utilization of self-regulating capacity in vocabulary learning. Among the 5 facets of the Self-Regulating Capacity in Vocabulary Learning Scale (Tseng et al.,

2006) trilingual learners most frequently used *Environmental Control* strategies. It is followed by trilingual learners partly agreeing on the moderate implementation of *Commitment Control* strategies. The findings of this study are in line with several studies, Zaper (2018) concluded that Croatian EFL levels reported a high frequency of use of *Environmental Control* strategies in self-regulating capacity in addition, the findings of Bayraktar-Çepni's (2021) study also revealed that among Turkish preparatory class, students put great emphasis on keeping environmental issues under control thus, indicating the highest utilization of *Environmental Control* strategies in vocabulary. Moreover, the research done by Hoa and Uyen (2023) found that high-school students in Gia Lai province attached the strongest use for *Commitment Control* and *Environmental Control* strategies.

On the other hand, for this current study *Metacognitive Control* strategies are the least employed strategies. Conversely, a study conducted by Amirian et al. (2015) discovered that 90 Iranian English language and literature students reported that *Metacognitive Control* strategies contributed more to the prediction of learners' vocabulary size.

Regarding Gender differences, in overall use of Self-Regulatory Strategies, both males and females indicate a high frequency of use of these strategies, however, males tend to have a stronger commitment to the implementation of these strategies than females showing no significant difference and the findings of this current study regarding gender are in line with studies (Ayhan & Payan, 2023; Fatemipour & Najafgholikhani, 2015; İstifçi, 2024; Hoa & Uyen, 2023; Zaper, 2018) conducted before indicating, gender does not affect learners' self-regulation in vocabulary learning.

In terms of the type of high school differences, students who attended public high schools possessed strong strategies compared to the ones who attended private high schools with minor mean differences. However, these differences did not indicate any statistically significant difference.

When it comes to year of study differences, Junior/ Senior students attached the highest importance to the utilization of these strategies in vocabulary learning and the attached importance level of the employment of these strategies is followed by the Sophomore students and Freshman students respectively.

Considering CGPA scores, the result of this current study shares similar perceptions with Bayraktar-Çepni (2021) and İnan's (2023) study as well, indicating higher-achieving students tend to put greater emphasis on these strategies than lower-achieving students. In this current study, students with a CGPA of 3.00 to 4.00 had stronger commitment to the use of Self-Regulatory Strategies in vocabulary learning than students with a CGPA of 2.00 to 3.00, yet, they did not indicate any significant difference.

Regarding ENG101 letter grade differences, interestingly lower-achieving students receiving B-, C+ and C reported the highest use of these strategies while mid-achieving students reported the lowest mean score indicating their slight use. Significant differences were found between higher-achieving students and mid-achieving students showing that students who had received A and A- showed greater inclination towards the use of these strategies. Another significant difference was observed between the lower-achieving students showing a strong commitment to these strategies than students who had received B+ or B letter grade for this course.

Lastly, as for the differences in ENG102 letter grades, students receiving higher grades put greater emphasis on SRCvoc than students with lower grades.

Regardless of the mean differences, they did not significantly differ in the perceived employment of SRCvoc. It could be interpreted that the findings of the current study with regards to ENG102 letter, share similar perceptions with the findings of the study by Teng et al., (2024) highlighting that higher-achiever learners have better self-regulation skills compared to low-achievers.

Implications for Practice

The present study focused on the implications of self-regulating capacity in vocabulary learning in an EMI university offering trilingual translation and interpretation program in Türkiye. On the basis of some findings of this study, some implications for practice can be provided. Given that the results signify an average use of overall strategies among trilingual learners; in order to increase their strategy use awareness and knowledge, strategy training can be provided by the institution to promote learners' autonomy in SRL and to develop learners' self-directed learning, motivation and self-efficacy (Schmitz & Wiese, 2006; Reinders & White, 2011). In order to prevent students choosing wrong strategies that might not take them to success (Tomak, 2017), an instructional guidance by the teachers can be provided with respect to strategy use training. Zimmerman (2002) mentioned that "recent research shows that self-regulatory processes are teachable and can lead to increases in students' motivation and achievement (p.69). By observing students' individual needs or comprehension of their own performance of a skill or strategy teacher may help developing students' performances and increase their motivation to use self-regulatory strategies, as theory demonstrated self-regulation can be increased through exposure of models (Schunk& Zimmerman,2007). Thus, for this purpose, curriculums can be reorganized for both teachers and students to adopt these strategies.

In Turkish higher-education setting, students mostly have various backgrounds, differences in cultural contexts and sociocultural perspectives, various social environments, having access to artefacts and resources to fight with challenges on a different level may have impact on the strategy use (Gao & Hu, 2020). Thus, various cultural values should be included in the learning process with the aim of addressing learners' individual needs. In order to differentiate learners' needs, teachers should be qualified and knowledgeable about not only the contextual differences also students' practice of the strategy use and capacity. Once again, a teacher training program, workshops, classroom observation can be provided by the institutions.

Implications for Further Research

This current study utilized a cross-sectional single-site survey study conducted at a foundation university offering trilingual (English-French-Turkish) bachelor's degree in translation and interpretation in Türkiye. To the best knowledge of the researcher, there are only three universities offering trilingual translation and interpretation program with the same language combinations in Türkiye. In addition, there are several high-schools and K-12 schools offering English-French-Turkish education at the same time, French as medium of instruction. In order to increase the reliability and generality of this research, similar studies using similar contexts could be conducted with larger samples in national contexts. Furthermore, for broader applicability, research in international contexts examining institutions offering different language combinations could also be examined.

Regarding sampling methods, the study focused on the entire population of the students within the bachelor's program concerned. However, only 83 out of 165 learners participated in this study, despite efforts that included a face-to-face

introduction, email invitations, and the distribution of a QR code linked to the study. Thus, the sample size may not fully represent the entire population, suggesting the need for future research with a larger and more representative sample.

Given that the findings of this current study demonstrate that trilingual learners attach average importance to the use of self-regulating capacity in vocabulary learning, and recognizing the crucial role of self-regulated learning in vocabulary learning, further research could examine the impact of raising learners' awareness in their use. This could be achieved by providing strategy training and comparing learners' strategy use before and after the intervention.

As mentioned in existing studies, cultural differences may have impact on the use of Self-Regulatory Strategies (Gao & Hu, 2020; Mizumoto & Takeuchi, 2012; Zhang & Zhang, 2013) , thus further studies can be conducted in different contexts.

Finally, teachers' perception regarding SRCvoc and their implementation to their lesson plans can be further examined focusing on whether training teachers about SRL to develop their teaching practices that develop students SRL or not could be conducted.

Limitations

There are several limitations related to this study. The sample size is limited to trilingual Turkish learners in a higher education context. In Türkiye, there are only three institutions offering trilingual translation and interpretation programs. Still, while the results are most directly applicable to this specific group, they may also be relevant to other educational contexts in Türkiye offering trilingual education, such as high schools, context. Additionally, these findings may relevance to similar educational contexts abroad, particularly in multilingual settings.

This study utilized a cross-sectional survey design to get an insight into students' perceived use of self-regulating capacity in vocabulary learning, capturing data at a single point in time and relying on self-reporting. To gain a deeper understanding of learners' perceptions regarding the use of their self-regulated capacity in vocabulary learning, future research could incorporate qualitative data could be gathered through interviews, self-reflected journals, or classroom observations.

Another concern for this specific study is the limited number of participants who did not attend the French preparatory program preceding their undergraduate studies. The uneven distribution of responses might disproportionately represent this group of students.

A similar issue was observed with the ENG101 and ENG102 letter grade variables, and the uneven distribution of the responses. As most of the participants were freshmen who had not yet taken or completed these common English language courses, the majority of the responses were "not applicable" leading the researcher to exclude answers from inferential statistics.

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Appendix A

Informed Consent Form

Dear Students,

You are invited to participate in a study about strategic self-regulating capacity in vocabulary learning that I'm conducting as a part of Master's program in Teaching English as a Foreign Language at İhsan Doğramacı Bilkent University. Please read the following information, and the criterion to meet, before you agree to participate in this study.

Purpose: The study intends to use the "Self-Regulating Capacity in Vocabulary Learning Scale (SRCVOC)" (Tseng, Dörnyei, & Schmitt, 2006)* in the department of Translation and Interpretation at Bilkent University with the purpose of examining how the trilingual EFL learners in an EMI context perceive their SRCVOC and whether there is any difference in their perceptions on the basis of gender, high school type, academic year, achievement as measured by CGPA, achievement in ENG 101, achievement in ENG 102, and English and French preparatory program attendance.

Voluntary participation: Participation in this study is voluntary, and you have the right to withdraw from the study at any time for any reason. Your participation will be valuable to increase understanding of self-regulating capacity in vocabulary learning.

Confidentiality: If you choose to participate, your answers will be anonymous and your responses, or any other identifying information, including your university, will not be shared. Only the researchers in this study will have access to the information you share, and any data will be kept on a password protected laptop. Your responses will only be used for conducting and disseminating research.

Duration: The questionnaire has two sections. It should take about 10 minutes to complete the questionnaire

Criterion: Check if you meet the following criterion, and then read the statement that follows before you decide to tick the box:

1. I am at least 18 years of age. ☐

Agreement: I understand the information provided, meet the criterion and agree to participate: ☐

Thank you very much for your time and participation.

Name: Nihan Şahin

Program: MA in TEFL program, Bilkent University

Thesis Advisor: Asst. Prof. Dr. Necmi Akşit

* Tseng, W., Dörnyei, Z., & Schmitt, N. (2006). A new approach to assessing strategic learning: The case of self-regulation in vocabulary acquisition. *Applied Linguistics*, 27(1), 72-102.
<https://doi.org/10.1093/applin/ami046>

Appendix B

The Questionnaire

You will find below a questionnaire with TWO SECTIONS: SECTION 1: Demographic questions, and SECTION 2: Self-regulating capacity in vocabulary learning.

SECTION 1

DEMOGRAPHIC INFORMATION/QUESTION

1. How would you describe your gender
 - a. Female
 - b. Male
 - c. Prefer not to say
2. What type of high school did you attend?
 - a. Public
 - b. Private
3. What is your academic year at the university?
 - a. Freshman (1st year)
 - b. Sophomore (2nd year)
 - c. Junior (3rd year)
 - d. Senior (4th year)
4. What is your current Cumulative Grade Point Average (CGPA)? Please provide a numerical value.

5. Did you participate in the French language preparatory program before starting your department?
- a. Yes
 - b. No
6. Did you participate in the English language preparatory program before starting your department?
- a. Yes
 - b. No
7. What grade did you receive in your ENG101 course? Please specify the letter grade.
- _____ (Leave blank to skip if not applicable)
8. What grade did you receive in your ENG102 course? Please specify the letter grade.
- _____ (Leave blank to skip if not applicable)

SECTION 2

The statements in this section are about your learning experience of vocabulary. There are a total of 20 *statements* in this section. Please, read each statement and use the scale below to indicate your level of agreement or disagreement based on your personal experience and/or views. There are no right or wrong answers.

- 1- Strongly Disagree
- 2- Disagree
- 3- Slightly Disagree
- 4- Partly Agree
- 5- Agree
- 6- Strongly Agree

SELF-REGULATING CAPACITY IN VOCABULARY LEARNING SCALE

	Items	1	2	3	4	5	6
1	Once the novelty of learning vocabulary is gone, I easily become impatient with it.						
2	When I feel stressed about vocabulary learning, I know how to reduce this stress.						
3	When I am studying vocabulary and the learning environment becomes unsuitable, I try to sort out the problem.						
4	When learning vocabulary, I have special techniques to achieve my learning goals.						
5	When learning vocabulary, I have special techniques to keep my concentration focused.						
6	I feel satisfied with the methods I use to reduce the stress of vocabulary learning.						
7	When learning vocabulary, I believe I can achieve my goals more quickly than expected.						
8	During the process of learning vocabulary, I feel satisfied with the ways I eliminate boredom.						
9	When learning vocabulary, I think my methods of controlling my concentration are effective.						
10	When learning vocabulary, I persist until I reach the goals that I make for myself.						
11	When it comes to learning vocabulary, I have my special techniques to prevent procrastination.						
12	When I feel stressed about vocabulary learning, I simply want to give up.						
13	I believe I can overcome all the difficulties related to achieving my vocabulary learning goals.						
14	When learning vocabulary, I know how to arrange the environment to make learning more efficient.						
15	When I feel stressed about my vocabulary learning, I cope with this problem immediately.						
16	When it comes to learning vocabulary, I think my methods of controlling procrastination are effective.						
17	When learning vocabulary, I am aware that the learning environment matters.						
18	During the process of learning vocabulary, I am confident that I can overcome any sense of boredom.						
19	When feeling bored with learning vocabulary, I know how to regulate my mood in order to invigorate* the learning process.						
20	When I study vocabulary, I look for a good learning environment.						

Appendix C

QR Code

Ben Nihan Şahin. 2021 yılında Bilkent Üniversitesi Mütercim Tercümanlık bölümünden mezun oldum ve şu an Bilkent Üniversitesi Eğitim Bilimleri Enstitüsüne bağlı olan Yabancı Dil Olarak İngilizce Öğretimi yüksek lisans programına devam ediyorum.

"Trilingual EFL Learners' Strategic Self-Regulating Capacity in Vocabulary Learning" başlıklı yüksek lisans tez çalışmam kapsamında Etik Kurul onayı alınmış hazırlamış olduğum anketi doldurmanız bu alandaki bilgi birikimimizi arttırmamıza büyük ölçüde yardımcı olacaktır ve bizler için büyük önem taşımaktadır. Anketi tamamlamanız yaklaşık 10 dakikanızı alacaktır. Aşağıdaki QR kodu okutarak ankete ulaşabilirsiniz.

Şimdiden katkılarınız için teşekkür ederim.

Sorularınız ve daha fazlası için bana ulaşabilirsiniz.

